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MOTOR AGE

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VOL. XLVIII No. 1

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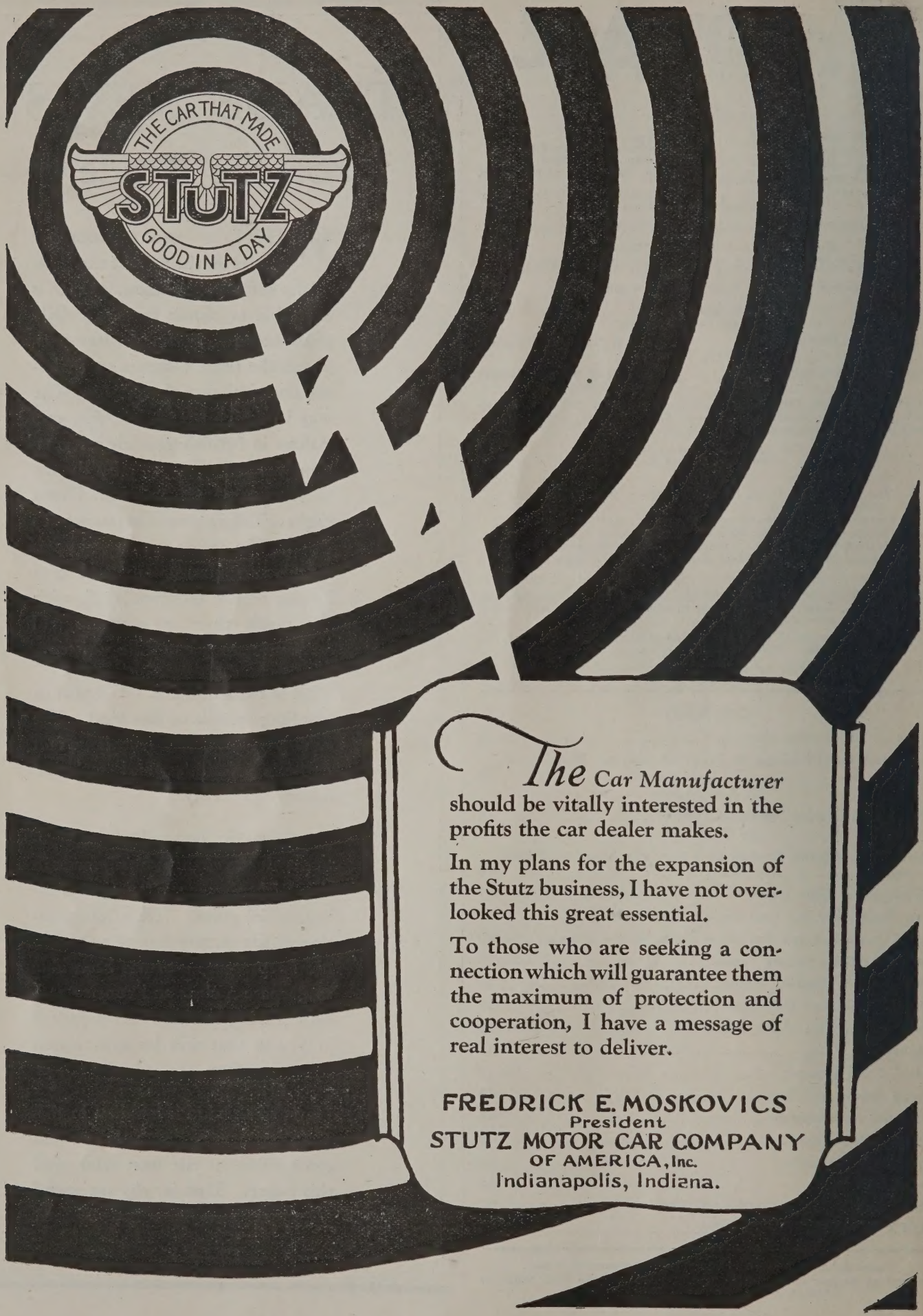
TRADE NEWS
For the Trade

WHEN a new automobile comes on the market the trade wants information about it that it is unable to obtain from the daily press accounts and advertisements. What the trade wants is an analytical description of the product. The way in which MOTOR AGE specializes in furnishing such information was well illustrated by the detailed study of the New Diana Eight which appeared in last week's issue. The article was based upon on-the-spot observation and trial by one of our technical staff, with the result that an accurate and authentic story could be written.

That is the MOTOR AGE plan in handling articles of this kind. We can do this because of our large fact gathering facilities and technical talent.

An article in this week's issue dealing with the changes being made in the Rickenbacker is another illustration in point. Thru co-operation of the factory one of our technical representatives has been able to prepare a clear and concise article covering this new development in a way that will be appreciated by our readers.

News of this kind, handled in this way, has a very direct dollars and cents value to the men who read this paper. That is why we spend money to provide it.



The Car Manufacturer should be vitally interested in the profits the car dealer makes.

In my plans for the expansion of the Stutz business, I have not overlooked this great essential.

To those who are seeking a connection which will guarantee them the maximum of protection and cooperation, I have a message of real interest to deliver.

FREDRICK E. MOSKOVICS
President
STUTZ MOTOR CAR COMPANY
OF AMERICA, Inc.
Indianapolis, Indiana.

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MOTOR AGE

Vol. XLVIII | Chicago, July 2, 1925 | No. 1

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

OUTLOOK for July business in automotive industry considered very favorable. Seasonal decline in June less than in former years. Page 32.

President John Hertz of Yellow Cab refuses to deny or confirm reports of merger pending with General Motors. Page 32.

Noise elimination is one of principal subjects discussed at summer convention of Society of Automotive Engineers. Page 43.

Chrysler Corporation buys all business and property holdings of Maxwell. Page 33.

Deliveries of new Diana Eight are heavy in Chicago trade territory. Page 34.

Automotive parts and accessory trade moves steadily throughout June while prospects for July continue to be good. Page 34.

Decision of N. A. C. C. directors to arrange co-operative insurance company ends long controversy over rates. Page 42.

Fiat Company opens active sales campaign in favor of its new light model. Page 39.

Western Aero League is formed in Los Angeles to push development of aviation and building of landing fields. Page 39.

Automotive payroll increases 56 per cent during the first five months of the year, figures show. Page 38.

June sets record for Hudson-Essex sales, the number exceeding May by about 2,500. Page 33.

June sales in Chicago show advance with open models improving slightly in demand. Page 37.

Chrysler will sell cars "equipped" with insurance for the year as part of the purchase price. New finance methods also planned. Page 37.

Renault stock model breaks world's record for 24 hours over the Montlhery track in Paris. Page 36.

New Orleans June sales better than May with the rush expected by dealers during August. Page 36.

Department of Commerce reports May output of motor cars exceeds that of last year but is below figure for April. Page 33.

Sensational pace of sales in Detroit during April continues throughout May. Page 36.

Cannon Ball Baker, Rickenbacker's chief test pilot, claims many long distance records as result of his novel job. Page 38.

Passenger automobiles moving more steadily with slow gains reported in Oregon. Page 35.

Vice-president Rice of General Motors is made chairman of U. S. Delegation to Pan-American Roads Congress. Page 43.

Southern California reports the most encouraging sales situation that has existed in many months. Page 35.

June sales in Boston display much steadier tendency than in May. Page 34.

In Next Week's Issue—Another Bill Fixit Experience

607570

Merchandising Problems to Front at Summer Meeting of A. E. A.

Harvard Bureau's Cost Survey, Webster's Reconsideration of Resignation and Steps Toward Possible Merger With Other Organizations Are Outstanding Features

BY SAM SHELTON

Colorado Springs, June 26.

MANUFACTURERS and wholesalers of automotive accessories and equipment met here this week in the tenth anniversary summer convention of the Automotive Equipment Association for consideration of those merchandising problems which more and more are being recognized as extending all the way down through the retail dealer to the ultimate consumer.

Members of the A. E. A. and their guests were present from all sections of the United States and Canada. New England, the southern states, the central west, the Rocky Mountain region and the Pacific coast territory were well represented and there was an unusually large representation from the Association's Canadian membership. Probably the fact that the Association's summer meeting is going to Toronto next year accounts somewhat for the enthusiasm of the members from the Dominion. In all about 130 jobber members and 155 manufacturer members were represented at the convention, but the fact that most members were represented by a delegate and an alternate and that many of these representatives were accompanied by members of the families brought the convention personnel to the neighborhood of 1,000.

Outstanding among the accomplishments of the convention were these:

Report of the second survey of the cost of doing business in the wholesale automotive equipment field by the Bureau of Business Research of Harvard University.

Definite suggestions by Dr. Melvin T. Copeland, director of the Bureau of Business Research, of better methods of retailing automotive equipment and supplies as a means of increasing the profit of both wholesalers and retailers.

Authorization for the board of directors to proceed with negotiations for the consolidation of the Automotive Equipment Association with other associations in the same field.

Announcement that Commissioner William M. Webster, chief executive officer of the association since it was established 10 years ago, had reconsidered his resignation and would remain as commissioner.

Divisional meetings of both manufacturers and jobbers at which representatives of the other group talked frankly of the faults and shortcomings their own group found in the other. Thus at the manufacturers' meeting several jobbers expressed friendly criticism of the manufacturers and at the jobbers'

A. E. A. Board of Directors



1—E. E. Klewer, secretary; 2—W. A. White, Orr Iron Co., Evansville, Ind.; 3—H. L. Stevenson, Motor Supply Co., Phoenix; 4—Percy Stern, Interstate Electric Co., New Orleans; 5—Jesse F. Brown, S & M Lamp Co., Los Angeles; 6—Wallace Page, American Motor Equipment Co., Boston; 7—Lou Safford, McQuay-Norris Mfg. Co., St. Louis; 8—N. F. Ozburn, Ozburn-Abston Co., Memphis; 9—A. C. Storz, Storz-Western Auto Supply Co., Omaha; 10—M. S. Gooderham, Toronto Auto Accessories, Ltd., Toronto; 11—L. F. Iverson, The Piston Ring Co., Muskegon, Mich.; 12—William M. Webster, commissioner; 13—J. A. Blum, T. T. Hutchinson Co., Wheeling, W. Va.; 14—F. B. Caswell, Champion Spark Plug Co., Toledo; 15—Ralph J. Cahall, Cahall Motor Supply Co., Philadelphia; 16—William T. Morris, president, American Chain Co., Bridgeport, Conn.; 17—B. K. Sweeney, B. K. Sweeney Electric Co., Denver; 18—P. D. Parker, Edison Lamp Works, Harrison, N. J.

Membership Committee



Left to right: B. W. Ruark, secretary; W. R. Crow, Crow-Burlingame Co., Little Rock, Ark.; H. J. Banta, The Banta Co., Los Angeles; D. G. Smith, Smith & Hemenway, Inc., Irvington, N. J.; William M. Webster, commissioner; George E. Ellis, Supplee-Biddle Hardware Co., Philadelphia; J. A. Bennet, Bennet & Elliot, Ltd., Toronto; F. W. Pardee, American Auto Parts Co., Detroit; F. P. Lilley, Quinn & McGill Motor Supply Co., Denver.

meeting some broad-visioned manufacturers pointed out some faults they believed attributable to the jobbers.

The second Harvard survey which was presented to the members in pamphlet form and discussed at considerable length by Dr. Copeland in an address, was based on reports received from 151 jobber members of the A. E. A. This compared with only 128 members reporting in the survey made last year. Dr. Copeland's address, reported more fully elsewhere, pointed out the significant features of this comparison, the most noticeable of which was an increase in the sales force expense from 7.8 per cent of total sales in 1923 to 8.2 per cent in 1924. The common figure for total expense of doing business in 1924 was found to be 25.5 per cent of sales as compared with 23.4 in 1923. At the same time the common figure for gross margin of profit was reduced in 1924 to 24.8 per cent of sales as compared with 24.9 per cent in 1923. Thus the common figure for net profit in 1924 was 1.3 per cent of total sales as compared with 1.5 per cent in 1923. The common figure for stock turns increased in 1924 to 3.6 as compared with 3.4 in 1923.

Sees Unhealthy Condition

In the greater cost of the jobber's sales force Dr. Copeland saw an unhealthy merchandising condition and one which he charged directly to the retailer. The sales force cost has increased, he said, because of the great number of unproductive calls made and the smallness of the orders received by the jobbers' salesmen. Responsibility for this condition he laid in turn at the door of the garagemen and repair shop operators who he said make little effort to actively sell automotive equipment and supplies. He declared the average garageman and repair shop operator is not a merchant and does not serve satisfactorily as a retail distributor for automotive accessories and supplies.

It was Dr. Copeland's opinion that the great need of the industry is more active selling of automotive merchandise and he believes this will come through large, well-stocked retail stores.

Following his prepared address Dr. Copeland was questioned for more than an hour by both manufacturers and jobbers who were eager to get suggestions for the improvement of certain specific conditions in the industry. In reply to one of the questions Dr. Copeland stated that price will not sell merchandise, but sales can be increased only by making the consumer want the merchandise and enabling him to find it where he prefers to buy.

The convention approved a proposal to print Dr. Copeland's address and the full text of questions asked and answered by him for distribution to all members of the association. The merchandising committee, of which L. A. Safford of St. Louis is chairman, will have charge of that work.

The convention was unanimous in its decision to authorize the board of directors and a special committee to proceed with negotiations for the consolidation of the

Merchandising Committee



Left to right, sitting—Arthur R. Mogge, merchandising director; L. A. Safford, chairman of the merchandising committee; Dr. Melvin T. Copeland, director Harvard Bureau of Business Research; William T. Morris, president of the A. E. A. Standing—H. E. Ervin, Canadian Raybestos Co., Ltd., Peterborough, Canada; N. H. Ozburn, Ozburn-Abston Co., Memphis, vice-president of the A. E. A.; William E. Wissler, Herring Motor Supply Co., Des Moines; R. W. Proctor, Black & Decker Mfg. Co., Baltimore, and A. C. Storz, Storz-Western Auto Supply Co., Omaha

A. E. A. with other associations in the same field. The particular association with which negotiations are now being carried on is the Motor and Accessory Manufacturers Association with headquarters in New York City. This association has appointed a committee which is to confer with the A. E. A. committee. It is understood that if common ground is reached upon which these two strong organizations can combine an effort will be made to bring in several other organizations working in the automotive field on a national basis.

The chief argument advanced for the consolidation is the elimination of wasted effort that comes from the considerable duplication of the association activities. As it now stands many automotive manufacturing concerns are members of several national associations which perform more or less the same functions. It is believed that if these associations can be combined into one a considerable saving will be effected for the members and this will be reflected in a lowering of the cost of doing business.

At the A. E. A.'s spring meeting at New Orleans a year ago last April Commissioner Webster announced that he would retire this fall. Since that time many members and directors have been active in the effort to have him reconsider his resignation, and the announcement that he had decided to remain in his present position was greeted with great enthusiasm. Mr. Webster, at the request of a number of automotive jobbers, organized the A. E. A. in 1915. At first it was limited in its membership to wholesalers, but later manufacturers were taken in, at first as associate members and later on a basis of equality. Mr. Webster is firmly convinced that the great success achieved by the association has been due to the cooperation of manufacturers and jobbers on equal grounds provided by the particular type of organization.

Morris Reviews Accomplishments

An outstanding feature of the convention was the address of its president, William T. Morris of the American Chain Co., Bridgeport, Conn. Mr. Morris reviewed the activities of the association and outlined some of the work proposed for the next few months. He referred particularly to the proposed consolidation of associations and recommended careful consideration of the proposal in the interest of economy.

The first general session of the convention was held Tuesday morning. On Wednesday morning divisional meetings of manufacturers and jobbers were held in separate halls at the Broadmoor Hotel. Two more general meetings were held Thursday and Friday mornings, the convention adjourning at 1 p. m., Friday.

Definite action was taken on a number of proposals included in the commissioner's report and the board's recommendations, and action on others was deferred for further consideration.

One proposal brought before the convention was for the creation of a merchandise exchange through which jobbers might be able to dispose of surplus or slow moving stocks to other jobbers who might be able to use them. It was found that this situation was covered by one of the association's fair trade practices which recommends that jobbers exchange stocks among themselves after first notifying the manufacturer of the goods that they are to be disposed of in this way, thus giving him an opportunity to take them up if he so desires.

Consider Credit Department

The creating of an extensive credit department came up for consideration. The association already had a committee working on this proposition. The board of directors was given authority to act upon the committee's recommendation when it is ready, taking into consideration the probability of carrying out the consolidation with other associations.

The committee on contact with car manufacturers reported it is making progress in its negotiations with the car makers with reference to the accessory and equipment business. Some of the A. E. A. members have felt that the growing tendency of car manufacturers to turn out cars fully equipped and to sell accessories and equipment through their distributors was encroaching upon the business of the accessory and equipment manufacturers and jobbers. This committee is continuing its work and it hopes that it will be successful in the effort to have the annual service convention of the N. A. C. C. held in Chicago concurrently with the A. E. A. show next November. Heretofore the N. A. C. C. service convention has been held in Detroit in connection with the maintenance equipment show.

Foreign trade possibilities in the accessory and equipment business were emphasized in the report of the Foreign Trade Committee. It was pointed out that the Commissioner has already sent 800 invitations to foreign automotive wholesalers to attend the next A. E. A. show at Chicago in November.

An important report was that of the Replacement Parts Committee.

This report recommended that those jobbers who distribute replacement parts should (1) segregate the parts department; (2) have it on the ground floor with stock bins in view and close at hand; (3) locate it in a convenient place but not necessarily in the main business district, preference being given to the garage district where plenty of parking room is available; (4) use a perpetual inventory and adequate stock control system.

In addition to these recommendations the committee suggested the appropriation of $3,000 for the purpose of making a survey of the possibilities of simplified cataloging and uniform numbering and listing of parts. This



Panorama photograph of Automotive Equipment Association's summer convention which was held a

report with its recommendation was approved by the convention.

Twenty new members were admitted to the association at this convention, as follows:

Manufacturers

Allen Electric Mfg. Co., Detroit.
Clifton Mfg. Co., Waco, Texas.
Indianapolis Tool & Mfg. Co., Indianapolis.
Thompson Products, Inc., Cleveland.
White & Bagley Co., Worcester, Mass.
Wolverine Bumper & Specialty Co., Grand Rapids.

Wholesalers

Albany Hardware & Iron Co., Albany, N. Y.
John Andrae & Sons Co., Milwaukee.
Bertram Motor Supply Co., Boise, Idaho.
W. Bingham Co., Cleveland.
Bostwick-Braun, Toledo.
Herrick Hardware Co., Waco, Texas.
Miller Auto Supply Co., New York.
Nevada Auto Supply Co., Reno.
D. F. Owen Co., Tampa.
Peake Auto Supply Co., Kansas City.
Rappole & Robins, Jamestown, N. Y.
Tampa Hardware Co., Tampa.
E. J. Wilson Hardware Co., Beaumont, Texas.
Wolff-Egan Motor Supply Co., Oklahoma City.

Many recreational and entertainment features were provided for the delegates and their families. These included golf tournaments, cards and dancing. The ladies were taken on a sight seeing tour one afternoon and numerous small parties took in the many scenic trips abounding in the Pike's Peak region.

Dr. Copeland's Address

"The Cost of Doing Business" was the subject of the address by Dr. Melvin T. Copeland, director of the Harvard Bureau of Business Research, in which he analyzed the Bureau's survey of the automotive wholesale field for 1924. The reports on which the analysis was based represented 60 per cent of the firms solicited for cooperation, Dr. Copeland said. He considered this a very high and gratifying proportion.

"The outstanding contrast between the figures for 1924 and 1923," he said, "is the increase in the ratio of sales force expense. In 1923, the common figure for sales force expense was 7.8 per cent of net sales; in 1924, it was 8.2 per cent. For several other items, the expense ratios were slightly lower in 1924 than 1923. The wages of receiving and shipping force, for example, were 1.7 per cent in 1924 and 1.8 per cent in 1923. Executive salaries were 2.1 per cent last year, as compared with 2.2 per cent the preceding year. The common figure for miscellaneous expense also fell from 0.7 per cent to 0.6 per cent, a change which, in this last instance, may have been the result of more careful accounting. The effect of these changes in ratios was to yield a common figure for total expense in 1924 of 25.5 per cent, whereas, in 1923 is was 23.4 per cent. In other words, the total cost of doing business was approximately the same in both years and the only really marked change was in the ratio of sales force expense to sales." Dr. Copeland spoke further in part, as follows:

"The common figure for gross margin in 1924 was 24.8 per cent; in 1923, it was 24.9 per cent. The net profit, consequently, was 1.3 per cent in 1924 as compared with 1.5 per cent in 1923.

Comparison of Figures

"Figures on the cost of doing business are available for several other wholesale trades as well as for the wholesale automotive equipment business, and a comparison of the figures for your trade with those of the other trades is suggestive. Your common figure for the wages of receiving and shipping force was lower than the common figures for that item for the wholesale druggists. Your total interest figure was lower than the total interest figure for the southern dry goods wholesalers, and your losses from bad debts also were less in percentage of net sales than for the wholesale dry goods trade. The ratio of taxes to sales is about the same in your trade as in these others. For practically every other item of expense, however, the ratio is higher for the automotive equipment wholesalers than for the other wholesale trades for which comparable data are accessible.

"It is probable that the cost of doing business is lower in the wholesale grocery trade than in other wholesale businesses. In 1925, the average cost of doing business for wholesale grocers was 10.6 per cent of their sales.

"I am not aware, however, of any other wholesale trade in which the expense ratios are as high as in the wholesale automotive equipment business.

"The items of expense in your business which stood in particularly sharp contrast to those of the other trades were the following: Rent, where your figure was 1.2 per cent, as compared with 0.5 to 0.7 per cent in the other trades; office supplies, postage, executive and office salaries, advertising and catalog expense, and particularly sales force expense. The common figure for total sales force expense in this trade, as I have said, was 8.2 per cent of the sales in 1924. This compares with a figure of 3.7 per cent for the wholesale druggists in 1924, 2.6 per cent for the wholesale grocers and 5.7 per cent for the southern dry goods wholesalers in 1923.

"The contrast between these figures for the various trades are not to be taken as an indication of poor management on the part of the automotive equipment wholesalers.

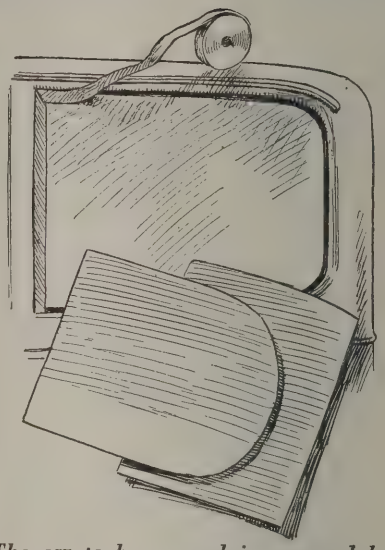
(*Continued on page* 18)



Colorado Springs, Colo., last week. Including members of families the attendance approximated 1,000 persons

Preparing a Car for Pyroxylin Finish





The car to be sprayed is prepared by covering the engine, upholstery, etc. In some cases the windows of a closed car are covered with grease, but a more satisfactory method is to cut pieces of heavy paper as shown and secure these in place with gummed tape. Paper and tape also can be used on the body panels

When to Remove All the Old Finish. Methods for Taking Off Paint. Protecting Engines, Upholstery, Windows, Etc.

By B. M. IKERT

WHEN a car is to be refinished by the nitro-cellulose system the first question is whether the old paint should be taken off or whether the new material can be applied directly over the old. In this respect the makers of nitro-cellulose lacquers differ, some stating that under no circumstances should a nitro-cellulose finish be applied over the old paint, while others claim this process is all right.

There are instances no doubt, where the old coats have become sufficiently hard so the solvents in the lacquer will not attack them, but very often the risk is not worth the cost of removing the old finish. It is well to bear in mind that the solvents in nitro-cellulose lacquers contain materials which make very good paint removers and once they penetrate the old surface they go clear through to the metal and effect the under coats.

A car in which nitro-cellulose lacquers have been sprayed over the old coats may look all right for a time, but eventually vibration and temperature changes will break the coating away from the body. With a complete nitro-cellulose system it takes but a little while longer to get down to the bare metal and by building up the various coats there is every assurance of knowing that the completed job will be a good one.

Take Time for Cleaning

Quite a bit of time should be devoted in cleaning the car preparatory to refinishing. In this respect the process is very much the same as in soldering, where cleanliness of the parts is about 90 per cent of the job. Any mechanic or shopman knows that it is impossible to do a good job of soldering over a surface that is not clean and the same holds true with painting over metal that is not perfectly clean.

There are several methods which can be used for removing the old paint. Some use alkali processes to do this, but in such cases it is very necessary that all traces of the chemicals are removed from the metal.

There are of course paint and varnish removers for doing this work and such removers usually contain wax. It is highly essential that all of this wax be removed from the surface which can be done with high test gasoline or wood turpentine. The surface should then be given a final wash with the solvent used for thinning the lacquer.

Rust spots must be sandpapered with a fine grade of paper and the spots should then be treated with some cleaning material, and washed with water. The surface should then be dried and a coat of primer applied as quickly as possible.

How to Know Whether Metal Is Clean

One way of determining whether or not the metal is free from grease and oil, is by washing the body with some of the thinner used as a solvent. If the metal is clean the thinner will evaporate promptly, but where the surface is not thoroughly free from grease and oil the thinner will dry much more slowly and such spots should then be washed in high test gasoline or benzine. The thinner can then be applied again and if it dries promptly the metal is ready for the under coats. Particular attention should be paid to the mouldings, seams and joints and a practical way to determine if they are clean is to spray under them with some of the thinner.

In the case of parts or bodies finished in baked, black enamel this material need not be removed, but can be rubbed down carefully either with water, sandpaper or powdered pumice stone and water. This is then wiped off with denatured alcohol and coated with the nitro cellulose finishing enamel direct.

Some concerns dip the fenders and hoods in tanks of

hot lye to take off baked enamel. When this is done these parts should be washed in clean hot water and the water blown out of the seams by air. Aluminum hoods or fenders should not be put into these lye baths however.

Where the original finish consisted of nitro-cellulose lacquer over varnish type undercoats and it is desired to refinish without removing the old finish, great care must be used not to soften up the varnish undercoats through the old nitro-cellulose lacquer by the application of heavy lacquer coats. Swelling and blistering will result, followed by chipping and peeling. The old lacquer surface must be well rubber down and absolutely free from grease, oil, wax or moisture.

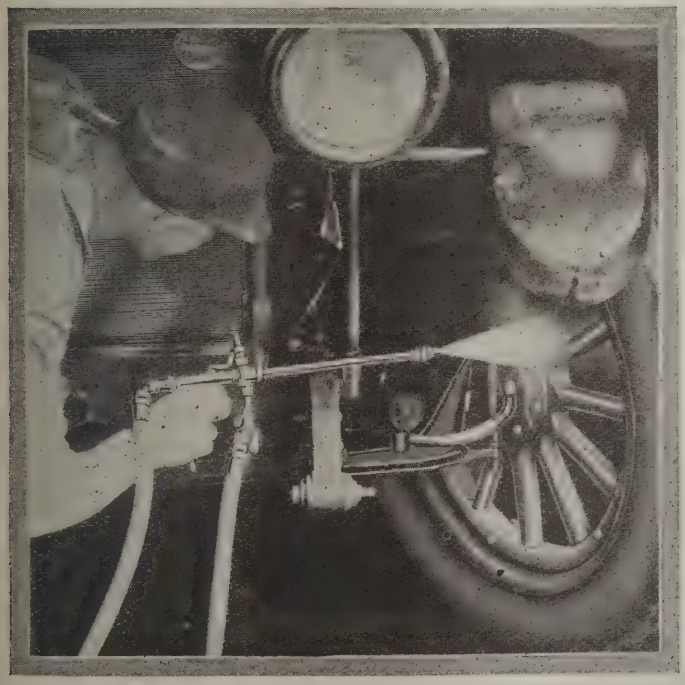
Where finishing varnish has been used over a nitro-cellulose system and refinishing becomes necessary the old finishing varnish may be removed by a mixture of solevents that does not touch the nitro-cellulose underneath. The latter can then be rubbed smooth and the job finished with either more finishing varnish or nitro-cellulose finishing enamel.

One maker of pyroxylin finishes has a special cleaning fluid which has the properties of the solvent for cutting the lacquer materials, but is not so expensive. This fluid is colored green so that it cannot be used by mistake in place of the proper solvent when thinning the enamels as it cannot be used for this purpose. As an added precaution in cleaning moldings, garnish rails, and so forth, can be gone over with a blow torch to make sure nothing remains under them.

An ideal way of cleaning metal bodies is by sand blasting which leaves a perfectly clean surface and eliminates all danger from moisture or wax. It can be especially well used on open cars and also is applicable to closed cars providing the windows, and so forth, are properly protected.

Equipment Will Pay

It is possible to buy equipment for removing the old finish on a car and where a paint shop is called upon to do much work it certainly pays to install such apparatus.



Cleanliness is the big point to watch in the application of pyroxylin finishes. The body and chassis must be thoroughly cleaned and for this some of the apparatus on the market which applies the cleaning liquid under pressure is a big help. It also is a good plan to use a blow torch under mouldings and garnish rails to make sure all moisture is out

SAFETY PRECAUTIONS WITH PYROXYLIN FINISHES

IT must be remembered that there is much greater inflammability of the vapors from lacquer than those from varnish. Consequently great care should be taken that no spark, electric or otherwise, occurs where lacquers are sprayed in quantities on account of the low flash point of the vapors produced. The flash point of some of the pyroxylin materials is as low as the freezing point on the Fahrenheit scale and in some cases even lowr. The flash point of some of the high grade varnishes and paints is over 150 degrees Fahrenheit.

Spray booths should be used for no other purposes excepting the application of pyroxylin finishes. If this precaution is not taken serious results may occur because the alternating deposits of pyroxylin materials, varnish, ground coats, oil base stains and so forth makes probable spontaneous heating and eventual ignition.

In one of the later articles of this series the matter of safety precautions necessary with pyroxylin finishes will be discussed quite fully. The nature of the materials used in nitro cellulose finishes is such that ordinary precautions are not sufficient. Obviously no smoking should be permitted at or near a spraying booth.

These paint and grease removing units apply chemical hot or cold to the metal of a car and the operator has perfect control at all times. The apparatus consists essentially of a fiber brush which resembles very closely a conventional paint brush, but which is attached to a gun quite similar to a spray gun. By manipulating the trigger and at the same time sweeping the brush the solution is spread on wherever desired. The material of course, is spread under pressure and is given ample time to get a good "bite" into the paint after which the car is washed with water. Here again it is possible to buy equipment for quickly washing the car and drying it at the same time with air pressure.

Since pyroxylin finishes are sprayed on some means must be provided for protecting surfaces which are not to be covered with the particular material being sprayed at the time. For instance, if the space between the two belt line mouldings extensively used on bodies of today, is to be finished in a different color the under panels and the upper structures, glass, and so forth, must be protected by masking. On open cars the upholstery must be protected as well as surrounding parts such as the engine. To take care of the engine any material such as canvas or rubber tarpaulin, can be used and the same materials can be used to cover up the upholstery in an open car.

When a closed car is to be refinished all the windows must be closed and protected which can be done in several ways. One of the most popular ways of doing this at the present time is to cut pieces of heavy paper or cardboard in the shape of the window spaces and attach these to the windows by means of gun tape. This is easily removed later on and is much superior to the application of grease to the windows. It is true that grease is easily applied, but it is a much more difficult job to clean the windows later on. Some shops use ordinary paperhangers' paste, but in the long run the best results seem to be obtained by using paper in connection with gum tape.

Paper can also be used on the lower body panels, in between the belt line moulding and so forth. Each car probably will demand a different treatment and this will dictate as to just how the various panels must be protected. Where a car is to be finished in one color only, it is only necessary to protect the upholstery on an open car and only the windows on a closed car.

More Than 600,000 Orphan Cars Now Ply American Highways

Interesting Facts Concerning This Class of Vehicles Revealed in Survey by General Manager of N. A. D. A.

THERE are more than 600,000 automobiles running in the United States today which as new automobiles cost their original buyers approximately half a billion dollars that are today "orphan" cars, that is, cars whose manufacturers have gone out of business since the vehicles were produced, according to announcement by C. A. Vane, general manager of the National Automobile Dealers Association in concluding a survey of automobile ownership in America.

The figures are taken from official registration statistics in the office of the registration officials in the 48 states and the District of Columbia.

"The survey indicates above all things else," Mr. Vane declares, "the necessity of the buyer of the automobile looking far beyond the car right under his eyes when he is in the motor car market. All these cars were just as well painted when they were turned out, had just as good tires and the same number of wheels as motor cars built by substantial manufacturers and sold by reputable dealers, but today their value on the open market wouldn't be ten per cent of the value of automobiles of similar age and type built by substantial manufacturers.

"As all automobiles pass through the hands of from three to five owners on an average before they are finally discarded, the buyer of a new car cannot be too careful in demanding evidences of the financial stability of the company producing the automobile that he contemplates owning.

"Who buys orphan automobiles?"

"The survey indicates an interesting bit of information as to this point."

Orphans and Farmers

"Most people think that a farmer is the wariest buyer who comes into the market, but the ownership of orphan cars indicates that the farmer is far from being the cautious purchaser he is credited with being.

"Our information indicates that 40 per cent of the farmers who own automobiles above the Ford, Chevrolet, Overland, Star price class own orphan cars."

"The reason for this is not difficult to find. Most farmers are price buyers and price sellers. When a farmer turns in a substantial used automobile of the cheaper price class on a new automobile of a higher price class, he goes shopping for the best 'trade-in allowance' he can get for his used car.

"Most of the automobiles that are now orphans were sold with an inflated list price or a trading allowance to catch just such buyers."

When the farmer sized up two automobiles of about the same general style and appearance and found out that the car made by the substantial manufacturer and sold by the reputable dealer would offer him only $100 or $150 for his used car, and the other outfit would offer him from $400 to $600 for his used car, he took the larger offer for his used car.

The "Never Again" Club

"Anybody who ever owned an orphan car, who has learned how difficult it is to get repair work done on it (and all automobiles have to be repaired no matter how expensive or how good they are) will throw up his hands and say, 'never again' for me."

The most enthusiastic owners of standard automobiles are the people who once owned orphans.

"Who is your 'hard boiled' value buyer?

"The man who presumably has the least occasion for actual merchandise purchase. The man who handles the least quantity of actual goods throughout his life of any single business man. The banker.

"Only six per cent of the orphan cars of the country are owned by bankers."

This reason too is the easiest to explain. The banker is the hardest buyer in the world because he generally asks himself these three questions when he buys anything:

"'Do I want it?'

"'Am I willing to pay the price?'

"'What have I got after I buy it?'

"Any buyer can ask himself those three questions and if he does, he'll save money not only on automobiles but on everything he purchases."

Making Sure of the Title Certificate

BIRMINGHAM dealers have been bothered in their sales of used cars with the neglect of the salesmen to secure the certificate of title when taking trade-ins. Sometimes the mere fact that a certificate of title is not handy will be enough to throw a monkey wrench in the sale.

The Drennen Motor Car Company of Birmingham has an agreement with its salesmen whereby every one that fails to get a certificate of title within 48 hours after the trade-in is made is fined $2.50. The agreement is thoroughly understood by all parties concerned and for that reason is perfectly fair.

Needless to say the certificates of title are right on file within a few hours after every trade is made. It seldom happens that a salesman runs over the time limit on securing the important document.

A MECHANIC'S GUIDE BOOK

A 56 page Mechanic's Guide Book has been published by John C. Hoof & Co., 157 W. Illinois Street, Chicago, for complimentary distribution among automobile dealers, service stations and repair shops. This book contains valve timing, dimension and clearance data, together with specifications of timing gears, tappet adjusting screws, valve silencers and other products distributed by John C. Hoof Company.

Honest Values Keep Used Cars Sold

HONESTY is the best policy in selling used cars; in fact, it's the only policy if you leave it to an eastern company which distributes Cleveland cars.

It is much better to make friends than enemies in selling used cars, the Cleveland company believes. Its way of making friends is to thoroughly recondition the cars, put on new tires and other equipment that they may need, and paint them. Then give the buyer the right sort of service on the car. By following such procedure, these Cleveland people say they have never had any trouble in disposing of their used cars.

Rickenbacker Eight Units Redesigned to Coincide With Six

ECONOMIES effected through the redesigning of various important units so they are interchangeable with those of the six-cylinder chassis, making for simpler manufacturing and service operations, and increased production volume, have brought about reductions in price ranging from $200 to $600 on the Rickenbacker vertical "8" chassis.

New bodies of more advanced design are mounted on the refined eight-cylinder chassis which are priced by the Rickenbacker Motor Company as follows: sport phaeton, $1995; coupe-roadster, $2095; coach-brougham, $1995 and the sedan, $2195. A new roadster listing at $1995 and a seven-passenger "deluxe" sedan at $2470 will shortly be included. It will be seen that the open car now lists for the first time at the same price as the most popular closed model. In addition, a new line of "deluxe" models having the highest grade of upholstery and selling at $125 more than the regular models are available on both "eight" and "six" chassis.

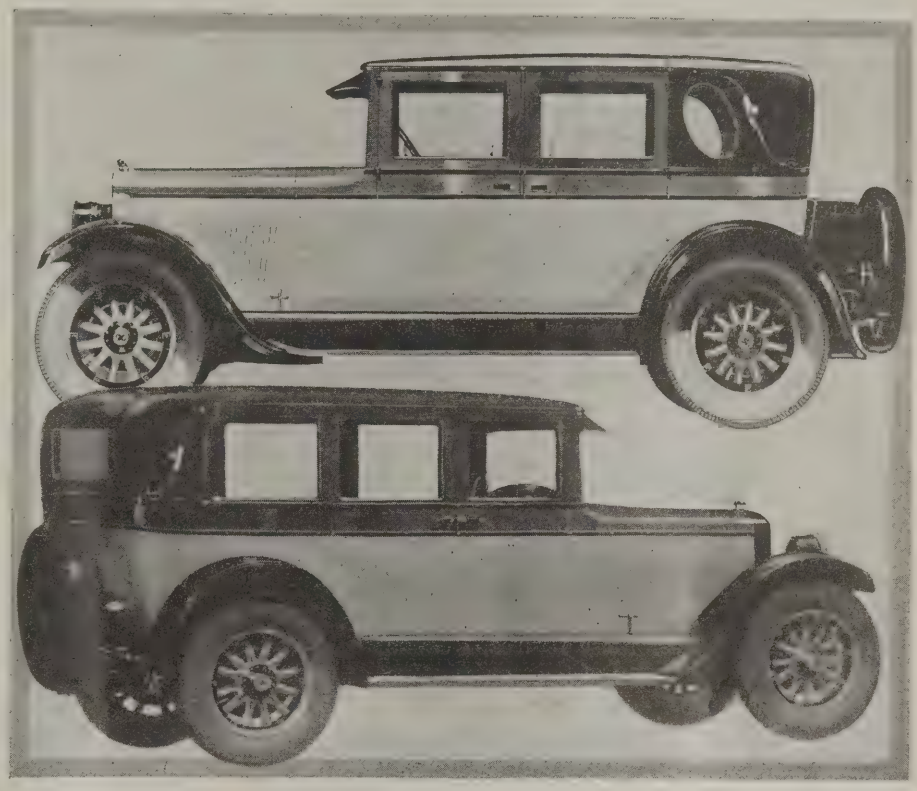
A new line of bodies identical in design, coloring, and upholstery to those on the "eight" chassis are now mounted on the "six" which continues without any mechanical change other than a few minor refinements. The price of the "six" phaeton has been advanced $100 to $1495 and the sedan cut from $1995 to $1795. In addition to the roadster and coach-brougham which remain unchanged in price, a new coupe-roadster at $1695 is announced, while shortly a seven-passenger sedan will be included.

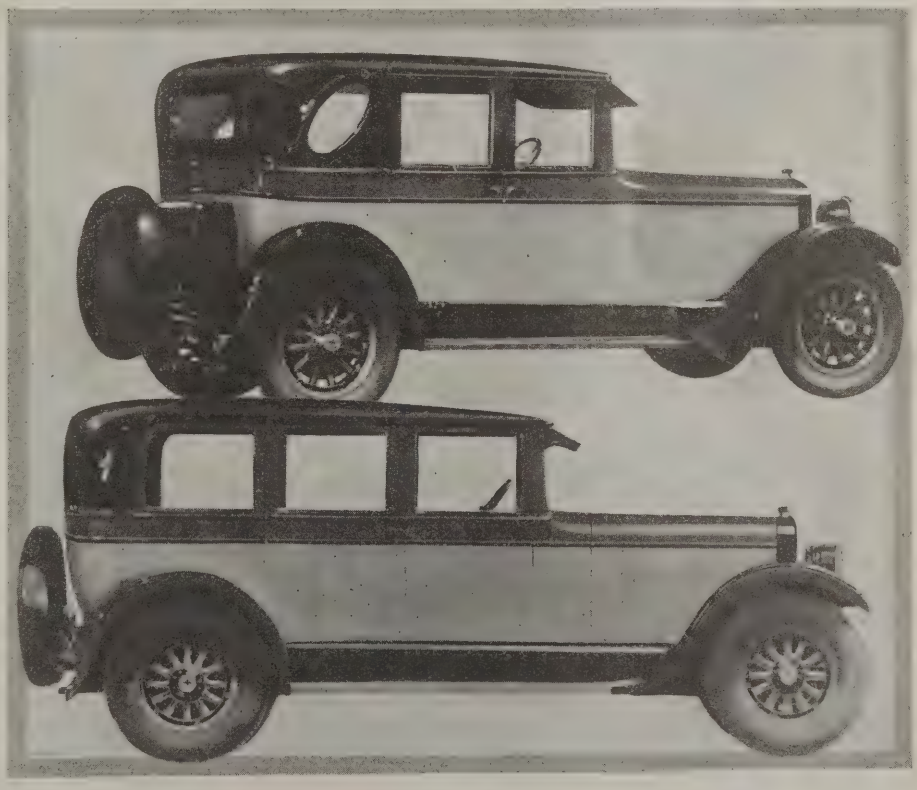
Smaller Parts Inventory

Through the standardization of the majority of parts used on the "six" and "eight" chassis, the dealer will be able to carry a smaller inventory in the form of replacement parts for both Rickenbacker models and the customer will benefit correspondingly in having greater facility of servicing, and the lower cost of parts.

The most important change on the new "eight" model lies in enlarging the bore of the engine from 3 inches to 3¼ inches, thus increasing the power output from 72 to 84 hp. With the bore of the "eight" the same as the "six," all parts of the smaller engine are interchangeable with the "eight," with the exception, of course, of such units as cylinder block, crankcase, crankshaft, etc. A larger and more effective water pump is now mounted on the larger engine, most of the parts of the former being interchangeable with those on the "six," while the oil pump and relief valve interchange with the "six."

Among the engine parts which are interchangeable on the two models are, pistons, pins, connecting rods complete; timing chain, sprockets, chain case, cover, valves, springs, push rods, guides,





From top to bottom: The six-cylinder Rickenbacker coach-brougham and sedan; Vertical Eight super brougham and sedan. The six-cylinder bodies are virtually the same as those of the eight. Both six and eight models are finished in a two-tone color

main bearing caps, bearing shells, studs, distributer, drive gears, shafts, generator wiring assembly, parts of the oil lines, the flywheel housing and the bell housing. The clutch throwout is also common to both models.

Simplification of the four-wheel braking system has been made on the larger car so that the hook-up corresponds to that on the "six" and all the operating parts can be used on both models. With the exception of the side rails, all frame parts are interchangeable on the two cars, as are the gasoline tanks, and the fenders, the style of the larger car fenders being adopted for both models. A new heavier construction of the rear axle is employed, while the tire size has been increased from 33 in. by 5.77 in. to 33 in. by 6 in. on all body models on the eight cylinder cars.

All body models on both chassis have a moulding strip starting at the radiator and extending the entire way round the body giving a pronounced double belt effect and enabling the two-tone exterior finish which is used on all models to be displayed to advantage. With exception in long grain leather, the interior covering of all regular closed cars is in velvet velour, while the "deluxe" models are upholstered in silk faced mohair. The following color schemes are employed in two-tone Duco effects, phaeton, Dublin gray; coach-brougham, Bambalina blue with black moulding; sedan, green with gold stripes and the roadster, brown.

Besides the new line of bodies, several minor refinements have been made on the "six" models. One inch has been added to the height of the radiator, while the thickness of the core has been increased from 1⅛ in to 2¼ in. The "coincidental lock" which has been standard equipment on the eight since its conception, is now applied to the "six" also. This theft-proof device, which locks both steering post and ignition, consists of pin tumblers in the bracket which attaches the steering post to the cowl board. In connection with the new fenders which formerly were used on the "eight" only, metal running boards have replaced the former wooden type while their height from the road has been decreased by 1½ inches.

Tires, 33 in. by 6 in. similar to those on the "eight" are now fitted on both "standard" and "deluxe" special sedan. Wood wheels of natural finish are now standard equipment on all models on both chassis.

The following are the prices now in effect.

Eight Cylinder Chassis

2-4 passenger roadster, $1995; sport phaeton, $1995; coach-brougham, $1995; coupe-roadster, $2095; sedan, $2195; 7-passenger sedan, $2470.

Six Cylinder Chassis

Roadster, $1595; phaeton, $1495; coupe-roadster, $1695; special sedan, $1795; "deluxe" 7-passenger sedan, $2070.

Merchandising Problems to Front at A. E. A. Meeting

(*Continued from page* 13)

"To my mind, the analysis of these figures raises a broad question as to the soundness of the merchandising methods of your industry.

"As I have gone over these figures, I cannot help wondering whether the sales of the automotive equipment wholesalers generally are commensurate with the merchandising effort that is being expended. If not, are the present methods of merchandising automotive equipment the methods that will stand the test of time, The high selling cost and its tendency to increase indicates the possibility, at least, that a negative answer should be given to these questions.

"Proceeding further with this analysis, I should like to suggest some of the conditions to which the higher selling costs in this trade may be attributable. In the first place, we know that the average sales per salesman are not high in this business. The average sales per salesman of the automotive equipment wholesalers were $40,000. This compares with average sales per salesman in the wholesale drug trade of $98,000 and with average sales per salesman of approximately $100,000 in the wholesale grocery trade. In 1922, furthermore, 75 wholesale grocers, among 361 for which data were available, had average sales per salesman of over $150,000 a year.

Dealers Lack Aggressiveness

"The low figure for the sales per salesman in your trade may be the result of an exceptionally large number of unproductive calls or of the small size of the individual orders or upon both of these conditions. The amount of sales effort apparently required from the sales force of the automotive equipment wholesalers indicates a lack of aggressive selling by the retailers who are your customers, and perhaps also lack of conformity to the buying habits of consumers.

"Many automotive equipment wholesalers, I judge, are seeking to merchandise accessories through a large number of garages and repair shops. The garage owners and repair men who thus constitute their customers usually are not merchants.

"Because of their locations and their lack of real interest in merchandising, many of them, I judge, carry wholly inadequate stocks. The result is that if a consumer starts out to buy a particular article, he may have to visit a number of these garages or repair shops before he finds it.

"To an outsider, it would appear that a small number of centrally located, well stocked and well managed retail stores could handle the automotive equipment trade in each community to better advantage and with lower gross cost than a large number of garages, repair shops and miscellaneous dealers."

Dr. Copeland finds a suggestion in the study which he said indicates "that the automotive equipment wholesalers are likely, in the future, either to throw their emphasis on a different type of merchandise from that which now constitutes the bulk of their sales or that each wholesaler will become an exclusive distributor at wholesale in his territory for a selected group of manufacturers." He resumed:

"The wholesaler has provided a sales organization for reaching all these small garages and repair shops and for assuming the credit risk involved in selling to these dealers. If conditions in retail trade change, however, the same provision of a force of order takers and the assumption of the credit risk will no longer be the chief service of the wholesalers. Most of the articles which the automotive equipment wholesalers handle need active sales promotion by manufacturer, wholesaler and retailer. If such changes should occur as I have suggested, it means that the wholesaler will assume a substantially greater part of the sales promotion task for particular items than now.

Important Changes

"For the reasons that I have pointed out, it seems to me that important changes are likely to occur in the methods of retailing automobile accessories. Those changes will be brought about by a growing recognition of the buying habits and preferences of consumers and the determination of the line of least resistance in merchandising such goods. If these changes in retail trade do occur, it is inevitable that they will affect the character of the wholesale business."

Dr. Copeland concluded by saying any such change as that referred to would come about gradually, not abruptly, and that wholesalers with most foresight would likely readjust their merchandising plans most readily to fit the new circumstances.

New Studebaker Bus Chassis Uses Big Six Power Plant

FOR some time past the Studebaker Big Six chassis has been operated in connection with bus service, special bodies having been built for this work. Some of these buses have operated from 100,000 to 300,000 miles, the results being so satisfactory that this company has gone a step farther and has built into two special bus chassis, the structural details which have proven their value in actual service. The features which are said to be secured in the new bus chassis are low initial cost, economy of operation, dependability and passenger comfort.

Model A-158 has a wheelbase of 158 inches; Model M-184, a wheelbase of 184 inches.

The long, flexible springs, balloon tires and the tested car construction contribute toward the comfort of passengers.

The Big Six 75 hp. engine is used in the bus, this being a unit power plant, with single-plate dry disc clutch, set in its own subframe to eliminate road torsions.

Engine L-Head Type

The engine is of the L-head type, cast en bloc with removable head, bore 3⅞ inches, stroke 5 inches. Pistons are of cast iron on 11¼ inch connecting rods. Piston pins are 1 inch in diameter. A fully machined crankshaft, inherently balanced and of extra weight, is carried on four bronze-backed bearings of 23⅝ square inches projected bearing area. Such constructions practically eliminate vibration, it is said.

Lubrication is positive, forced to crankshaft, connecting rod and camshaft bearings. Used oil passes through a circular screen; therefore the sump always contains clean oil. The crankcase may be drained by a valve at the side of the engine, without getting under the car.

The carbureter is 1½ inch, double jet, two range, specially designed for the Big Six engine, with choke on the dash and accelerator of the spherical type for relieving foot strain. Spark advance is automatic, timed by the engine itself. All electric wiring is in metal conduit and the whole ignition system is water proofed, even the spark plugs being protected by rubber shields.

Full control of the lighting system is on the steering wheel, at finger tips, an important safety provision for night driving. An inspection lamp, with extension cord, is located on the instrument board.

Semi-floating rear axle is housed in truss construction with one removable plate to admit directly to the differential. Axle shaft is 2⅛ inches in diameter.

Springs are semi-eliptic, two inches wide. The front springs are 38 inches long, those at the rear, 56 inches long. Fenders (on the front only) are of 19 gage pressed steel, double crowned and concentric to the steel disc wheels, which carry 34x7.3 6-ply tires. Dual rear wheels and tires are optional on the M-184 chassis.

Service brakes are the Studebaker hydraulics on four wheels (licensed under patents) impossible to lock. Hydraulic equipment is at the rear of the transmission case, where two opposed cylinders, actuated by a force pump, impart a 60-40 proportioned force of 200 pounds on rear and front wheels, respectively. Driven by the propeller shaft, it is impossible to lock, since stoppage of motion of the shaft ends the compression in the cylinders.

The emergency brake works with the direct pull of a latching, pistol grip projecting from under the center of the instrument board.

The frame has side members 7 1/16 in. deep, of 3/16 in. steel, with 2¼ in. flanges on the Model A-158. On the Model M-184, the flanges are 3 in. wide and the channel is 8 in. deep at the center with a 4½ in. channel beam running 40 in. beyond the rear axle.

On the Model A-158 the seven regular frame cross members are supplemented by a 3½ in. tubular cross member. On the longer model, this supplemental bracing consists of two 3½ in. tubular cross members in the center and an additional 2½ in. tubular cross member at the rear.

The propeller shaft is in two sections with center ball-bearing steady rest, and two Spicer universal joints.

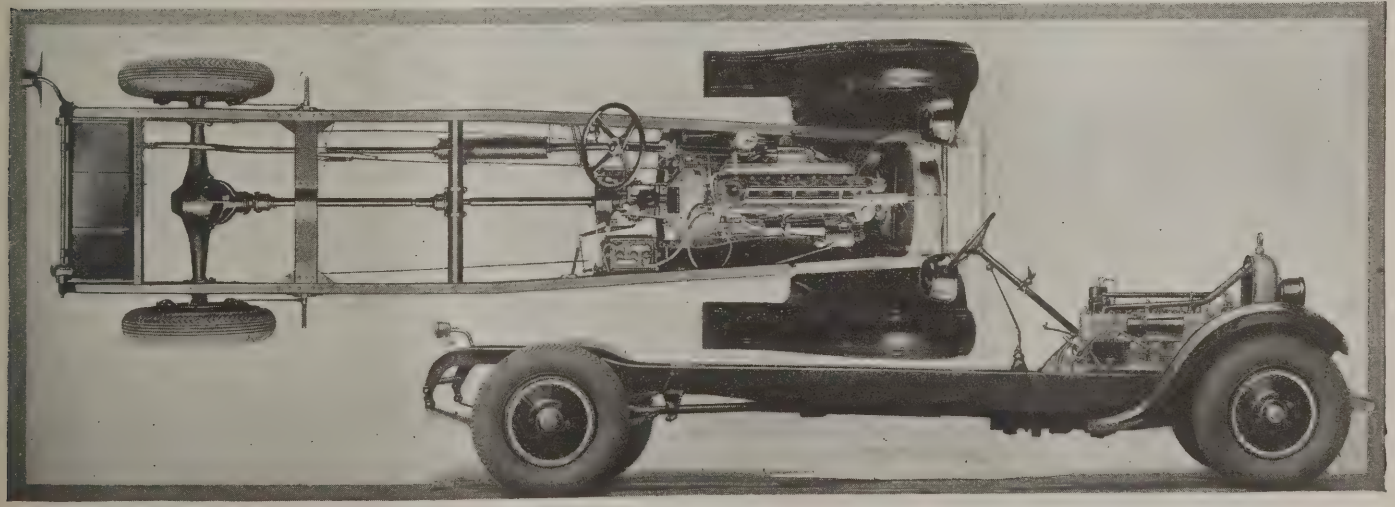
The gear ratio on both models is 4.7 to 1, which maintains the Big Six engine at its most efficient speed under average running conditions.

Standard Equipment

Standard equipment on both models includes a front bumper, extra wheel, tire and tube, motometer with winged radiator cap, combination stop-and-tail light and inspection lamp. All instruments are grouped on a walnut-finish board under one oval glass indirectly lighted against a silvered background. Instruments include a high-grade eight-day clock, ammeter, speedometer, oil gage, a gage showing the number of gallons of gasoline in the 19-gal. tank, and one showing the hydraulic pressure of the four-wheel brake systems.

The radiator is the regular Big Six type, with hood and dummy cowl for driveaway purposes. Studebaker engineers and body designers have collaborated with several outstanding bus body builders in designs for bodies built to these chassis and this designing service will be available for all purchasers of the chassis.

Model A-158 is for 12 to 15 passengers, the chassis price being $1,785, f. o. b. factory. Model M-184 is for 15 to 20 passengers, the chassis price being $2,150 f. o. b. factory. Both models will be in production in July.



Studebaker Big Six bus chassis showing particularly well the supporting means for the propeller shaft at the middle of the frame

Novel Crankshaft Is a Feature in the Improved Cunningham

Appearance of Car Changed in Addition to Detailed Revisions in Engine and Chassis Mechanical Four-Wheel Brakes Standard Equipment

CHIEF among a large number of refinements which have been made recently in the Cunningham passenger car chassis is a two-plane, counter-weighted crankshaft which puts its 90 deg., V-eight engine in inherent balance. In addition to the detailed mechanical changes in the engine, axles and other parts of the car, its appearance has been improved by the adoption of a new radiator design and Perrot-Bendix mechanical four-wheel brakes have been made regular equipment.

The arrangement of the crank throws in two planes at right angles to each other and the counterweight is illustrated. As a forging, the crankshaft is of particular interest for the reason that a considerable portion of the mass of the counterweight is integral with the shaft. Another unusual feature of this shaft is the manner in which the additional weights required to balance the inertia forces, are attached. As shown, a large, tight fitting dowel takes all the centrifugal stress, screws being used merely to clamp the weights together. The dowel is locked against endwise motion by peening over the edges of the holes in the weights as shown.

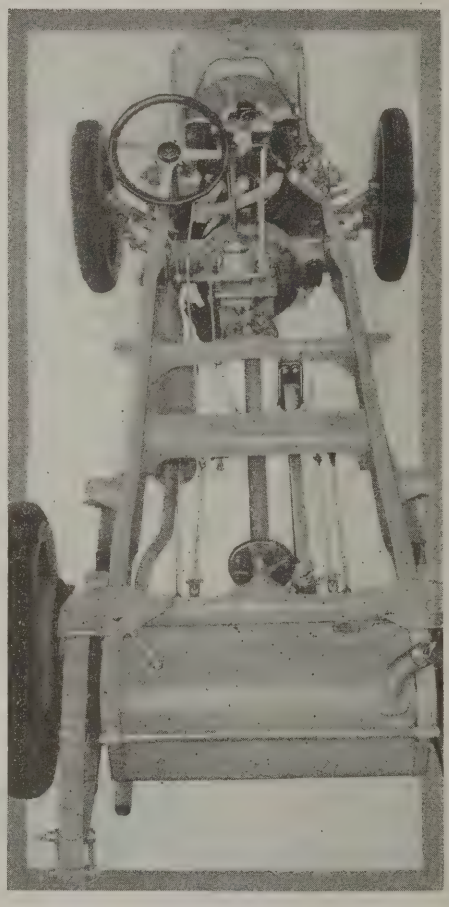
Crankshaft Stiffer Torsionally

The new chankshaft also has been made considerably stiffer torsionally, its main journal and crank pin diameters having been increased from 2¼ to2¾ and 2⅝ in. respectively. To simplify adjustment for end play, crankshaft thrust now is taken at No. 1 bearing, which is provided with a flange for the purpose. The pistons have been made ½ in. longer above the pin and a corresponding reduction has been made in the length of the connecting rod, which is now machined all over.

As the counterweights increase the amount of oil thrown on the cylinder walls, the pistons are fitted with an Indian oil ring. For the same reason the longitudinal groove formerly cut in the connecting rod big end bearings has been replaced with a circumferential groove. Shimless bearings are being used and the main bearing caps have been strengthened by increasing the depth of the stiffening ribs on them. Due to the increased weight of the crankshaft, the flywheel has been lightened.

The engine now fires 1R, 5L, 4R, 8L, 6L, 3R, 7L and 2R and its valves are timed as follows: Inlet valve opens and exhaust valve closes at 5 deg. after top center. The inlet closes 51 deg. after and the exhaust opens 41 deg. before bottom dead center. In addition, the valve lift has been increased from 5/16 to ⅜ in.

As in the past, the valves are operated through the intermediary of rocker levers. These levers are now bronze bushed at the rocker shaft and the cam rollers are fitted with hardened steel bushings. The end actuating the valve tappet has been provided with a renewable hardened steel button with an integral pin on its under side which fits into a hole in the rocker arm. The button fits between two lips forged on the top of the rocker level and is locked in place by peening the edges of these



The chassis showing the single exhaust line and muffler and the new intake manifold

lips. The valve spring length has been increased ⅛ in. and the cups formerly employed at their upper ends have been eliminated, the lower flange of the valve guide being used to center the spring. The face width of the timing gears has been increased 1/16 in.

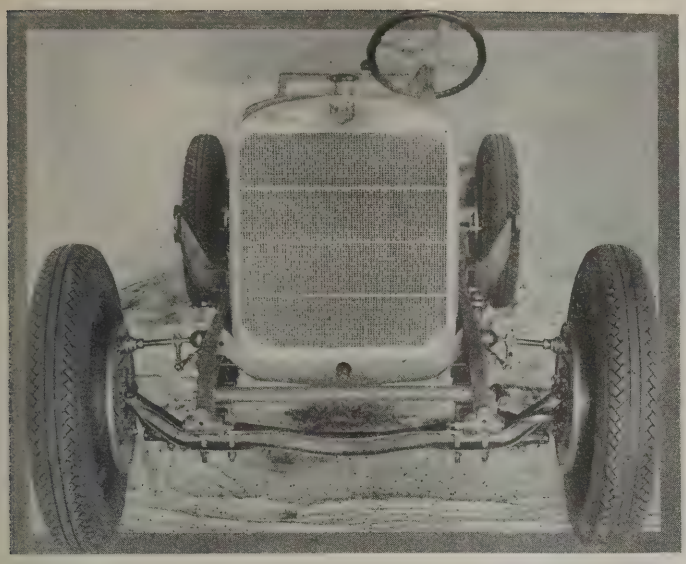
A T-shaped intake manifold, which is more completely water-jacketed, has replaced the Y-design used formerly. A change also has been made in the design of the hot air stove to muffle the noise at this point. The chassis has been cleaned up and more space provided for the tool box and battery by the elimination of one exhaust pipe and muffler. The two exhaust manifolds now discharge into a Y-connection to which a single exhaust pipe leading to the muffler is connected. In as much as a dash gasoline gage is being furnished as regular equipment, the need for a reserve fuel supply has been eliminated and this feature is no longer incorporated in the gas tank.

The outlet connections of the water pump have been simplified and the provision for taking impellor thrust improved. The hoses now connect directly to the outlet pipes intsead of through the intermediary or flanged members as formerly. The bushing supporting the front end of the pumpshaft has been provided with a thrust flange and a self-lubricating washer is installed at its forward end.

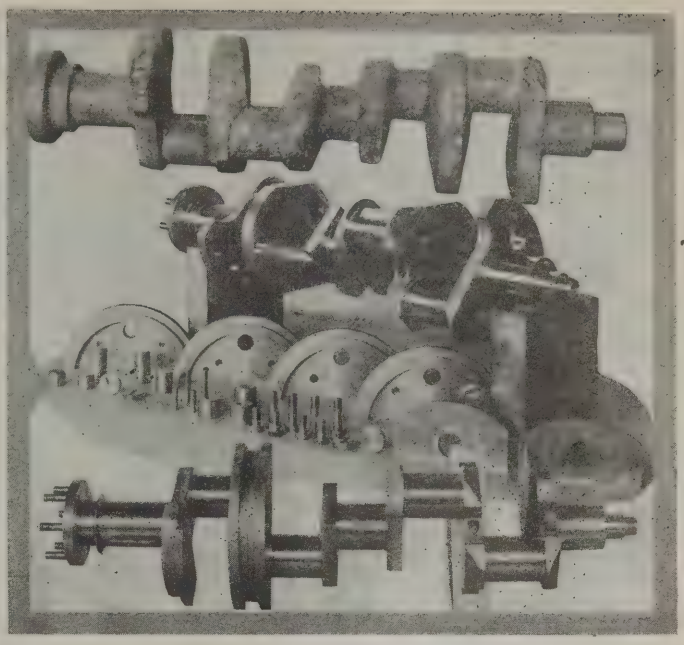
Difference in Rear Axle

The rear axle differs from the unit used in the past chiefly in the method of supporting the pinionshaft. The shaft is supported in two opposed taper roller bearings forward of the pinion and in a Hyatt roller bearing aft. The arrangement of the taper roller bearing provides for thrust in both directions and provision is made for wear adjustment. The position of the pinion with respect to the ring gear may be altered by removing or introducing shims between the differential carrier and a flange on the sleeve carrying the two opposed roller bearings.

The front axle is now a reverser Elliott design with ball thrust bearings and transversely inclined king pins. The reduction ratio of the steering gear has been increased from 8½ to 1, to 11½ to 1, this change having been made to provide easy steering with the 33x6.75 in. balloon tires, which are offered as standard equipment. The front end of the torque arm now has a fabric support, and the frame has been stiffened by the addition of a tubular cross member at its front end. Supports for the front bumper are provided as an integral part of the front spring horns. The diameter of the spring eye-bolts has been increased to ¾ in. from ⅝ in. Another change is in the suspension of the power plant which is now carried by pressed steel brackets riveted to the frame side rails, the wood block construction used formerly having been discarded.



Front view of Cunningham showing new radiator design and the front wheel brake installation. The four-wheel brakes, are of the Bendix-Perrot three-shoe serve type and are said to multiply the pressure applied at the pedal by over 2½ times. Although one set of brakes is used for service and emergency, adequate safety is provided, as, should the rods leading to one, two or three-brake fracture, the intact rods would still function



From top to bottom: The crankshaft forging; the crankshaft disassembled showing counterweights, dowels and clamping screws; and the crankshaft with counterweights attached

The four-wheel brakes are of the Bendix-Perrot three-shoe serve type and are said to multiply the pressure applied at the pedal by over 2½ times.

The brake cross shaft is unusually stiff, being made of 1⅜ in. outside diameter, steel tubing with a wall thickness of 7/32 in. This provides free motion under any condition of frame distortion and the shaft itself shows no perceptible deflection under any load the driver can exert. The stiffness of this shaft together with the fact that the rods are of large section and are under tension only, means that small motions of the pedal or hand lever will result in proportional movement of the cams.

The hand brake lever is designed so that when the brake pedal is down against the floor, there still is 25 per cent of effective travel in the hand lever. The leverage between the cross shaft and the cams is arranged so that the mechanical advantage on the rear brakes is 1.85 to 1. as compared with 1.65 to 1 on the front brakes. Consequently, there is little tendency to lock the front wheels and in addition the system has the Perrot characteristics of releasing one front wheel on making a turn.

Although one set of brakes is used for service and emergency, adequate safety is provided as, should the rods leading to one, two or three-brake fracture, the intact rods would still function. It is altogether improbable that all four brake rods would fail simultaneously or that connections from the pedal and hand lever to the cross shaft would both break.

Brakes are easily adjusted to give equal retarding effects on each wheel by jacking up the car and adjusting the nuts on the extreme ends of each brake rod until the pull measured by the spring scale is equal on each wheel, the spring scale being attached at the same distance from the wheel center in each case. The brake drums are of high carbon steel and have a stiffening flange.

N. A. C. C. Owner Booklet

THE little booklet published by the National Automobile Chamber of Commerce, which car makers and dealers are being asked to put into the hands of owners, is full of sensible boiled-down advice on the care and operation of a car in the interest of both safety and economy. The booklet is intended to assist the new car owner in getting the most satisfactory service from his car at the lowest cost. The title is "Getting the Most from Your Car."

Under the heading of, "Rules for Keeping Upkeep Down," this advice is given:

Take advantage of the dealer's offer to inspect your car at frequent intervals while it is new. It will keep little troubles from growing to big ones.

Drive the first 500 miles not faster than 20 miles an hour.

Drive the second 500 miles not faster than 25 miles an hour.

Never race the engine, especially in starting in cold weather before the oil warms up enough to circulate.

Shift gears when the engine labors on hills.

Give proper attention to lubrication, oiling often enough (according to the car maker's instructions) and using the right grade of oil or grease.

Oil is cheaper than repairs—change crankcase oil every 300 miles in winter and 600 miles in summer. If the maker recommends it, use a lighter grade in winter than in summer.

Keep nuts and bolts tight.

Have brakes and steering gear frequently inspected.

Keep headlights adjusted so as not to glare.

Keep the radiator filled—in the summer with pure water; in the winter with an anti-freeze solution.

Keep tires properly inflated—too little pressure shortens the life of the tires; too much shortens the life of the car.

Avoid sudden stopping or starting. Sliding or spinning the wheels wears tires more than many miles of normal use.

Spare the battery. Prolonged cranking is unnecessary if the ignition and carburetion conditions are right.

Keep battery filled with distilled water and watch the state of charge. A fully charged battery never freezes.

Adjustable bearings should be kept snug, because wear accelerates as it progresses.

Put your rear tires on the front when they have become well worn.

There is a chapter devoted to "Common Sense in Driving," which gives many suggestions for the avoidance of accidents.

Police Find 38 Pct. of Brakes Faulty

HARTFORD, Conn., June 27.—Thirty-eight per cent of the brakes tested by the Hartford police a few days ago proved to be faulty, a condition that Chief of Police Garrett B. Farrel calls alarming. The chief has made it known that from now on any brakes that do not work will result in a trip to court for the car owner. The tests were conducted in various parts of the city, it being the practice of the police officers to stop owners and ride along with them and on arriving at the test section command the brakes be worked. Several fines resulted from the tests.

MOTOR AGE'S PICTURE PAGES



THE FIRST SALE. Here is shown a front view of the Ajax, which recently made its debut. Rudolf Hokanson, vice-president and treasurer of the Nash Sales Co., Milwaukee, is seen with Walter J. Wilde, U. S. Collector of Customs for Wisconsin, the first retail buyer to acquire one of the new vehicles. Mr. Hokanson is one of the oldest automobile merchants in the state, starting in 1900



EXPORT DEMAND BRISK. Reports from the Moon factory are that export sales for the first five months of 1925 were 50 per cent ahead of the same period last year. The pictures show some of the steps in getting a vehicle ready for foreign shipment: 1—Where the cars start on crating line at the Madison, Ill., boxing plant; 2—Interior view of crating line; 3—End of line and hoisting derrick; 4—Part of a single order for 200 cars on way to England; 5—Vehicles being loaded for export.

OF AUTOMOTIVE INTEREST



AUTOMOTIVE VERSATILITY. For the past nine months an Oldsmobile Six has been the business office and only means of transportation of C. G. Gale of the Motor Wheel Corp. Mr. Gale is installing service stations and distributing centers for his company.



PORTABLE TIRE RACK. In the accessory department of Chester N. Weaver Co., San Francisco, a portable tire rack has been built from pipes which can be easily moved from place to place. In view of the limited space occupied by the department, this system has been found especially convenient



FOR LIGHT DELIVERY. This miniature car, used by a Los Angeles cleaning establishment, is said to be the smallest automobile in the United States engaged in actual commercial use.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Low Gas Mileage Due to Poor Compression

Q.—I have a 1924 Maxwell car that is not giving the service that it should and the owner has not been able to get more than 10 miles per gallon of gasoline. The carbureter has been changed, valves have been ground and tappets set up. Ignition has been checked three or four times and still no change in the mileage. The car seems to work well in every way. If you could give me any idea what the trouble may be and the remedy for same I would greatly appreciate it.—The Sixth Ward Garage, 2320 Union avenue, Altoona, Penn.

If the tappets are set to the proper clearance it would seem that the only remaining cause would be blow by past the pistons. When the engine is running and is fairly warmed up remove the oil filler cap and note whether there is any amount of smoke or vapor coming out of it. Also when the engine is throttled down listen with the ear near the cylinders to note whether you can hear any hissing or blow by past the rings. It is possible that at some time during the life of the car it has been run slightly dry due to high speed or insufficient lubrication with the result that the rings are scored slightly and compression is leaking.

Removal of the piston assembly and examination of cylinder walls will clear up this point. Although it is not an accurate test it is possible to determine the condition of the engine by testing the compression with a gauge and comparing the reading with that of a normal car of the same make and model. In case compression is lower or a blow by is heard it will mean replacing the rings and perhaps the pistons and refinishing the cylinder bore walls.

Gears Out of Line Change Timing Slightly

Q—Would like to know if a cam gear or spiral cut placed about ⅛ of an inch from flush with the other gears would cause any change in the valve timing? The gears all mesh up O. K. as per punch marks only. The cam gear became pushed in farther and will only stay in that position with dowel pins in holding camshaft bushings. Would this cause any difference on account of the spiral gears. Motor is not ready for running yet. Possibly it might cause gear noises but that wouldn't matter as long as the valve openings would be correct.—Sidney Topness, Taylors Falls, Minn.

With the cam gear ¼ or $\frac{3}{16}$ inch back from the edge of the others there will be a change in the valve timing of a few degrees. With this sort of mesh the gears also will be very noisy. To find out how badly out of time the valves are remove the cylinder head and with it off turn the engine over slowly by hand. Watch the action of the valves and turn until the engine is starting up on the exhaust stroke. When the piston has reached the exact top dead center the exhaust valve should close and very shortly afterwards, 5 degrees to be exact, the inlet should just start to open.

PERSISTENCE WINS IN TWO YEARS

Q.—I have located a click in a Ford car after hunting two years for same. The keeper plates of two of the magnets on the flywheel were striking the poles of the field winding due to a slight twist in the magnets in question.—P. B. Fitzpatrick, Indianapolis, Indiana.

A condition of this sort is no doubt difficult to find unless the engine is thoroughly overhauled. Then in checking the 1/32 inch clearance between the magnets and the poles of the winding a condition of this sort should be discovered.

MOTOR AGE READERS' CLEARING HOUSE INDEX

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Smaller Ball Holds Gear Shift Lever in High

Q.—We have a 1924 Essex coach in which we changed the engine, installing a 1925 engine. We are having trouble with the transmission. It will not stay in high gear when drifting or when slowing up for rough places in the road. We thought at first it was end play in the clutch but have taken all the play out of the clutch shaft and still have same trouble. We had no trouble with the 1924 engine.—R. L. Starr, 643 Sage street, Evanston, Wyo.

It is probable that the thrust washers in front of the front gear in the transmission are worn so that this gear is too far forward and does not mesh very closely with the high speed gear immediately behind it. A remedy that you might try is to remove the ½ inch steel ball which is used to engage with the notches in the shifter shafts and replace it with a 7/16 inch ball which will mesh more deeply, into the V shaped notches.

This will necessitate stiffening the spring which operates the ball or using a new spring and may necessitate using spacers in order to get stiffer spring action. If this fails to prevent the trouble it may be necessary to remove the transmission and clutch, taking the clutch away from the transmission. It will then be necessary to install new thrust washers so that the front gear of the transmission will be properly located and will give the correct depth of meshing when in high. End play in the transmission shaft rather than in the clutch is doubtless the cause of this condition.

INDIAN MOTORCYCLE TIMING

Q.—Would you give me the correct valve timing and correct setting of the magneto for an Indian motorcycle, single cylinder motor No. 42E 965.—W. F. Dougal Garage, Van Wert, Ohio.

According to information supplied by the local branch of the Indian Motorcycle Company the exhaust valve should close on top dead center. The gears in this engine are marked at the factory and if they are lined up the timing will come out correct. Alignment of the gear as regard marking should start with the two gears which mesh with the flywheel pinion inside of the crankcase. There is also a mark on the flywheel which indicates the center position and which should be at right angles to the gear mark.

With regard to the gears set into the gear, the markings, which may be alphabetical or numerical should run straight across the first one being in alignment with the mark on the gear case and the others in line with it such as A to A, B to B, or 2 to 2, and 3 to 3.

The ignition setting is conventional in that the spark should be timed so that with the magneto in full retard position it occurs at top dead center.

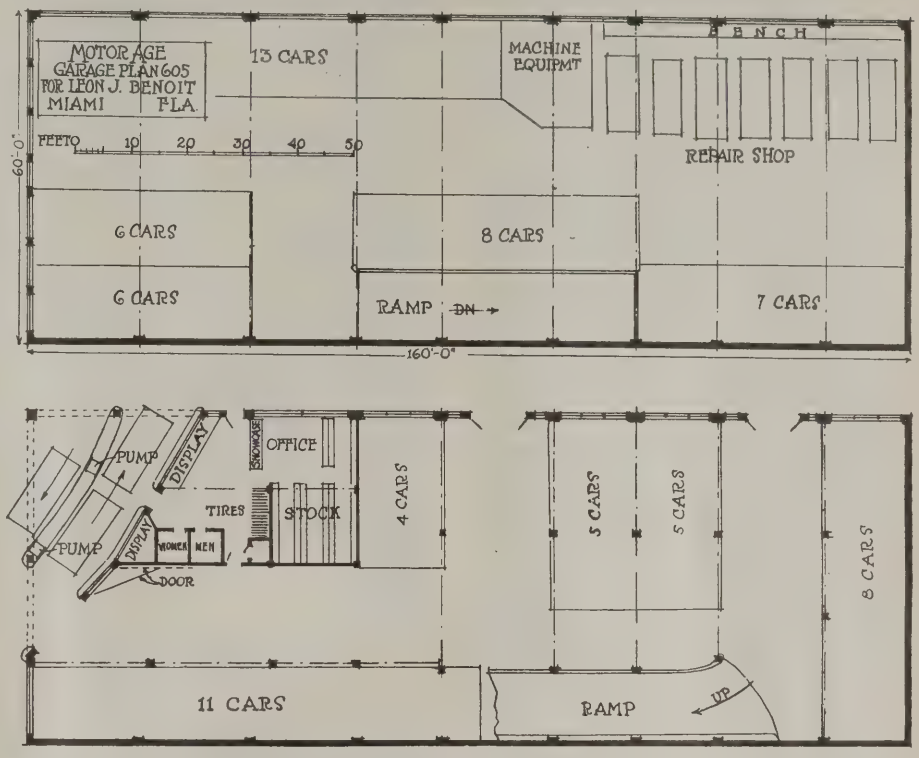
Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Repair Shop for Florida

Q—I want to build a garage down south in Miami, Florida, on a lot 60 by 160 feet. Enclosed you will find diagram. We would like a door in front (south) and a door on the west side and oil and gas filling pumps on S. W. corner. Also a wash rack, office and work shop on ground floor. The garage to be a two-story. We would like a ramp to the second floor. See profile. Except the oil filling pumps you can lock the doors (both front and side). Make office, work shop and wash rack where you believe it is best; also show where and how many supports we ought to have to support the second floor. —Leon J. Benoit, 622 N. W. 20th Street, Miami, Fla.



The front part of this garage might be converted into a car showroom by changing the door to a window

We have laid out your plan about in accordance with your diagram, but have made a change in the location of the lamp in order to save parking space for cars. You have asked that the repair shop be on the main floor, but we are very much opposed to this, due to the fact that the lighting arrangements cannot be as good as upon the second floor, where you can have the benefit of skylights as well as side windows.

Besides this, it is well to have all the storage possible on the main floor, sending only the overflow to the second floor. The front part of the storage room on the first floor, could very easily be converted into a show room, if at any future time you decide to handle new cars. In fact we would be inclined to close up the front door anyway as it will interfere more or less with the cars stopping at the filling station and these in turn will interfere with cars going in and out.

The wash rack we would place at any one of the corners next to the side street, using a 3-car space, so that two cars may be washed at once or three cars may be stored when the rack is not in use.

We have shown supports for the second floor placed to the best advantage for car storage; should you alter this arrangement of cars the supports should also be rearranged, so that the spacing is proper.

Legal Questions Answered—

By WELLINGTON GUSTIN of the Chicago Bar

HOW TO COLLECT UNPAID CHARGES

Q.—Would you be kind enough to advise us just what steps are necessary for us to take in order to sell a car which was left with us for storage? Car in question was left at our place in November of last year, with instructions to repair same. Owner ignores our statements and letters.—Automotive Service, Inc., Mt. Vernon, Ill.

You have a lien for the repairs called a common law lien, but under this lien you are only given the right to hold the property for payment.

Now under the recent garagekeeper's lien act you are given a lien covering both repairs and storage. But to keep this lien alive you are required to file a lien notice with your county recorder within 60 days from date of delivery of the automobile to the owner. The form of the lien is set out in the act found in Chapter 82, section 46 of the Illinois Statutes. This lien may be foreclosed by advertisement and sale of the car in the manner set out by the statute found at section 50, same chapter. This section is too long for quotation.

If there are no other liens to upset you on this car, you can hold the car and bring suit and take a judgment and levy on the judgment and sell in this manner.

Q—I have been taking MOTOR AGE for the last 3 years. I would now like to get a little advice. A brings car in for repairs and material, and the job is done satisfactorily. One month later A trades car in on new one. Can B hold new car for repairs done on old car? Advise how B can collect bill due on old car.—John D. Daech, LaSalle, Ill.

You have a repair lien upon the repaired car only. This lien is good against the car for 60 days after delivery of the repaired car, at which time it ceases unless within this period you file a lien notice with your county recorder as required by law. The statutes provide a blank form to follow in making and filing your claim.

You should notify the present owner of the repaired car that you have a lien and intend to help same, and it may be that this owner will see that you are paid your claim. But you cannot neglect this settlement beyond the 60-day period, unless you have the promise of the present owner to pay, and then, only, if you consider this said owner personally good for the amount. If you do not get settlement within the 60 day period (being 60 days from the date of the delivery of the car as repaired) you should before the end of the 60th day file your notice of lien, and proceed to foreclose in the manner set out by the statute. You do not have to wait, but can foreclose at any time.

AC PLANT SHOWS GROWTH

FLINT, Mich., June 27.—Organized in 1908 with a dozen employees and a production capacity of about 300 spark plugs a day, the plant of the AC Spark Plug Company at Flint has grown to where it now employs over 1500, with a production capacity in excess of 200,000 spark plugs, 8,000 speedometers and several thousand air cleaners daily.

Clearing Up Electrical

The Readers Clearing House

EDITED BY A. H. PACKER

Change the Condenser or Use New Coils

Q—Supply wiring diagram of Moline Knight which had a 12-volt battery. This engine starts hard and will hardly run. Could this trouble be in a weak coil. Someone had this wired direct to one-half of the storage battery. A. C. Glinke, Palmyra, Wis.

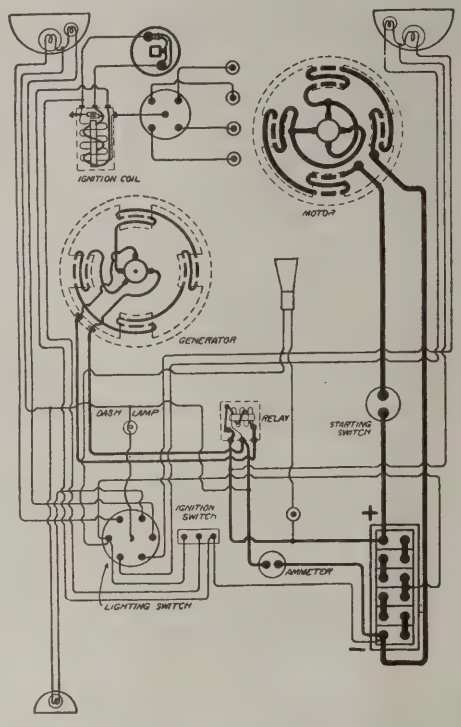
Wiring diagram is published in accordance with your request. You will notice that this shows a wire connected to the center terminal of the battery and going to one terminal of the switch and then over to the ignition switch. This would apparently indicate that a 6-volt ignition coil is required and that the connection should be made to one half of the battery. If the ignition is poor a new coil should be tried for both the condenser and the windings are in the coil unit. If the trouble is in the condenser a good electrical shop can change the defective unit, but the time required is such that it might pay to use a new coil. It is of course, possible that the interrupter points are burnt away and need replacing or that there is a poor connection in the circuit.

GENERATOR LAZY AT 20 M. P. H.

Q.—We have a Ford generator which cuts in at the right speed and charges all right but will not charge 20 amperes unless a speed of 35 miles per hour or more is reached. The third brush adjustment is set as far as it will go and it seems to charge higher when the commutator has just been cleaned, but this lasts for a short time only. Formerly it would charge 20 amperes at 20 miles per hour. New brushes have never been installed and we wonder if this would correct the trouble. —C. M. Ford.

Oil working from the rear bearings on to the commutator will be soaked up by the brushes and will give trouble. However, this usually shows up by a generator failing to cut in, the difficulty being due to a film of oil acting as an insulator between the brushes and commutator. It is also possible that oil soaked brushes might cause trouble of which you complain especially in view of the fact that cleaning the commutator seems to correct the condition temporarily. As the brushes are not very expensive it might be well to try this.

The charging rate of 20 amperes, however is more than you require for summer conditions although it is all right in winter if the car is not run for excessive periods. Another possibility is that the brushes fit the commutator somewhat better than they did when the generator was new. It might be well to check the main brush position by running the generator as a motor with the third brush lifted. There should be no appreciable tendency for the armature to rotate, although it is permissable to have a slight tendency for it to turn in the normal direction. It is also possible that the armature is slightly shorted and there is enough leakage of current to cause the condition you describe.



Moline Knight Wiring

ONE OR TWO WINDINGS IN MOTOR GENERATOR ARMATURE?

Q.—"A" says that the armature in the North East generator used on Dodge Brothers cars has a primary and secondary winding, or two distinctive windings. "B" says there is only one. Who is correct?—E. G. Hill, 1247 DeQueen boulevard, Port Arthur, Texas.

"B" is correct, for there is only one winding in the armature of the North-East generator used on Dodge Brothers cars. Perhaps "A" is thinking of Delco motor generators, which have two commutators and two windings, each electrically separate from the other.

CHARGING FORD MAGNETO

Q.—Having seen a write-up in Motor Age about what Motor Age medicine did to a Ford magneto, would like to know just how this was done with the batteries and how to connect same. — Henneke Brothers, Cuero, Texas.

Instruction covering charging of the Ford magneto without removal from the car was printed in the March 12 issue of Motor Age on page 26 of the Clearing House section.

Ford Bulbs for Magneto and Battery

Q.—Explain the difference in headlight bulbs operated from Ford magneto and those operated from battery. Kansas Reader.

The bulbs operated on the Ford magneto have only one filament and this filament is supposed to give the proper amount of light when operating on nine volts. Connecting the two lamps in series makes the light operate properly on 18 volts. In the bulbs designed to operate in connection with a storage battery the filament is so designed as to operate properly on 6.5 volts, and there are two filaments in each bulb, one to give dim lights and the other to give bright lights. In this case the two small filaments are in parallel when the switch is in the dim position and the two large filaments are in parallel when the switch is in the bright position.

WHERE A. C. FALLS DOWN IN IGNITION WORK

Q—Can a bell ringing transformer which reduces 110 volts 60 cycle current to 6 or 8 volts be used to operate a make and break ignition and could a Ford coil be used with the same sort of transformer. Would also like to know if such a transformer can be used with a jump spark ignition. I have been told that A. C. will not do for make and break ignition. If so, I see no reason why it will not work for jump spark.—H. M. Daggett, Hollister, Calif.

There are two difficulties with your scheme. One is that the alternating current in changing from one direction of flow to the other has a zero value of current. It is accordingly possible that the make and break device will open just at the instant that the current is practically zero. This would mean that you would get no flash and the engine would miss. In the same way a jump spark type of ignition which uses a coil and interrupter might have the interrupter contacts open just as the current reversed.

Another difficulty is that with rapidly reversal of current, the value of the current may not be high enough to give good results, for the current in a coil builds up rather slowly. Operation of the Ford type coil is a possibility on alternating current because the points are pulled apart by magnetism and accordingly whenever they open a spark occurs. We rather suspect however, that the current capacity of the transformer would not be sufficient to properly operate a Ford coil. If you have a transformer and a Ford coil however, it is easy enough to try it and see what the results will be.

Trouble With Bill Fixit

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

When Serial Numbers Do Not Help

Q—Supply wiring diagram for a Willys-Knight three-passenger roadster, model 20-A car No. 25421.—Erickson & Son Garage, 120 S. River Street, Eau Claire, Wis.

The serial number of a Willys Knight does not help much in identifying the car for the manufacturers do not give out information of this character. The model 20 however, was made in 1920 and 1921 and comparing both diagrams, we find them practically identical. We are showing the 1921 wiring which as nearly as we can determine is also correct for the 1920 car and we hope this will serve your purpose.

IGNITION TESTED WITH VOLTMETER

Q—When testing the wiring on a 490 Chevrolet, 1922 car with a voltmeter and connecting the meter from the interrupter terminal of the coil to ground, the hand of the meter will vibrate rapidly between 2 and 7 volts. If connected from the interrupter terminal to ground it will vibrate the same way. What is the cause of this action.—Charles Tuckfeld, North Branch, N. Y.

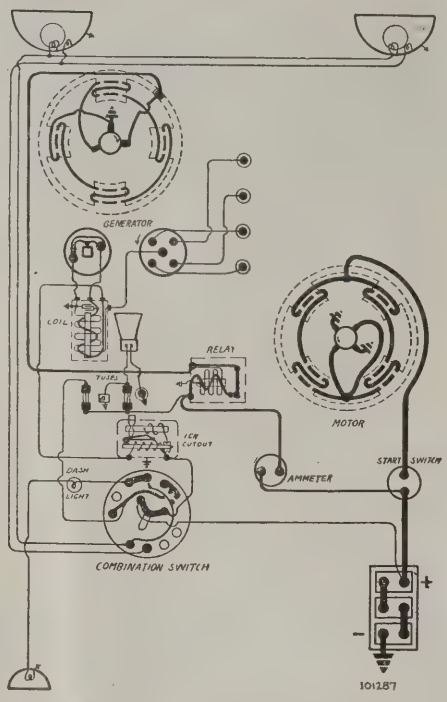
We assume that you made this test with the engine running, in which case the interrupter points were opening and closing. When the interrupter points are closed the interrupter terminal is grounded, due to the two points touching each other. The same thing is true of the interrupter terminal of the coil, for the closing of the interrupter points grounds this terminal. For this reason when you have the points closed you have no voltage across the meter and it tries to read zero.

On the other hand when the interrupter points are open you have one terminal of the voltmeter connected to ground and the other terminal connected through the winding of the coil, the switch and the ammeter, back to live battery so that it tries to read battery voltage. This is the wrong way to use the voltmeter, for with the needle vibrating you cannot get any satisfactory results. The voltmeter can be used for example to locate a shortened condenser. This is done with the engine standing and the interrupter points open. Then if you connect the meter in series with the interrupter and get a reading, it shows that the condenser is leaking.

TRICK WIRING FOR A SPOTLIGHT

Q—We wish to wire a spotlight on a 1923 Nash so it will burn when the dimmers are turned on and will be off when the lights are bright. We also want it to be off when the parking lights are on. How can this be done?—Ohio Tire Dealer.

On 1923 Nash cars, models 691 to 698 there are in effect three lights which can be used for driving. We have the bright headlights, also the same bulbs with a dimmer resistance in circuit and in addition to this, we have separate side lights.



Willys Knight 1921 Wiring

It is not clear to us whether you refer to the separate side lights as parking lights or whether you refer to a single light mounted on the left rear fender as a parking light. Referring to the original wiring, if you should connect the spotlight to the No. 5 terminal on the switch it would light up when the bright headlights are turned on and would be dimmed when the head lights are operated in the dim position.

This would be undesirable. If you connect the spotlight to the No. 6 terminal which is at the end of the dimming resistance, you would have the spot light dim when the head lights are bright and you would have the spot light bright when the head lights are dim. This would also not be very desirable. If you connect the spotlight to the No. 8 terminal which is a terminal used for the separate side lights, it would light up whenever the side lights are turned on. A connection of this sort is desirable when driving along a road at night and encountering a car driving in the opposite direction.

If the circuit is wired so that switching off the head lights and turning on the dim or side lights also sends current to the spotlight it makes a very simple motion and accomplishes the necessary change in the lighting. The spotlight can be trained on the ditch and automatically lights up when the side lights are turned on. If you refer to the side lights as the parking lights, then there is no satisfactory way of accomplishing what you have indicated.

Checking Advance With Spark Lever Movement

Q.—I would like some information in regard to the Willys Knight model 66 six cylinder engine. With piston on top center how far should the spark control lever be moved from the full retard position in order to produce a spark. They have automatic as well as hand advance. I am working on these cars and am not satisfied with the way some of them perform, feeling that the spark may not be advanced enough.—F. A. Johnson, 521 Masten street, Buffalo, New York.

In the retard position of the lever it is usually considered desirable to have the spark occur when the piston is on top dead center. However, to make sure that the engine does not kick back it is usually customary to have the piston start down a slight amount, say from 1/64 to 1/32 inch, before the interrupter points begin to open. This corresponds to moving the lever a slight distance in the advance direction, while the piston stays on top dead center.

We are unable to state the exact amount of this movement, but it should be rather slight, say 1/10 of the total possible movement of the spark lever. If a great deal of movement is necessary it means that the spark is too much retarded and the movement of the advance lever will merely bring the spark back to dead center and will not advance it very much.

ONE BULB FOR FORDSON HEADLIGHT

Q.—Is the current output from the Fordson magneto any greater than from the magneto on the Ford car? Carlos Farris, Tilford, Ky.

We do not know of there being any difference. However, if the Fordson engine is run at fairly high speed most of the time the voltage generated may be higher on the average.

Q.—In using just one bulb on the Fordson tractor for a headlight, what kind should be used?

You might try a 24 volt bulb if you can get one, or you might try a 32 volt bulb, although this would probably require a special socket. You might find that the dimming coil as used on Ford trucks would work very well in series with your lights, using a 6, 9 or 12 volt light. As this is a special application you will have to do some experimenting, running the engine at slow speed at first to make sure that you do not burn out the bulb. As the voltage of the magneto varies with the speed it will be best to use the dimming coil, which, due to the fact that the Ford magneto gives out alternating current, compensates somewhat for changes in speed and will give a more constant light.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Importance of Accurate Trouble Shooting

THE installation of a flat rate system means considerably more than merely establishing a flat price for any repair job.

It means more than the ability of quoting a customer a fixed price for maintenance work. It means someone in the shop, or whoever comes in contact with the customer, must be able to "shoot" the trouble, or intelligently ascertain the needs of the customer's car.

Flat rate is no excuse for poor trouble shooting. If a customer has been sold a job or series of jobs on a flat rate basis and still his engine or car is no better off than formerly, then, the flat rate has accomplished very little.

A Case on Record

There is a case on record where a customer drove his car to a garage stating the engine was slow on accelerating and often stopped completely when throttled down.

This particular garage did not operate on the flat rate basis, but this was no excuse to go ahead and suggest all sorts of remedies for the trouble in question. Everything from grinding valves to installing a new distributer was suggested. The fuel lines were blown out and a new set of plugs installed.

Still, after the customer had paid plenty of money at this garage, his trouble still manifested itself. He tried another place and was told the fuel line was clogged. This shop again blew out the line, advanced the ignition and did a few other things. Yet, the trouble was not completely remedied. Some of the mechanics stated it was one of those "mysterious" troubles hard to find.

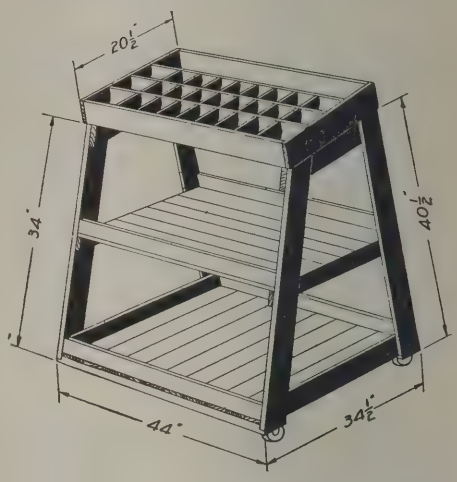
Finally the customer took the car to the dealer's service station. A grudge against the dealer's place of business had stalled off the visit but in the belief that the dealer's men knew what ought to be done he finally went to them.

And there he found a man who could shoot trouble and knew the peculiarities of the engine and car. After the customer had explained the engine action, the trouble shooter instructed one of the men to remove part of the carbureter and polish the cylinder attached to the metering pin.

The parts were reinstalled and when the customer took the car out acceleration was improved as well as the general running. The trouble shooter knew his stuff. and the customer was only too glad to pay the slight charge for the work.

Maintenance is something which ought to be merchandised the same as any commodity and often a customer can be sold more operations than he calls for. It may be of benefit to him to call his attention to a much needed repair and a shop is justified in doing so.

But the big thing is to be sure to sell the customer at a flat price the thing he needs, which intelligent shooting makes possible.



THINGS THAT HELP FLAT RATE

When parts are taken off an engine or car much time is saved by having some sort of stand or rack in which such parts can be placed. Such stands can be bought or made. Here is one sponsored by the Franklin company to be used in connection with its standardized system of selling maintenance

MOTOR AGE'S FLAT RATE FORUM

No. 19

STAR MODEL F FLAT RATES FOR VALVE MECHANISM OPERATIONS

Manufacturer's Official Designation		Charge
1110-F	Reseat and grind valves Material required: 2 valves, 1 valve spring, 2 valve stem keys, 2 valve cover gaskets.	$4.10
1110-G	Valve stem guide—replace Material required: 1 valve stem guide.	.75
1110-H	Piston ring (three to one piston)—replace Material required: 3 piston rings (three to one piston).	1.50
1110-I	Crankshaft sprocket—replace Material required: 1 crankshaft sprocket.	2.00
1110-J	Camshaft—replace Material required: 1 camshaft.	9.50
1110-K	Camshaft sprocket—replace Material required: 1 camshaft sprocket.	2.90
1110-L	Generator drive sprocket—replace Material required: 1 generator drive sprocket, 1 generator nut.	1.80
1110-M	Valve lifter guide (one)—replace Material required: 1 valve lifter guide.	1.80
1110-N	Valve lifter (one)—replace Material required: 1 valve lifter.	1.05
1110-O	Valve lifter adjusting screw and nut—replace Material required: 1 valve lifter adjusting screw, 1 valve lifter adjusting screw nut.	.30
1110-P	Valve lifter guide plug—replace Material required: 1 valve lifter guide plug, 1 valve lifter guide spring.	.15
1110-Q	Timing drive chain—replace Material required: 1 timing drive chain.	7.85

School Uses Flat Rate Manual

New Britain, Conn.

To the Editor of MOTOR AGE:

Enclosed please find fifty cents for your Flat Rate Manual.

I use the flat rate very successfully in the automobile department of this school as all of the repair work is on outside cars.

A Buick Branch Gets 50 Charts

Indianapolis, Ind.

To the Editor of MOTOR AGE:

We would like to get fifty copies of your Flat Rate sheet that came out in the Oct. 23 issue. If this is possible please mail these to us at once.—Buick Motor Co., E. S. King, Supt.

Forum Prices

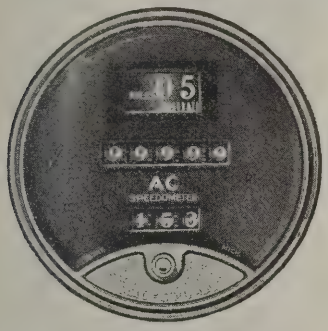
The charges listed for the various operations on the Star model F in the table on this page represent the total charge to the customer. They include material as well as labor and, as will be noted, the necessary material is listed under each operation where material or parts are needed.

THE MARKET'S NEW OFFERINGS

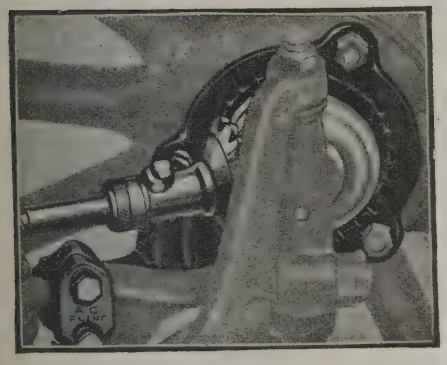
Accessories—Equipment—Supplies

AC Speedometer for Fords

A SPEEDOMETER outfit which requires no swivel in the drive and designed for Ford cars and trucks is being manufactured by the A. C. Spark Plug Company, Flint, Mich. The speedometer head with its round nickeled dial is installed in the dash in a manner to make it appear as a part of the car rather than an "extra." It provides a 100-mile trip register, with tenths and a 100,000 mile total register. Miles per hour from



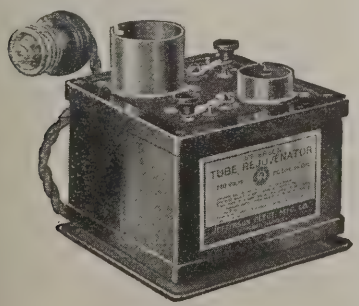
A. C. speedometer head



A. C. Direct Drive

one mile to 75 can be shown and it is said the instrument registers accurately even on rough roads.

The drive can be attached without drilling holes in hub flanges or spokes. Three of the regular flange bolts hold the driving gear which is connected to the flexible shaft by a coupling that eliminates the need for a swivel.



Radio Tube Rejuvenator



Accessories and Necessities

In the opinion of an enterprising equipment dealer in California it is easier to sell an owner of an old car "necessities" than "accessories."

He has come to the conclusion that the word "necessities" has a better psychological effect than "accessories" especially in the case of the old car owner. While he uses both words in circularizing owners of comparatively new cars the word "necessities" is kept emphatically to the front in circularizing old car owners.

Thus he stresses the need of buying certain additional equipments even though the old car owner might have a notion that he does not want to merely "doll up" his vehicle.

Trampe Spark Plug

A NEW spark plug, called the Trampe, has been put on the market by the Trampe Spark Plug Co. of St. Louis. The plug carries a guarantee against fouling. Actuation of a special power disc made of Monel metal is said to eliminate wastage of gasoline and prevent it from getting into the crankcase and diluting the oil therein. The patented disc is said also to take the full force of the pounding due to explosions, insuring constant performance and prevention of injury to insulators and contact points. The plug is made for all cars and retails for $1 for Fords and $1.25 for other makes.

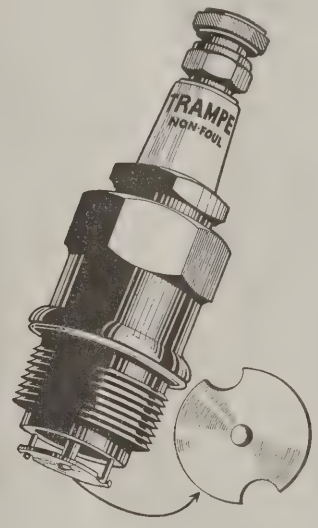
Radio Tube Rejuvenator

A TRANSFORMER device operating on alternating current is announced by the Jefferson Electric Manufacturing Company of Chicago. This device is specificially designed to restore the operating characteristics of radio tubes. is also stated that summer reception is very much improved when tubes which have been used all winter are subjected to the rejuvenation process. The retail price is $7.50.

Biflex Superb Bumper

(Cut shown above)

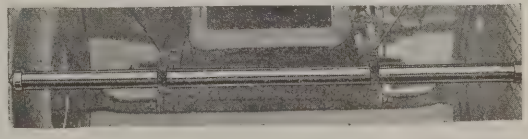
A MARKED departure from the regular Biflex Standard Bumper is found in the new Biflex Superb Bumper which is being produced by the Biflex Corporation, Waukegan, Ill. The Superb model is said by the manufacturers to have ultra-cushioning strength, possessing powerful resiliency. Very attractive in appearance, it is proving an extremely popular item on the Biflex list.



Trampe Spark Plug

Tubular Bumpers for Chevrolet

TUBULAR bar bumpers for 1925 Chevrolet cars have been put on the market by the Churchville Manufacturing & Laboratories Co., 246 N. 17th St., Philadelphia. Fittings for the device are universal, the same bumper being adaptable to use in front and rear. The bumper lists at $15, including fittings. Brackets are japanned and baked and the nickel rail is of the five-year guaranteed rust-proof type.



Tubular Bumper for Chevrolet

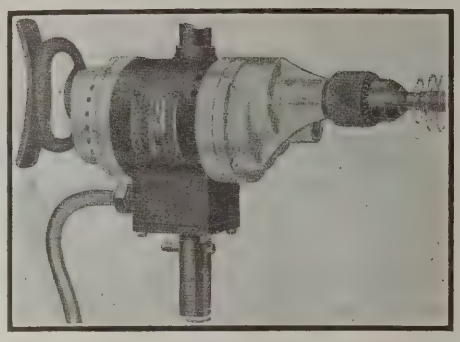
GETTING MORE OUT of the SHOP

A Super Motored Drill for the Garage Man

One of the most common repair jobs today is that of cylinder honing, for which there are a number of tools on the market. In the operation of these tools considerable power is required to do the job properly.

Realizing the importance of this work, and also to provide a tool that would meet all requirements, the Temco Electric Motor Co., Leipsic, Ohio, has just brought out a new super-motored half inch garage drill.

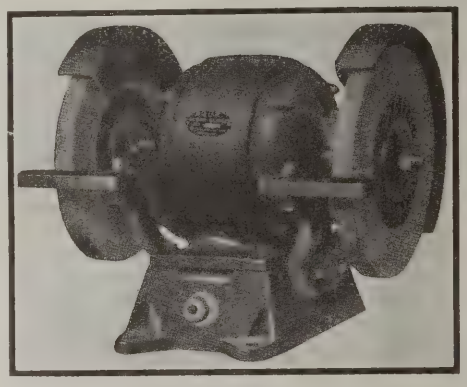
In appearance it is typical of all other Temco electrical drills, but the motor in this drill is more powerful. Like all other Temco drills, it is Temco-built throughout, except the chuck and cord. The motor is fan-cooled and mounted on ball bearings thrust being taken by a ball thrust bearing. The price of the new model G-D half-inch Temco drill is $56.



Temco drill

Azor Bench Grinder

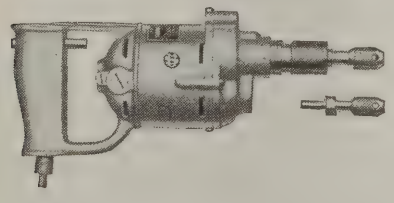
The Azor Motor Mfg. Co., 7424 Bessemer avenue, Cleveland, Ohio, have announced a 110-volt bench grinder, selling for $32, for use with either direct or alternating current. It is equipped with two ¾ x 8 in. grinding wheels and shaft is threaded for 2-B Jacobs chuck. Specifications are: 1/3 hp., 1,800 r.p.m., length 13½ in., height 11 in., weight 55 lbs. It is equipped with 10-ft cord and plug.



Azor bench grinder

Electric Screw Driver and Nut Setter

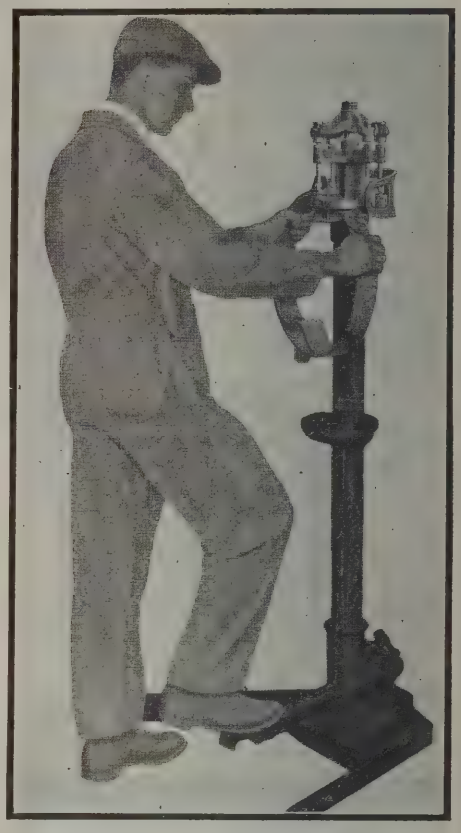
This is an electrical tool designed to speed up the work of driving screws, lag bolts and setting nuts. It runs on 110 or 220 volts, alternating current or direct current; is equipped with positive clutch, normally held in "open" position and engaged by pressure on tool and released when pressure is released. It has SKF ball bearings and bits are equipped with "slot finder." It is made in four sizes, No. 1 size taking wood screws up to and including No. 10x1½ in., lag screws 3/16x 3 in., and nuts and cap screws up to ¼ in. No. 4 size takes wood screws larger than No. 20 by 4 in., lag screws up to ½x5½ in. and nuts and cap screws up to ¾ in. Sizes Nos. 2 and 3 take intermediate sizes or screws, lags and nuts. The prices are, No. 1, $48; No. 2, $68; No. 3, $80, and No. 4, $105. It is made by the United States Electrical Tool Co., Cincinnati, Ohio.



U. S. electric screw driver and nut setter

Brake Service Machine

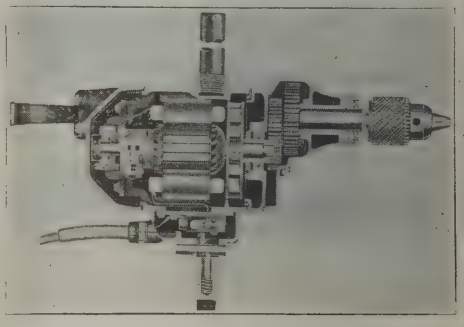
A new brake service machine for relining various types of brake bands, brake shoes, disc clutches and Ford transmission bands, has just been put out by Weaver Manufacturing Co., Springfield, Ill. Mounted at a height convenient for the operator, a revolving turret carrying plungers to take care of punching and countersinking various diameters of rivets, is operated by a toggle action controlled by a long leverage foot pedal. The turret is rotated by hand to bring either of the four plungers in line with the riveting work. Each plunger can be screwed up or down so as to countersink rivets to the desired depth and take care of variations in thicknesses of bands and linings. Special attachments are included so as to make only two operations necessary to remove old lining and rivet on new for Ford bands. Price $70.00.



Weaver brake service machine model H

Hisey Half-Inch Universal Drill

The Hisey-Wolf Machine Co., Cincinnati, Ohio, has placed on the market a new half-inch universal drill equipped with a standard Hisey motor. The chuck of this drill is fitted to hardened and ground tapered spindle and is of Jacobs make. An oversize chuck spindle is used and is automatically lubricated through the gear case. A cooling fan is accurately finished to insure balance and is a slip fit over the shaft and held in place by a key. The cool incoming air passes over the commutator and motor and vents insure maximum protection against accidental abuse.



Hisey half-inch universal drill

The brush holders with adjustable spring tension are mounted as a separate unit on a bakelite yoke which makes for good installation. The end cover is a rugged casting carrying all pressure applied to the spade type handle and being independent of the motor and motor bearing relieves them of all strain. The spade handle is directly in line with the drill chuck thus eliminating side pressure and for close quarter work it can be removed and pressure applied directly on the end cover casing. The side handle is removable. The speed of the drill with no load is 525 r.p.m. and the net weight is 17 lbs. Standard equipment besides the half-inch chuck includes 10 feet of all rubber Tirex cable and suitable attaching plug. The price of the drill is $58.

EDITORIAL

Routings That Save Money

DECREASING the cost of traveling by motor through increased efficiency in routing is to be an outstanding development of the accomplishments this year of the American Automobile Association, according to Thomas P. Henry, president of that organization. Thanks to the continued extension of the nation's paved highway mileage the A. A. A. should be able steadily to improve its routing service. The character of roads over which the motorist is to travel will figure largely in the cost of operation. Efficient routing also often cuts down distance. This is a work which the A. A. A. is excellently prepared to carry on and any progress it makes is in the direction of the automotive trade's great ambition to see automobile transportation brought down to the lowest possible operation cost. Lower the cost of highway travel and more highway travel will result.

The Last Half of the Year

IN its monthly discussion of current market conditions the National Bank of Commerce, of New York, predicts better general business in the last half of the year than was noted in the first half—providing "crop yields are reasonably good and farm prices profitable."

The bank declares that "profitwise, the business outlook is the best since 1919, because it is the most stable."

One big factor in the process of stabilization has been the automotive industry. Contributing to improved conditions one of the chief forces has been the general effort to American manufacturers to measure output closely to the requirements of consumers.

No other industry has striven harder to accomplish this adjustment than have the makers of motor vehicles. In fact, automobile manufacturers must be given due credit for their leadership in this constructive movement. And they are entitled to the profits of their wisdom.

It is reasonable to expect that the last half of the year will be a substantial period for the automotive trade. The seasonal decline is on but the downward curve is apparently more gradual than ordinarily and demand is keeping some of the factories at capacity operation.

The farmer has been an important figure in the progress we have made thus far and as the New York bank has indicated the farmer's prosperity will have a significant bearing upon balances of the last six months. At this time the farmer's outlook seems sufficiently secure. Barring unlikely misfortune our agricultural industry should come through in good shape.

There should be no let-down by the automobile dealer in intensified merchandising effort. Many motor vehicles will be sold between now and the last day of December, a big volume of accessories and supplies will be marketed and much maintenance work will be required.

While we are not prepared to say that the last half of the year will be a record period it can be safely ventured that it will be better than the corresponding period of last year from the standpoint of profits and opportunity. Prospects are unusually good.

Studebaker and Used Cars

STUDEBAKER has announced plans for a broadside at the used car problem. It is a relief to see factories take hold of this matter. Studebaker offers to stand behind the dealer in guaranteeing correct representation of used cars offered for sale by the retailing organization. The pledge which the dealer is required to sign and post conspicuously in his place of business is an impressive document. In its assurance of honesty it sets forth an essential that the trade at large must emphasize and live up to if the used car problem is to be solved. Honest representations must be found in all merchandising enterprise that hopes to endure and prosper. The honest merchant, however, who fails to let the public know of his honest policies is overlooking opportunity. Most certainly he is guilty of this if he is a used car merchant.

An All-Time School

THE young man who thinks that his school days are over when he receives a college diploma is certain to bump into disillusionment when he invades the field of automobile selling for a livelihood. While his college training is a fine asset he will find that those who keep up with the automobile selling procession are never "out of school." To keep up there is a demand for constant study which has been increasing in proportion to the intensification of competition.

Factories are coming more and more to the realization that education of the field after all is the big thing in automobile merchandising. Requirements by factories for dealers and salesmen to study are yearly becoming more pressing. Factory budgets for educational campaigning in the trade have become very large. A double-jointed chin and a rubber tongue might have been considered the only necessary selling requisites at one time—but not so today. Merchants and salesmen today must THINK—they must ANALYZE—they must STUDY.

July Automotive Outlook Is Favorable

Seasonal Decline in June Is Less Than in Former Years

Several Large Producers Still Behind in Meeting Orders—Exports Set Records

NEW YORK, July 1—Good automotive business was experienced up to the end of June, and the outlook for July is favorable. There was a slight seasonal decline in sales during the month just past, but the drop was less than in former years and far less than was expected late in May.

Several large producers in various price classes are still behind in meeting orders—a highly unusual situation for this time of year. Others have caught up, however, and are slowing down in production. The lower activity is particularly noted in these factories that are preparing to introduce new models.

Three or four new cars have been introduced recently and their reception from the public has been most cordial, a particularly striking example of the keen interest in automobiles that buyers everywhere are evidencing.

Why unsatisfactory sales conditions are reported, local influences are found to be the causes, such as the coal situation in sections of Pennsylvania and the poor state of crops in the southwest.

Truck sales and production are running well ahead of last year at this time. With the opening of the tourist season the automotive supplies market has experienced a quickening in almost all lines. The tire market has shown particular strength. Replacement parts and shop equipment continue to show a slight gain in almost all sections of the country.

Exports are setting records and it begins to look as if the total for the year may reach the half million mark, against 385,000 last year, which marked the peak of foreign sales for all time.

A healthier condition among car distributors and dealers is one of the notable achievements of the year in automotive lines. This is particularly noted in used car stocks, which in most sections of the country are low. Used cars moved in satisfactory volume throughout the month and new car stocks are also in good shape.

Revenue Collections From Automotive Industry Less

WASHINGTON, June 27.—A decrease of $3,296,465.90 is noted here by the Bureau of Internal Revenue in the May, 1925, internal revenue collections from the automobile industry as compared with the collections in May, 1924. The total collections for the month just passed is given at $12,357,156.33 as contrasted with a total of $15,653,622.23 for May, 1924.

A substantial decrease is also shown in the collections from the automobile industry for the period from July 1, 1924, to May 31, 1925, which were $109,943,871.61 or $36,125,708.95 less than for the period July 1, 1923, to May 31, 1924, when the total was $146,069,580.56.

The segregated taxes collected from the automobile industry for May, 1925, as compared with May 1924, follows: In May, 1925, from automobile trucks and automobile wagons, $688,046.51 as compared with $1,098,427.70 in May, 1924; other automobile and motorcycles in May, 1925, $10,027,796.17 as compared with $11,539,012.29 for May, 1924, and automobile parts and accessories, $1,641,313.66 in May, 1925, as compared with $3,016,182.24 in May, 1924.

All Business Aided by Advance of Car Industry in Lansing

LANSING, June 27.—Through the growth of Lansing's automobile and general accessory business in the last 20 years, the value of Lansing's manufactured products has increased 116.4 per cent.

Capitol used in the manufacture of the products showed an annual average increase of 46.6 per cent and the number of employes gained 12.1 per cent. Business firms increased at the rate of 17 per cent annually, banking resources at the rate of 36.5 per cent and bank clearings at 38 per cent.

Population increased 12.9 per cent annually; families 12.5 per cent; homes 14.1 per cent; value of personal property 28.1 per cent, building and loan assets 26.5 per cent, and per capita wealth 48.9 per cent.

FORD PLANS MEXICO PLANT

MEXICO CITY, June 27.—The Ford Motor Co. plans to take over certain warehouses now under construction on the outskirts of Mexico City and use them as an assembly plant. These warehouses are modern and constructed in accordance with specific requirements so that the company will be able to assemble knocked-down cars received from the United States and to carry a moderate stock of cars, trucks, Fordson tractors and Lincoln cars as well as parts. Whether the plant will be operated as a branch or as a Mexican corporation has not been decided. Occupancy is expected early in July.

Hertz Refuses to Deny or Confirm Merger Reports

Financial Men Believe Yellow Manufacturing Will Unite With General Motors

CHICAGO, June 29—John Hertz, president of the Yellow Manufacturing Co. and associated interests, and Edward D'Ancona, secretary and general counsel of the concern, have steadfastly refused to either confirm or deny reports that a $60,000,000 merger of the Yellow interests with General Motors Corporation is pending.

Meetings were held simultaneously in Detroit and Chicago last week, and although no official announcement has been made regarding the sessions, it is persistently reported in La Salle Street that the purpose of the meetings was to effect a consolidation of the two corporations.

Financiers and financial authorities appear to be entirely satisfied that such negotiations are going forward and that they probably are nearing completion because of the fact that no denial has been issued from either the Yellow Manufacturing or General Motors headquarters.

The center of conjecture seems to be in what manner control of the Yellow interests will pass to General Motors. Many quarters credit Mr. Hertz with controlling not more than 30 per cent of the stock of the Chicago company of which he is president. This would make it impossible for him to deliver entire control. It is believed that General Motors is planning an exchange of stock as an alternative.

In its financial statement of May 31, General Motors had 5,161,800 shares of common outstanding and 10,000,000 shares authorized. The same is true of the debenture and two preferred stocks. In other words a large part of the authorized total is available for expansion. Besides this, General Motors has on hand about $140,000,000, far more than is needed for protection in its own field.

This statement shows that it is in excellent condition to consummate such a deal as is reported without any financing. Should such a deal be arranged, General Motors would be in an enviable position in the automobile field as Yellow Manufacturing is pre-eminent in the building of motorbuses and taxicabs.

Should General Motors acquire control of Yellow Manufacturing, the corporation will be closely allied with the Yellow Cab Company of New York, the Chicago Yellow Cab Company, the Omnibus Corporation and the Yellow-Drite-It-Yourself System, which are the most important Manufacturing outlets for the production of the Yellow Manufacturing Company.

Chrysler Corp. Buys Business And Properties of Maxwell

Transfer Plan of April 15 Adopted At Meeting of Stockholders in Detroit

DETROIT, June 27.—The Chrysler Corp. has acquired today all the business and properties of the Maxwell Motor Corp. The sale, pursuant to the plan of April 15, was authorized at a meeting of the Maxwell stockholders held here.

Incorporation papers for the new Chrysler Corp., were filed in Delaware, June 6. This corporation takes the place of the Chrysler Corp. formed in Michigan with nominal capital to conform with legal matters necessary in connection with carrying out the transfer plan.

Under the transfer plan 239,373 shares of Chrysler Corp., preferred will be issued to Maxwell stockholders on the basis of 100 shares of preferred and 10 shares of Chrysler common stock for each 100 shares of Maxwell Class A stock, and 100 shares of Maxwell common for each 100 shares of Maxwell Class B stock.

The new corporation will have an authorized capitalization consisting of 275,000 shares of $8 cumulative preferred stock and 800,000 of common, all no par value.

Walter P. Chrysler stated that the new company was beginning its career under the most auspicious circumstances. The new four cylinder Chrysler car, now being introduced has met with complete approval of the dealer and distributor organization. The company, he continued, has orders on its books assuring capacity production for the next three months on both the four and six cylinder models. He said that the company was never in a stronger position with respect to forward orders, organization facilities and cash.

19,000 Used Cars Sold in Boston in Last Six Months

BOSTON, June 27.—Nearly 19,000 used cars were sold in Boston during the six months period beginning December 1 last and ending May 31 of this year. Figures compiled by the Boston Police Department give the details to show that while the dealers took in 15,040 machines during the winter and spring they sold 13,340. That left a margin of some 1,700 used cars on the hands of the dealers. However, when it is considered that there were 194 such dealers licensed in Boston the average would be less than 9 cars to each on a pro rata basis.

That the used car sales this spring were good is further emphasized by the record of sales made by individuals. In many cases the dealers advised seekers after new cars to try to sell their old cars to others, and that they were successful is recorded in the books where it shows permits were granted to 5,578. Therefore, when this individual number is added to the 13,340 sold by the dealers it totals 18,918.

These figures are solely for the city of Boston and are correct because motor cars are not registered without a waiver or permit from the Boston Police Department. Furthermore, a comparison is given with the same period of a year ago. This year shows an increase for the previous year had 12,698 cars taken in trade and 11,175 sold leaving the dealers with 1,523 on hand or a difference of 177 less than this year. In the same period the individual sales ran up to 5,023 so that it made the total 16,198.

"Co-operative" Brake Tests Planned

SYRACUSE, June 27.—Syracuse automobile dealers cooperating with state, county and city officials will conduct the first automobile brake testing campaign ever held in this city.

The State Motor Vehicle Bureau, the city police, deputy sheriffs, Syracuse Safety Council and the Automobile Club of Syracuse will be organizations which will cooperate with the dealers.

An attempt to hold a campaign last year failed because the right of officials to stop automobiles was questioned. This year drivers will be invited to have their brakes tested on specially designated streets in the city in charge of officers. Testing will be without charge and there will be no compulsion on the part of the driver.

Sales of New Cars Slow Appreciably in St. Louis

ST. LOUIS, Mo., June 27.—Sales of new cars in the city have slowed down. Especially is it noticeable that those lines which are in the habit of bringing out new models about the first of July or the first of August have not been selling so well lately. Also one popular line which has not been in the habit of putting out yearly models has been enjoying a great popularity.

In fact the month of May was one of the best if not the best month the distributor of this line in St. Louis has ever had.

Dealers are determined to keep their used car stocks down. With this end in view they have taken them in trade sparingly and with due dilligence. The result is that used car stocks on hand at this time are low, 25 per cent below normal it is said in some quarters. Some dealers say they could sell a good many more cars if they were willing to allow large figures for used cars, but this they refused to do.

Accessory sales are spotty. It is said by some firms that their business is 20 per cent ahead of last year while others claim that sales are very poor.

Collections are good.

May Output of Motor Cars Exceeds That of Last Year

Both Passenger Automobiles and Trucks, However, Are Below April Figures

WASHINGTON, June 27.—The May output of motor vehicles in the United States and Canada, according to the Department of Commerce, was 382,714 passenger cars and 43,303 trucks. The May, 1924, total was 286,324 passenger cars and 35,314 trucks while April of this year showed 391,302 passenger cars and 47,815 trucks.

Figures in the United States alone show 364,363 cars and 41,415 trucks as compared with 375,787 cars and 46,239 trucks for the preceding month.

Production for last year and the first five months of this year, according to the figures gathered by the department are listed below. The table is based on data received from 185 manufacturers from recent production statements as furnished to them. The May figures from 14 small firms were not received in time to be included in this report.

	Cars	Trucks	Total
1924			
January	293,824	30,741	324,565
February	343,460	32,910	376,370
March	357,045	36,444	393,489
April	346,405	37,948	384,353
May	286,324	35,314	321,638
Total	1,627,058	173,357	1,800,415
June	225,079	29,067	254,146
July	244,544	26,391	270,935
August	255,232	28,647	283,879
September	263,528	31,960	295,488
October	260,881	32,475	293,356
November	204,343	27,905	232,248
December	182,099	27,542	209,641
Total	3,262,764	377,344	3,640,108
1925			
January	212,921	28,147	241,068
February	252,803	34,412	287,215
March	332,151	45,096	377,247
April	391,302	47,815	439,117
May	382,714	43,303	426,017
Total	1,571,891	198,773	1,770,664

June Is Biggest Month in History of Hudson-Essex

DETROIT, June 27.—Hudson-Essex sales which will be between 26,000 and 27,000 for June will break all previous records and will be the best month in the history of the company, according to word given out at the factory today. The present sales and orders on hand will exceed those for May by about 2500.

Ninety per cent of the orders are for enclosed cars, with the demand being even throughout the entire country. The sales of both cars are running about even. The new Hudson brougham has met with a countrywide reception, factory officials said that will insure this model meeting with good demand for some time.

Plans now under way at the factory call for the output being increased from 1200 Hudson-Essex cars, the daily output now, to 2000 by the end of the month. Despite the increased demand, no unusual delay has been experienced in meeting deliveries. With the increased output it is hoped to make deliveries within an unusually short time.

Accessories Moving Steadily With July Prospects Good

May Sales Slightly Under April But Not So Much As Formerly

NEW YORK, June 27.—The automotive parts and accessory industry is proceeding at a strong and steady pace as the mid-summer season approaches. May business showed a less than normal seasonal decline from the April peak and July prospects are good. It is also indicated that business for the last half of the year will exceed the final six months of 1924 and that net profits of 1925 will be better than they were last year.

These statements are contained in the Business Bulletin for June just issued to members by the Motor and Accessory Manufacturers' Association. The association's survey of members' sales gives an aggregate index figure for May of 165 as compared with 168 for April, with business of January, 1925, furnishing the index of 100.

Sales of parts and accessories to car and truck manufacturers for original equipment dropped slightly from April to May, as did sales of accessories and maintenance equipment to the trade. Sales to the trade of replacement parts made a striking gain from an index figure of 107 for April to 134 for May.

Aggregate sales of original equipment on which the May index figure was based exceeded $12,000,000. Replacement parts sales included in the compilation aggregated nearly $3,000,000, accessory sales nearly $2,000,000 and service equipment sales slightly less than $500,000.

Indiana Registrations Off 5 Per Cent During May

CHICAGO, June 27.—Registration of new passenger cars in Indiana during May dropped 5 per cent, as compared with the preceding month, the total being 10,612 as against 11,178 for April. All price classes declined, but the decreases were small, with the exception of the high-priced vehicles which were 27 per cent under the April figures.

The following table indicates the changes for May as compared with April:

	Loss
Fords	3%
Low, excl. Fords	3%
Medium	6%
High	27%
Total	5%

Following are the detailed figures for the first five months of 1925:

Mo.	Fords	Low, excl. Fords	Med.	High*	Total
Jan.	4,239	1,024	1,837	117	7,217
Feb.	3,515	896	1,533	103	6,047
March	5,778	2,042	4,031	205	12,056
April	5,002	2,292	3,641	243	11,178
May	4,819	2,205	3,413	175	10,612
Total	23,353	8,459	14,455	943	47,110

*Includes miscellaneous cars not named.

The foregoing statistics were compiled from figures furnished to MOTOR AGE by Indianapolis Auto Trade Association, Indianapolis, Ind.

Savings Rise With Car Output

BALTIMORE, June 27.—A. E. Duncan, chairman of the board of the Commercial Credit Company of this city and affiliated companies throughout the United States, has issued figures to show that the savings of the company have not been distributed by the great increase in the number of automobiles.

According to Mr. Duncan, the number of registered motor vehicles increased from 2,445,666 in 1915 to 17,591,981 in 1924. During the same time, the number of savings depositors increased from 16,084,587 with savings deposits of $8,791,253,000 or $88 per capita to 38,867,994 depositors with savings deposits of $20,873,562,000 or $186 per capita in 1924.

Diana Deliveries Are Heavy In Chicago Trade Territory

CHICAGO, June 27.—Fifty-two deliveries have been made by the Quinlan Motors Co., distributors of the new Diana Eight, product of Moon Motor Car Co., in the Chicago territory since the first of the new models arrived here three weeks ago.

About 40 of the cars have been sold in Cook County, the other twelve going to dealers in Milwaukee, western Michigan towns and one or two in other cities of northern Illinois. This week was the first in which advertising of the new Diana has been carried out and with the beginning of an active advertising campaign sales are expected to jump appreciably.

Deliveries at present are practically immediate with the exception of the roadsters. The de luxe sedan is the model which is going best at this time.

WILLS ST. CLAIRE DEALERS

MARYSVILLE, MICH., June 27.—Distributors who have taken on the Wills Sainte Claire line are as follows: A. Lopez Ulloa, San Salvador, Central America; M. L. McCorkle, Eldorado, Arkansas. New dealers include the Nassau Boulevard Garage, Garden City, L. I., N. Y.; Wills Sainte Claire Sales Co., Hartford, Conn.; D. D. Provan, West Haverstraw, N. Y.; Barton Motor Company, Clarendon, Virginia; New Castle Auto Sales, New Castle, Pa.; F. H. Niece, Grove City, Pa.

TRUCK FEES DOUBLED

BOSTON, June 27.—Motor truck dealers have just received the copies of the new law passed governing fees for commercial vehicles beginning with 1926. The minimum has been jumped from $10 to $20. The law provides that all vehicles used in carrying freight, good and merchandise shall pay 50 cents per hundred pounds, which includes both the vehicle and its maximum carrying capacity. The present law provided for a flat rate of $10 per ton. Under the new law the five ton trucks with their chassis and bodies weighing about as much as the carrying capacity will pay about $100. This is an increase of 100 per cent.

Boston Sales for June Show Steadier Tendency Than May

Used Car Demand Advances, Dealers Selling More Than They Take In

BOSTON, June 27.—Motor car sales in Boston for the past few weeks, or since about June 1, have shown a steadier tendency than during May. There has been evidence of a letup but for only a few days instead of for a week or 10 days at a time. Distributors say that the retail sales in Boston have been good, but the dealers in the outside territory do not seem to be doing quite as well as they expected.

Used car sales have been going good, for the report turned into the police showed that during May the dealers sold 135 more of these cars than they took in, and with the scale of individual sales rising each month it meant a better movement for new cars.

Motor car distributors do not look for any seasonable slump of great proportions this summer. Announcement of one big company that it is no longer committed to yearly models will relieve buyers from waiting to learn what that company is going to do in August, as usual. There is no feeling that because summer is here the thing to think of is vacations.

With the registrations to June running 64,265 more than for the corresponding period in 1924 for Massachusetts; and the May listings alone for the state reaching 45,963 or 1,455 above May, 1924, it has given the dealers encouragement to keep plugging along.

PAIGE-DETROIT EARNINGS

DETROIT, June 27.—Paige-Detroit Motor Car Co. net earnings for May were $598,000, exclusive of earnings by branches and subsidiaries, which in April amounted to 16 per cent of the $522,000 net before taxes. Assuming the same ratio for branch earnings in May, total net for that month would be $712,000, or about 97 cents a share on the common after allowing for taxes, interest and preferred dividends. Exclusive of branches and subsidiaries, net earnings for the first five months of 1925 were $1,754,880, or $2,089,100 with the estimated 16 per cent covering branch earnings, amounting to $2.88 a share for the 615,000 shares of common.

EXTRA DIVIDEND

DETROIT, June 27.—An extra dividend of 20 cents a share, payable July 15 to common stockholders of record at the close of business July 7, 1925, has been declared by the board of directors of the C. G. Spring and Bumper Co. The corporation's new plant in Chicago is completed and in full operation. It has a capacity of 4,000 complete automobile bumpers daily. With this output combined with that of the Detroit factory it has been possible to secure greater production and increased earnings.

Passenger Automobile Sales Gaining Slowly in Oregon

Industry Believed to Be Forging Ahead in State With Outlook Promising

PORTLAND, Ore., June 27.—Passenger car sales in Oregon are gaining slowly. That is the most that can be said for the month. May sales increased 63 cars over the previous month, Multnomah County, whieh includes the city of Portland, gaining 32.

However, in view of general business conditions, even this slight increase is looked upon as an indication that the automotive industry is looking up in this state. Healthy indications are seen in a perusal of figures for Multnomah County for April and May. In April sales were 592 less than sales in April, 1924, while in May the loss was but 342 under May of last year. The percentage of loss in sales for 1925 as compared with 1924 is about the same for Multnomah County as for the rest of the state—about 24 per cent.

This loss applies to new car sales only, and considering the fact that dealers are allowing less on "trade ins" than they did last year, the profits may equal those of 1924 even though the volume be decidedly less. Some Portlnd dealers have reported that their used car stock is less than half their figures of 1924.

While truck sales for May were three less than during the same month last year, yet 215 trucks were sold in the state as against 192 in April. The number of trucks sold this year still lacks 58 of attaining last year's figure.

If applications for licenses continue to be filed this month and next as in April and May, Oregon will have more registered motor vehicles by August 1 than during the entire year of 1924.

Philadelphia Rubber Will Double Reclaimed Output

AKRON, O., June 27.—John K. Mitchell, president of the Philadelphia Rubber Works Co., has just announced plans for increasing the production of reclaimed rubber in the company's plants to 10,000,000 pounds a month, compared with present output of around 5,000,000 pounds.

The expansion program includes the cosntruction of two new factories, one in the East, probably Philadelphia, and the other in a locality not yet decided upon, and enlargement of the Akron plant.

NEW CLEVELAND DEALERS

CLEVELAND, O., June 27.—New appointments of dealers by the Cleveland Automobile Company are announced as follows:

Modern Service Auto Co., Ottumwa, Ia.; W. J. Price, Portsmouth, Va., and Alton Cleveland Sales Co., Alton, Ill.

A. A. A. Standings

FRANKLIN, Pa., June 27.—Following are the standings of race drivers announced officially by the American Automobile Association, as of June 15.

1.	DePaolo	2000
2.	Milton	1030
3.	Hartz	640
4.	Cooper	555
5.	Lewis	465
6.	Elliot	270
7.	Shafer	240
8.	McDonogh	145
9.	Duray	135
10.	Comer	124
11.	Kreis	112
12.	Batten	110
13.	Bordino	54
14.	Bennett Hill	50
15.	DePalma	40
16.	Shattuck	35
17.	Devore	15
18.	Mourre	11
19.	Corum	10
20.	Johnson	10
21.	Hepburn	10
22.	James Hill	5

Macon County, Ill., Plans Its Greatest Automobile Show

DECATUR, Ill., June 27.—The biggest automobile show ever given in Macon County, is the ambition of local dealers who have already begun preparations for the exhibition in connection with the county fair in August.

A tent, 100x250 feet will be pitched, wire-enclosed spaces allotted, the canvass decorated as magnificently as a winter show and space allotments made sufficient for three or four machines.

Southern California Sales Increase Greatly in May

New Automobiles Show Advance of 25 Per Cent Over Same Month Last Year

LOS ANGELES, June 27.—The most encouraging sales situation that has existed in southern California for many months has been revealed here with the announcement of the registration of new motor vehicles for May.

Total registration of new automobiles for the eleven counties of the southern part of the state was 9,273, or an increase of 25 per cent over May of last year. The total commercial car registration was 1,101 or an inerease of 17 per cent over 1924.

Among the makes showing the largest gain were Chevrolet, Chrysler, Dodge Brothers, Hupmobile, Lincoln, Maxwell and Nash. The most sensational increase was made by Hudson-Essex, Hudson jumping from 78 to 721 and Essex climbing from 85 to 618.

NEW JR-8 DEALERS

BRIDGEPORT, Conn., June 27.—Announcement is made by the Locomobile Company of America, Inc., of the appointment of the dealers who will handle the new JR-8, deliveries of which are now being made:

Locomobile Co. of New Rochelle, New Rochelle, N. Y.; Thomas H. Sinclair, Port Chester, N. Y.; C. A. McClintock Company, Pittsburgh, Pa.

25 Years Ago In the Automobile Industry
As Recorded In Motor Age

(From MOTOR AGE of July 5, 1900)

The Automobile in Washington

WASHINGTON, June 23.—Gradually the automobile is assuming a position of importance in the commercial life of the national capital. Several hotel proprietors have lately been experimenting with automobiles with a view to substituting them for their horse-propelled vehicles running between the hotels and the depots, and judging from the satisfaction they are giving and the patronage they are commanding, it is not too much to say that the familiar hotel omnibus with its pair of horses will soon be a thing of the past—at least in Washington. The department stores are also experimenting with automobiles in the delivery of goods and it is proving a good advertisement for them.

Cleveland Club Exhibition

The Cleveland Automobile Club, which is the second oldest organization of the kind in the country, is planning for a public exhibition and races, designed to familiarize the people with the possibilities of the automobile and to convince them that it is already a fixed element of transportation. In addition to a road race, it is proposed to have obstacle races, maneuvering contests, grade climbing races and other interesting performances. It is the present plan that the exhibition shall be free and that it shall be held at a time and place that will make it possible for a large number of people to be present.

Speed Reports

At Brussels in a contest for the flying and standing start, Jenatzy with his 3 h.p. gasoline vehicle covered the flying start kilometer in 38 1/5 seconds, a speed of 94 kilometers (50½ miles) to the hour; the former record belonged to Lemaitre, in 47 4/5. Another Belgian, Miesse, rode the same distance in a steam vehicle in 48 4/5 seconds, which is also a world's record.

German Exhibition Planned

A general motor car exhibition will take place at Leipzig from October 19 to 23 in connection with the third German cycle exhibition. The motor division will comprise six groups and deal most extensively not only with the industry itself, but with literature and other items pertaining to the industry. The exhibition is open to competitors of all countries.

New Orleans Reports June Business Better Than May

General Business Outlook Good With Heavy Buying Expected in August

NEW ORLEANS, June 27.—Business for June in most automotive lines, retail and wholesale, was slightly increased over the May business. The general business outlook as it affects the automotive industry is optimistic. Rains came in time to save the truck crops of both Louisiana and Mississippi and the rice crop of the first named state. The tendency is for an increase in time sales. Collections on cars are slow, but repossessions were reported as few. The used car demand during May was brisk. Automotive wholesalers of cars, accessories, parts, etc, reported that dealers were slow in paying and that they gave as a cause slow payment of the retail trade to them.

It is felt that July will be a good average month in this section, but that August will be much better for new cars. People, instead of buying new cars generally now, are, many of them, waiting until fall for the new models and also using their old cars or buying used cars to vacation in during the summer. The vacation period seems to have helped the accessory and replacement parts business in that it is causing many to overhaul old cars to get them ready for taking trips.

NEW PEERLESS DEALERS

CLEVELAND, O., June 27.—Following are the new dealers added to the Peerless organization recently:

Egyptian Motor Car Co. of Duquoin, Ill., Cumberland Peerless Co. of Cumberland, Md.; North Shore Peerless Co.; Woodside, L. I., New York; Van Kollem & Taemens of Babylon, L. I. New York; John E. Meyers, Boonton, N. J.; Miami Motor Car Co., Miami, Okla.; H. W. Bell, Brownsville, Tex.; A. J. Gilliam, Asheville, N. C.; James D. Hazlett Motor Co., Galesburg, Ill.

SECOND FORD DIVIDEND

DETROIT, June 20.—Directors of the Ford Motor Co., Ltd., of Canada, have declared a dividend of 10 per cent paid June 30 to shareholders of record at the close of business on June 20, 1925. This is the second dividend of 10 per cent to be declared by the Ford Motor Co., Ltd., of Canada, during the present fiscal year. The first dividend was declared last fall.

Co-operative Salvaging of Junk Rubber Is New Plan

ST. LOUIS, Mo., June 27.—A co-operative system of salvaging junk rubber from tires and the institution of a Credit Bureau involving the exchange of credit information between members were discussed at a recent meeting of the Associated Tire Dealers of St. Louis at the Claridge Hotel. A committee to work out details of both plans was appointed. It is composed of E. L. Meyer, Jr., of Meyer and Kemp Tire Co., chairman; Joseph Delabar, Sternwear Tire Sales Co.; Chris Hasenpflug, Hasenpflug Tire Co.; Arthur G. Jennings, business manager of the Association and J. A. Estes, field secretary of the National Tire Dealers Association.

Up to the present time it has been the practice of tire dealers to dispose of their salvage tires to junk dealers at a trifling price in order to get rid of them but the increase in the price of crude rubber convinced the dealers that co-operative selling of junk tires would be more profitable because it will be possible to gather them at low cost and sell them in quantity to the highest bidder. Each member in the movement is to receive a credit slip for the junk tires he contributes and at the end of a stated term the proceeds will be prorated.

Under the new plan of operating the credit bureau it is proposed to allow a disinterested official of the association make a confidential examination of the books of members to ascertain the credit standings of their customers. Previously it has been the policy to permit members to submit their own lists of delinquent customers and the results showed that such lists were not accurate.

St. Louis Distributor Will Radiocast

ST. LOUIS, Mo., June 27.—E. J. Krause, president of the Ernest J. Krause Co., 5187 Delmar boulevard, distributor of the Rolls-Royce and a Moon dealer here, has just returned from Washington, D. C., where his application for the installation of a high-powered broadcasting station was approved. The call KEJK has been allotted to his station and a temporary wave length of 400 meters has been given.

Wilson Foundry Expansion Program Will Be Rushed

Pontiac, June 27.—Orders have been given calling for increased speed in the erection of the $2,000,000 expansion project of the Wilson Foundry located here. Under the new plans, the factory should be operating at full capacity by October 1. A big increase in the demand for the new Willys-Knight sixes is given as reason for rushing work of completing the factory.

The foundry, one of the largest devoted exclusively to the manufacture of automobile engines in Michigan, is engaged in making motors for Willys-Overland. The present plant employs 4600 men. With the increased facilities, it is expected that this number will be increased to 6,000.

The building of the new structures will cost approximately $1,500,000. The remaining $500,000 will be spent in replacing old machinery and in the installation of the latest design machinery for foundry work.

Sales in Detroit Continue Sensational Pace of April

Absence of 1924 Models Features Trade-In Business This Season

DETROIT, June 27.—Sales which have kept up the sensational pace set in April may establish a new all-time monthly record for Detroit according to several of the leading dealers and registration figures for the first half of June.

New car demand has not been confined to any one particular class, each make getting its proportion of the business. Many sales topped the 11,000, the best local performance on record.

One of the unusual features of the trade-ins is the absence of 1924 models. Indications are that owners intend to drive last year's models for another season before trading them in. Dealers' stocks of used cars are lower than at any time this year, despite the large number of cars taken in on trades.

A definite shortage of used cars of the more expensive makes exists. Cars that when new sell for $2000 and up do not stay on the used car floor more than 24 hours.

Renault Stock Model Breaks World's Record for 24 Hours

PARIS, June 9—(By mail)—The six-cylinder four-passenger stock Renault, driven by Garfield and Plessier, broke the world's 24-hour record on Montlhery track this week by covering a distance of 2,103.19 miles in the two rounds of the clock.

The car used for this purpose was a 45 hp. 6-cylinder engine of 4.3x6.29-in. bore and stroke, giving a piston displacement of 602.6 cu. in. The previous record had been set up only two weeks earlier by Thomas Gillett driving an English 6-cylinder A. C. of only 122 cu. in. piston displacement, with which he covered 1950 miles in the 24 hours.

In this attempt the Renault captured nine world's records according to the ruling of the International Association of Recognized Automobile Clubs which does not recognize any records established in America. The car maintained a very regular pace of practicaly 98 miles an hour for the first sixteen hours, and began to break existing records from 1,000 kilometers onward.

Mechanical trouble developed after the twenty-first hour. The timing gear chain broke and had to be replaced by a chain taken from another car, and in addition several blades broke away from the flywheel fan. Owing to this the average during the last three hours dropped to 25 miles an hour, but the Renault had such a lead on the previous performance that these records were established with a fairly wide margin.

June Sales Show Advance In Chicago Trade District

Business Believed As Good As in May Which Was Record Month

CHICAGO, June 27.—Wholesale, retail and production phases of the automotive industry showed marked advances during June. Most of the retail dealers had far more orders than could be filled, ending the month with many deliveries still on paper.

Wholesale business throughout the trade territory served by Chicago, including several of the states west of the Mississippi, was beyond that of any month this year. May had set a record with a large number of the wholesalers but unofficial figures show that June was even better.

Although the greater number of the metal industries suffered declines late in May and early in June, with business falling off and employment figures low, the automotive industry was the principal exception. Automobile and accessory concerns were the outstanding examples of expansion in the metal trades, as they employed about 9.9 per cent more workers than in previous months.

It is believed by most manufacturers that this expansion is a salient instance of the leveling of the seasonal curve in automotive production. As the curve nears the line, the accessory business follows closely. It is believed that this accounts largely for the expansion in automotive metal trades while other metal trades are on the decline.

The same quickening of the production trade is noted in Indiana, a large part of which is included in the Chicago trade territory. Some of the Indiana brass works are reporting declines.

Dealers all report as good June business as in May which was a record month. Open models are showing improvement. Sedan models are the best sellers. but a number of touring cars and roadsters also are moving. A large percentage of the open cars are going to export trade. However, several dealers have expressed the opinion that open models are selling better at present than they have for some months past.

MINIMUM SPEED LAW

HARTFORD, June 27.—Connecticut's minimum speed law, whereby the highway commissioner may refuse to license a motor vehicle which is incapable of maintaining a speed of at least 12 miles an hour, is now in force. Commissioner Robbins B. Stoeckel announces that it will be rigidly enforced. Another piece of new legislation forbids the attaching of stickers to windshield or rear window in such manner as to interfere with vision, marking the exit of the bathing girl.

Vocational Training Boosted by Ford

WINDSOR, Ont., June 27.—Vocational education in this city has received what the school authorities regard as invaluable encouragement from the Ford Motor Co., Ltd., of Canada, in its provisions of a three-year apprenticeship course for the graduates of the Windsor-Walkerville technical high school.

The graduates who will be allowed to go into either the tool and die, electrical or sheet metal departments will be paid 40 cents an hour for the first year, 50 cents an hour for the second year and 60 cents an hour for the third and last year.

Fourteen graduates have already availed themselves of the offer, eight choosing tool and die department, four the electrical department and two the sheet metal department.

Up until the present offer, the school had nothing definite in the way of positions to offer its graduates. The offer is considered by school authorities as one of the biggest steps toward fulfilling the purpose for which the technical courses were formed.

LOOK OUT FOR THESE CHECKS

The Jessup Motor & Supply Co., Dodge Brothers dealers of Hannibal, Mo., has had a bad check experience which should be of interest to other members of the trade. The Hannibal house was given a "Universal Traveler's Check" on "The Oriental Tourist Company, of Los Angeles" in the sum of $10 in payment for storage and supplies. Payment of this check was refused on the ground that it had no value, the investigating California bank reporting to the Jessup Company's bank that it had no knowledge of the Oriental Tourist Company and stating it had been informed that the country has been flooded with such worthless checks.

AUBURN ORGANIZATION

AUBURN, Ind., June 27.—Following are new distributors and dealers added to the Auburn organization:

Distributors

Tri-City Motors, Louisville, Ky.; J. A. Wicke, Cedar Rapids, Ia.; Pittsburgh-Auburn Co., Pittsburgh, Pa.; H. W. Neuman Machine Co., Davenport, Ia.; Ike Carpenter, Allegan, Mich.; A. C. Barnhart, Wichita, Falls, Tex.; L. E. Tait, Lincoln, Nebr.

Dealers

Max H. Stock, Ashland, Ky.; B. E. C. Slauson Auto Co., Glendale, Cal.; R. E. Giddens, Carrollton, Ky.; Howard Avenue Motor Sales, Chicago, Ill.; Guy McCullough, Glasford, Ill.; Alexander Auto Co., Lebanon, Ind.; Riverside Motor Sales, Buffalo, N. Y.; W. B. Naugle, Santa Paula, Calif.; The LaFayette Phoenix Garage Co., Lexington, Ky.; Auburn Sales Co., Salem, O.; Auburn Motor Sales & Service, Canton, O.; Albert Kisielewiez, A. K. Garage, Cleveland, O.; L. LeVasseur & Sons, Arctic, R. I.; Walter D. Herr, Athens, N. Y.; Miller & Ziliox, Hamilton, O.; Catherine Levine & Son, Highland Park, Ill.

Chrysler Will "Equip" Cars With Flat Rate Insurance

New Retail Finance Rates for New and Used Automobiles Also Announced

DETROIT, June 27.—Announcement of new and reduced retail finance rates on Chrysler cars and the establishment of a flat insurance rate covering fire and theft insurance uniform throughout the entire United States was made here today by the Chrysler Motor Corporation. Effective July 1, 1925, all Chrysler cars will be delivered to the public insured for one year. This insurance is "standard factory equipment."

Arrangements have been made with the Commercial Credit Company of Baltimore, Commercial Credit Corporation, New York City, Commercial Credit Trust, Chicago, and Commercial Credit Co., Inc., New Orleans, to finance the sales. Separate and distinct terms regarding the financing of new and used cars have been made.

With new cars, there is no recourse, no re-purchase agreement. This is applicable everywhere in the United States; no insurance charges are included in the rates; the down payment will be at least one-third of the cash delivered selling price; and the balance must be paid in twelve equal monthly installments; the financing is figured on the unpaid balance.

It is possible to pay the balance in less than 12 installments and in such cases the finance charges grow less, viz.: When the note is for one month, the charge is 2½ per cent, two months, 3 per cent, three months, 3½ per cent, four months, 4 per cent, five months, 4½ per cent, six months, 5 per cent, seven months, 5½ per cent, eight months, 6 per cent, nine months 6½ per cent, ten months 7 per cent, eleven months 7½ per cent and one year 8 per cent.

According to Chrysler officials, the saving to Chrysler time buyers will be from 30 to 40 per cent less than present rates.

With used cars there is no recourse, no re-purchase agreement; as regards insurance, the finance charge includes fire and theft insurance for 80 per cent of the cash delivered selling price, for one year; the down payment is at least 40 per cent of the cash delivered selling price; the balance calls for not more than twelve monthly installments, provided that the installments shall not be less than $15 monthly. A plan for financing used car sales along the new car sales plan has been devised.

FLYER PLANS GROUND TRIP

WASHINGTON, June 27.—Lieutenant Leigh Wade, one of the army world flyers, will leave Los Angeles July 16 on an attempted non-stop automobile trip to New York, it is announced here by the American Automobile Association which will sponsor the venture. He expects to arrive in New York July 23.

Cannon Ball Baker Claims Many Long Distance Records

Rickenbacker's Chief Test Pilot Kept on Constant "Go" By His Novel Job

DETROIT, June 27.—Anyone who thinks Cannon Ball Baker has not been a busy man as chief test pilot of the Rickenbacker Motor Company will get another idea on looking over his list of outstanding "jobs" so far this year. "Miscellaneous" jobs are not included in the list. Here are some of the things that have kept Baker busy and incidentally some of the late records he claims:

Mid-winter drive from New York to Los Angeles in 71 hours, 33 minutes actual driving time.

"Three Flags" drive, from Vancouver, B. C. to Tia Juana, Mexico, 1,558 miles, covering the distance in 40 hours, .57 minutes.

San Francisco-Los Angeles run, clipping 18 minutes and 50 seconds from best previous record and averaging 49.05 m.p.h. despite handicaps of mountainous conditions and the fact that more than half the route was over gravel highways.

El Paso, Texas to Los Angeles, Calif., 21 hours, 33 minutes, total elapsed time; 908.5 miles, 42.48 miles per hour average.

El Paso, Texas to Phoenix, Ariz., 10 hours, 12 minutes, total elapsed time, 429.1 miles, 42.07 miles per hour average.

Phoenix, Ariz. to Los Angeles, Calif., 11 hours, 11 minutes, total elapsed time; 479.4 miles, 42.87 miles per hour average.

San Luis Obispo, Calif. to Los Angeles, Calif., 4 hours, 24 minutes, total elapsed time; 212.9 miles, 48.4 miles per hour average.

Ogden, Utah to Salt Lake City, Utah; 36 minutes, 18 seconds total elapsed time; 36.5 miles; 60.33 miles per hour average.

Boise, Idaho, to Idaho City, summer and return in second gear; 30 minutes, 39 seconds, total elapsed time; 16 miles; 31.32 miles per hour average.

Boise, Idaho, to Salt Lake City, Utah; 9 hours, 7 minutes total elapsed time; 398 miles; 43.65 miles per hour average.

Circle Route Denver; 1 hour, 17 minutes, 13 4-5 seconds, 57 miles; 44.28 miles per hour average.

Lookout Mountain, Denver, base to summit; 6.2 miles; 10 minutes, 31 2/5 seconds, total elapsed time; 36.38 miles per hour average. Summit to base; 6.2 miles; 9 minutes, 31 2/5 seconds, total elapsed time 39.06 miles per hour average.

Denver, Colo. to Kansas City, Mo., 16 hours, 36 minutes, total elapsed time; 686.4 miles; 41.35 miles per hour average.

Kansas City, Mo. to Excelsior Springs, Mo., and return; 1 hour, 8 minutes, 34 seconds total elapsed time; 57.6 miles; 50.4 miles per hour average.

Texas Firm Holds "Bargain Days" To Sell Used Cars

WICHITA FALLS, Tex., June 27.—The Keim Motor Co. of this city, Studebaker dealers, has applied practices of grocers and department stores to its used car department with pleasing success.

The company is featuring Friday and Saturday of each week as "Used Car Days" at which special bargains are offered. These bargains are advertised in local papers and have been found they "pull many prospects" to the sales rooms. The "Used Car Days" will be continued by the company, John L. Laughlin says.

The Keim company reconditions its used cars. On Fridays and Saturdays there are some special bargains which attract the attention of the people who are thinking of buying a car for driving about on Sunday, or any other day.

Lupton Service Helps Dealers Lay Out Parts Departments

DETROIT, June 27.—A department to help dealers lay out their parts departments and profitably merchandise parts and accessories has been instituted by David Lupton's Sons Co. E. H. Spears, sales manager of the automotive equipment division of the company, has charge of this service which is free to automotive dealers. Dealers contemplating a new buildings or change of building or parts department may have this service by submitting a sketch of the proposed floor plan. The dealer is then furnished with a detailed plan for his parts department, together with merchandising suggestions. A mail information bureau is operated to follow up and give needed advice and when necessary a field supervisor will call to assist the dealer in solving his problems. The company also has a booklet, "Better Parts and Accessory Merchandising," for free distribution to dealers.

CHANDLER DEALERS NAMED

CLEVELAND, O., June 27.—The Chandler Motor Car Company has named new dealers as follows:

McCarty-Greene Motor Co., Gadsden, Ala.; Horton E. Ostrander, Wallace, Idaho; W. H. Tanzey, Stockton, Kans.; Hagerstown Chandler-Cleveland Co., Hagerstown, Md.; Bradford Garage, Brockton, Mass.; Murdock N. Melrose, Washington Street Garage, Brookline, Mass.; Central Garage Co., Canton, Mass.; Somerville Motor Mart, Inc., Somerville, Mass.; Winthrop Chandler-Cleveland Co., Winthrop, Mass.; Broadway Garage, Cape Girardeau, Mo. B. & M. Chandler-Chevrolet Co., Columbus, O.; N. J. Boden, Avon, N. Y.; Otto Tauffener, Tonawanda, N. Y.; The City Motor Car Co., Middletown, O.; Brownsville Chandler-Cleveland Co., Brownsville, Pa.; Scott S. Gill, Coalport, Clearfield County, Pa.; West Indiana Motor Co., Indiana, Pa.; Guenther Motor Co., Souderton, Pa.; W. E. Laidacker, Watsontown, Pa.; George A. Joseph, La Crosse, Wis.

LUSK GETS WHITE TROPHY

NEW ORLEANS, La., June 27.—Milton W. Lusk, New Orleans sales manager of the White Company, has been presented with the president's trophy in honor of having achieved the highest percentage of sales of White trucks as per quota in the company's contest that ended April 15. The award of the trophy took place at a banquet at which Walter C. White, president of the White Company, presented the trophy to Mr. Lusk in the presence of all the southern executives of the company, who were present for the occasion.

Automotive Payroll Reaches High Point at End of May

Employment at Plants Increased Fifty-Six Per Cent During First Five Months

WASHINGTON, June 27.—The amount of payrolls in the automotive industry has increased over 56 per cent since last January and in April practically equalled the highest point ever reached, it is announced here by the Federal Reserve Board in its official June bulletin. It is further set forth that production of automobiles in April was at a new high record with the output of passenger cars in the United States about 376,000 in April, an increase of 115 per cent in the four months since last December, when production was the smallest since early 1922.

"Employment," continues the bulletin, "has also increased considerably, but the index for April did not equal the figures for the first four months of 1924. Weekly reports of employment in Detroit manufacturing plants, however, indicate further substantial increases during May.

Large Sales Volume

"Shipments and sales of automobiles have also been large and, in fact, according to reports, have made the high rate of production necessary in order to meet the demand. Freight car load shipments of automobiles in April were the largest ever recorded except in March, 1924, and driveaways and shipments by boat both exceeded corresponding figures for any month since 1923, when there was a slight shortage of freight cars.

Middle western dealers, reporting to the Federal Reserve Bank of Chicago, showed substantial increases in both wholesale and retail sales during April, as compared with March. Further evidence of increases in factory sales of automobiles is given by figures of internal revenue collections. Taxes collected on automobiles and motorcycles, other than trucks, totaled over $11,000,000 in April, as compared with only $5,700,000 in March and $9,500,000 in April, 1924. Sales of accessories and parts have also increased considerably in recent months.

Fiat Company Opens Active Campaign for Small Model

Novel Sales Methods Necessary Because of Rapid Exchange Rate Shifts

PARIS, June 13—(By mail)—An active sales campaign in favor of their new light car is being carried out by the Fiat Company in Italy. At the Milan Samples Fair a special hall was made use of for exhibiting all the varied types of bodies standardized on this chassis. On the close of the exhibition the twelve exhibition cars were placed in charge of the ex-race driver Felice Nazzaro and sent on a tour round Italy, calling at all the big cities and remaining on exhibition in each of them for a few days.

Fiat is taking orders for these cars on rather original lines. If cash payment is made with the order, a definite guarantee is given that there will be no increase, but there is no guarantee as to delivery date. This price is based on the present value of the lira relative to the dollar. If only part payment is made on placing the order, the possible increase on the outstanding amount will be proportionate to the increase in the cost of the dollar.

Only a general indication has been given as to delivery dates, but so great is the confidence of the Italian public in the Fiat Company that orders are flowing in at a record rate, most of them being full cash payment in advance. This has given the company several million liras cash and has made it possible for them to purchase dollars to cover the cost of all raw material required from abroad for an immense number of cars.

Recognizing the unusual nature of this method of salesmanship, and believing that it would have an important influence on the entire Italian automobile market, the Fiat Company called together all other automobile manufacturers and the leading importers of foreign cars and revealed their plan to them before presenting it to the public. Other firms were given an opportunity of participating in this scheme if they desired.

Deliveries of the new Fiat small car have not yet begun, but work on the new factory, erected specially for this model, being now almost completed, it is expected that deliveries will be made in big quantities in the early Fall.

NEW OAKLAND DEALERS

PONTIAC, Mich., June 27.—Oakland Car Company announces the following new dealers:

Oakland Motor Sales, Chicago, Ill.; Lake Shore Auto Sales, Evanston, Ill.; Quick Motors, Watertown, N. Y.; Srader-Calloway Motor Co., Broken Arrow, Okla.; Miller's Auto Service, Bloomingdale, N. J.; Arlington Garage, Kearney, N. J.; Kennedy & Kipper, Bellefontaine, O.; Kaleva Auto Company, Astoria, Ore.; Smith & McCarthy, Pittsfield, Mass.; J. F. Hardin, McMinnville, Ore.

Herman Boltz, Gardena, N. D.; Oakland Sales Company, Guthrie, Okla.; Darneille Griffin Motor Co., The Dalles, Ore.; Wichman Motor Co., Farmington, Mo.; Majeres Service Station, Garrison, N. D.; Sands Motor Sales Co., Inc., New Market, N. H.; Globe Garage, Southbridge, Mass.; Patterson & Boyer Motor Co., Easton, Pa.; R. O. Vaughan, Austin, Tex.; Crawford Garage, Roxbury, Mass.; Helenick Motor Car Co., Blushing, N. Y.; Richmond Motor Sales Co., Richford, Vt.; Ward's Garage, Leominster, Mass.; Middletown Bond Service, Inc., Middletown, N. Y.

W. A. Wright, Paris, Ill.; N. M. Conger, Warsaw, N. Y.; Rucker Auto Supply Co., Ashland, Ky.; Pikeville Oakland Co., Pikeville, Ky.; A. Ehlers, 306 West B Street, McCook, Neb.; Boone Tavern Garage, Berea, Ky.; Tri-Cities Motor Co., Louisville, Ky.; Guetschuff & Quist, Gaylord, Minn.; Watsonville Garage, Watsonville, Calif.; A. B. Kelley, Shelbyville, Ill.; Anderson Motor Co., Independence, Mo.

New President of Gray Motors



Ernest M. Howe

Hupmobile Shipments Jump 30 to 40 Per Cent in June

DETROIT, June 27.—An increase of from 30 to 40 per cent will be shown in June shipments of Hupmobiles over the same period last year, according to O. C. Hutchinson, general sales manager of the Hupp Motor Car Corporation. The figures for the present month also will be higher than the shipments for June, 1923, and will exceed May by at least 500 cars.

From June 1 to June 10, eight cylinder shipments and orders for shipments totaled more than 1200 cars. This created a new Hupp record for its cars of the eight-in-line type. Figures given out at the factory show that Hupp carried over into June more than $2,000,000 worth of unfilled orders. In addition orders for the different models in excess of $3,000,000 were received at the factory during the first ten days of June.

According to Mr. Hutchinson, the recent reduction of $180 in the price of each model has caused the sales to jump 30 per cent higher than their previous record. The indications are that the sales will continue to show the same steady climb for the next several weeks.

Western Aero League Is Organized at Los Angeles

New Body Will Cover All Territory West of Denver, According to Plan

LOS ANGELES, June 27.—With the establishment of permanent airports and air landings for transcontinental flyers as its chief aim, the Western Aero League has been organized in Los Angeles with a large initial membership. The organization meeting was held at Ross Field, Arcadia, and the following officers were elected: Dr. C. T. Young, Glendale, president; Earle Ovington, Santa Barbara, first vice-president; Lieut. C. P. Kane, Ross Field, second vice-president; Frank H. Page, San Diego, third vice-president; A. L. Oliger, Santa Ana, treasurer; Howard I. Wood, Glendale, general secretary; Robert Hausler, Winslow, Ariz., field secretary.

Arrangements were made to incorporate in California as a non-profit organization and to file papers in all states west of Denver, which will be the territory covered by the new league. A program for furthering aviation was adopted and assurances of co-operation were received from more than a dozen chambers of commerce. Glendale was selected as the headquarters of the league for the ensuing twelve months, and the next formal meeting will be held at San Diego in August.

Memberships are promised the league from Arizona, New Mexico, Oregon and Washington and directors will be added from these states as soon as they are received. The directorate is now composed as follows: T. C. Young, Glendale; Frank H. Page, San Diego; W. G. Scott, Bishop, Cal.; Earle Ovington, Santa Barbara; Lieut. C. P. Kano, Army Air Service; Ben Spencer, Ontario, Cal.; A. L. Oliger, Santa Ana; George B. Harrison, Los Angeles; Howard L. Wood, Glendale; Earl S. Daugherty, Long Beach; Bob Hausler, Winslow, Ariz.; Elliott H. Barrett, Los Angeles; Thomas B. Slate, Glendale; J. W. Jennings, Bell., Cal., and J. C. Reilly, Glendale.

BODY COMPANY EXPANDS

CINCINNATI, June 27.—The Burkett Closed Body Co., Dayton, Ohio, has acquired 71,000 square feet of factory space on Davis street which will be utilized in the manufacture of closed automobile bodies. Under present conditions the company has a production of thirty closed automobile bodies monthly. In the new factory, which is three stories high with a private railroad siding, present production will be tripled. The company now employs about forty skilled workmen, but that number will be doubled in the new plant. The present factor of the company located at 1312 East First street, has been leased for five years to the Coffield Tire Protector Co.

Along Automobile Row

KANSAS CITY.—An agency for the Rolls-Royce motor car has been opened here, the first in Kansas City. The agency is known as the Rolls-Royce Parker Schaefer, Inc.

BOSTON.—The Auburn Boston Company has purchased the business here of the F. A. Dutton Motor Company, for a number of years distributor of the Auburn for New England.

CLEVELAND, O.—The Solenberger Piston Ring Company of Cleveland announces the establishment of a factory branch at Los Angeles. Thomas C. Cooper will be in charge of the new branch.

SPRINGFIELD, MASS.—George E. Adams, Inc., is now distributor in Springfield for Ford cars, taking the place of the former H. K. Smith Company.

ST. LOUIS, MO.—Diesing Motor Sales Co., Rickenbacker distributor in St. Louis, has moved to its new quarters at 2216-18 Locust street. The move was made to give the company additional space.

CHICAGO.—Thomas A. Warren has opened a Kissel agency in Oak Park, Illinois. He was for many years sales manager for H. P. Branstetter, Inc., Kissel Car distributors. The name of the new company is the Oak Park Kissel Sales Company and is located at 1028 Madison street.

LOS ANGELES.—The J. W. Leavitt Company, California distributors for the Oldsmobile, announces the following appointments of Oldsmobile dealers in Southern California: H. C. Landstrom, Bakersfield; R. A. MacLean Motor Sales Company, Burbank; Fullerton Motor Company, Fullerton; Frehm Oldsmobile Company, Santa Ana.

DETROIT.—Byron C. Foy, former Detroit business man who for the past four years has been distributing cars in Los Angeles, has returned to Detroit as a partner in the John H. Thompson Company, Maxwell-Chrysler distributors for Detroit and the surrounding territory. Mr. Foy's new position will be that of vice-president and treasurer, Mr. Thompson retaining the presidency of the firm.

SPRINGFIELD, MASS.—Jack Lenihan, proprietor of the Olive Street Garage in Greenfield, Mass., has been appointed Paige and Jewett dealer in that territory.

ROCK ISLAND, ILL.—The Greenlease Motor Company of Kansas City has taken all holdings of the J. H. Hansen Cadillac company in Sioux City and Omaha, and although complete announcement of the plans of the new owners has not been made it is understood the organizations will be retained intact.

DES MOINES.—C. B. Ziegler and W. H. Rosenberger, former owners of the Electric Car Service station, 209 Tenth street, have opened the Capitol garage, 1012-16 Locust street, with complete mechanical, lubrication and electric car service maintained.

MEMPHIS, TENN.—Appointment of the Harter B. Hull Co. as dealer in Memphis and vicinity, succeeding the Hull-Cameron Co., is announced by Dodge Brothers.

DAVENPORT, IA.—Forty agents for the Studebaker car from the eastern Iowa and western Illinois territory met at the Hotel Blackhawk for a sales-building conference conducted by the factory executives throughout the country.

MONTREAL—The Royal Garage, McGill College Avenue, has been opened to the public. It is a fireproof building with space for 370 cars, and is the last word in modern garage construction.

WINNIPEG, MAN.—Great West Motors, Ltd., has taken over the salesroom and garage formerly occupied by Capital Motors, and from this location will handle a full line of Chevrolet and Oakland cars and Reo trucks, using the premises as a salesroom and service station.

HALIFAX, N. S.—The opening recently of the new quarters of the Archibald Motor Co., this city, gives the city of Halifax the largest motor show room and service station east of Montreal.

FORT WILLIAM, ONT.—Roach & Irwin is the name of a new company operating in the twin cities and Port Arthur. They will handle Maxwell-Chrysler lines in addition to International trucks.

KOKOMO, IND.—Pending the appointment of a new sales manager to succeed E. M. Lubeck, who resigned, O. T. Guennee, formerly assistant manager of sales and advertising, is acting general sales manager of the Baker Apperson Automobile Co.

NEW ORLEANS—Abbott Motors, Inc., distributor of the Packard line in about one-third of the state of Louisiana and in a few counties of Mississippi, now located at 1400 St. Charles avenue, will remove to 1711 St. Charles avenue about October 1.

BALTIMORE—The Maryland Tire Co., Inc., 1011 West North avenue, Baltimore, has been incorporated with $25,00 capital stock to deal in automobile tires and electrical supplies.

OSHKOSH, WIS.—Krueger Automobile Company of 62-64 State street, has been appointed Nash and Ajax dealer in Oshkosh and vicinity.

MADISON, WIS.—The East Side Motor Co. has been formed at Madison, Wis., to carry on a general garage business. Capital stock of the new organization is $25,000.

WILMINGTON, DEL.—Harry N. Partington has been appointed general sales manager of the Wilmington Automobile Co., 221 West Tenth street. The company handles the Buick and Chevrolet lines.

LOS ANGELES—Lynn C. Buxton has withdrawn from the retail field as a Willys Knight and Overland dealer and henceforth will confine his activities as a distributor of Stearns-Knight cars in Southern California.

BIRMINGHAM—The Olds Motor Works has announced the appointment of the Jordan Motor Company, distributors for the Oldsmobile in Birmingham, Bessemer and surrounding territory.

DETROIT—W. M. Chamberlain, director of sales development of the Oakland Motor Car Company, announces the appointment of M. L. Buck as field instructor, succeeding G. A. Johnston, who becomes retail sales manager of the Matheson-Oakland Company, Grand Rapids, Mich.

NEW ORLEANS—Harry Dawes has opened in Natchez, Miss., the Dawes Motor Company, which will handle Star cars exclusively.

AKRON—Walter E. Smith, of Youngstown, O., is the new local distributor in this territory for American-Akron tires. Mr. Smith now conducts an automobile accessory shop in Youngstown.

HARTFORD, CONN.—Russell P. Taber, Reo distributor in nearly all of the state of Connecticut, will on August 1 take over the Reo representation in Hampden county, Mass.

SAN ANTONIO, TEXAS—The Wroten-Hundley Motor Company, Dodge dealers and distributors in the San Antonio territory, has incorporated. The capital stock is $160,000.

TOLEDO—Robert E. Clingan, who for several years has been operating head of The Bock Bearing Company, one of Toledo's largest industries, was elected president of the company at a recent meeting of the board of directors.

LOS ANGELES—Mutual Motors, Inc., Southern California distributor for the Roamer, announces the appointment of W. F. Luvasky as the Roamer dealer in Hollywood, with sales and service building at 3206 Los Feliz boulevard.

CHICAGO—J. A. Hayes, formerly associated with Garford and GMC trucks, has been appointed district sales manager for the Diamond T. Motor Company with Wisconsin and Minnesota as his territory.

NEW ORLEANS—Ground has been broken for the erection of a new building for the Chevrolet Motor Co., at the corner of Baronne and Julia streets.

MILWAUKEE—The Achen Motor Co., Chandler and Cleveland distributor in Milwaukee, has purchased a plot of ground, 120 by 156 feet, at the southwest corner of Jackson and Oneida, streets upon which a new three-story automobile sales and service building will be erected.

ST. LOUIS, MO.—A reorganization of the company which was recently formed to distribute Kissel cars in St. Louis has been effected. The name of the company has been changed from the Meyer-Price Motor Car Co. to the Price-Renaud Motor Co., Inc.

CHICAGO—The Lohley Motor Sales Company, 2658 Lawrence avenue, Jordan dealers, have been appointed northwest side dealers for sales and service an Moon cars.

LOS ANGELES—Harry Handiges, formerly assistant sales manager at the Los Angeles factory branch of the Star Motor Company of California, has been appointed sales manager of the Fresno factory branch of the same company.

MILWAUKEE—J. S. Alcott, formerly in charge of wholesale and retail sales for R. D. Rockstead, Milwaukee, when distributor of Gardner and Lexington motor cars for Wisconsin and Upper Michigan, has been appointed head of the sales organization of the Belden-Nash Motor Co. of Racine, Wis.

DAYTON, OHIO—The Miami Garage Co. has been chartered with an authorized capital of $200,000 to operate a general garage.

LITTLE ROCK, ARK.—R. A. Cook has bought the controlling stock in the McGill-Bowman Overland Company, 313-315 West Capitol avenue, local distributors for the Willys-Knight Overland Company.

BOSTON—R. W. Burham, manager of the Boston organization for J. C. Harvey of Worcester, has signed a direct factory contract to distribute Moon and Diana cars here. The company is also associate dealer for the Peerless in Boston.

NEW YORK—Gunner R. Lundane, formerly manager of the New York office of the Black & Decker Manufacturing Company, has resigned to join the United States Electrical Tool Company of Cincinnati, Ohio.

MOLINE, ILL.—Harry Holm and Andrew M. Nielson, well known auto dealers in Moline, have established an Oldsmobile agency at 246 West Main street, Galesburg, Ill., with Mr. Holm in charge of the Galesburg office.

DETROIT—Malcolm McCormick, sales manager of the replacement parts department of McCord Radiator & Manufacturing Company, has resigned effective July 1 and his duties will be assumed by P. L. Barter, vice president in charge of sales, who, heretofore, has had general supervision.

COLUMBUS, O.—Public opening of the new Hudson-Essex sales and service establishment, 552 E. Broad street, was held recently. The company is distributor for the Hudson-Essex motor cars.

CINCINNATI—Backmeier Sales Corporation with general offices in Cincinnati and branch warehouses in Atlanta and Dallas, has been appointed manufacturer's agent to handle and promote the sale of United States electrical tools in the 14 southern states.

PARIS, TENN.—E. P. Orr has secured a franchise to establish a Willys-Overland dealership here.

With the Associations

Dealers Protest Law

PORTLAND, Ore., June 27.—The Automotive Dealers' Association of Portland, in a statement signed by H. W. Roberts, president of the group, has filed protest against the interpretation placed on the new Oregon commercial vehicle tax law, which now is said to add an extra impost on practically every type of vehicle used on the highways for other than exclusively pleasure purposes.

The measure to draw the fire of the dealer group is chapter 363 of the general laws of Oregon, passed as house bill 21 at the last session of the legislature during the winter.

This measure originally was intended to impose 50 per cent additional license fee on vehicles being used for wholesale and retail delivery. But instead of confining the fee collection to trucks and delivery cars, the law now is interpreted to include passenger cars used by salesmen, or passenger cars used for any commercial purpose whatever, the auto group avers.

Hints of possible legal action, to submit the measure to the scrutiny of higher courts, were made in the discussion of the situation.

Accessory Men Meet

PHILADELPHIA, June 27.—The Automobile Accessories Business Association held its annual outing and dinner at Betzwood Inn Farms, Betzwood, recently, starting from Spring Garden and Broad street at 9:30 in the morning in automobiles headed by buglers. There were 36 cars in line, all gaily decorated with pennants and American flags. Arrived at the grounds there were baseball games for members and guests, a quoit pitching contest and other athletic events. Luncheon was served at 12:30 and dinner at 6, was followed by a vaudeville entertainment and music by an orchestra.

Bus Operators Elect

ST. LOUIS, Mo., June 27.—Four directors were elected at the second meeting of the Motorbus Operators' Association of Missouri held in the offices of the Kardell Motor Car Co., Reo distributors here.

A constitution and by-laws submitted by Robert E. Lee, manager of the St. Louis Automobile Dealers' Association was adopted. A membership fee of $25 and dues of $25 per year were established for members of the association.

The new directors are: B. V. Steinmetz, Farmington-St. Louis Motor Coach Co.; Fred Bauer, Pacific-St. Louis Bus Co.; J. R. Moore, Moore Coach Line and J. R. Delaney, Old Trails Bus Co.

The Old Trails Bus Co. and the Midwest Auto Travel Co., joined the association.

COLE WINS IN BALTIMORE GOLF

BALTIMORE, June 27.—With a gross score of 82, beating Howard Ford by two strokes, Tom Cole has again won the highest honors in the monthly golf tournament held by the Baltimore Automobile Trade Association. Low net score in Class A was made by Jack Horner with a 67 after deduction of a 24 handicap. Low gross honors in Class B were won by A. J. Hunter, 89, and low net by William L. Duck, 66. Walter Kneip won Class C with low gross of 104 and A. M. Eastwick's 50 won low net honors in this class.

Convention Planned

HARRISBURG, Pa., June 27.—The fifth annual business convention and frolic of the Pennsylvania Automotive Trade Association will take place in Pittsburgh, October 12, 13, 14. Full details of the business, entertainment and banquet program will be broadcast to every automotive merchant in the state. More than 1,000 members will attend the discussions and addresses by nationally recognized leaders of every phase of this business and to enjoy the "big town" entertainment that the Pittsburgh Automobile Trade Association is arranging. Among many other features will be a meeting of the officials and secretaries of each and every local dealers' association in Pennsylvania.

Arrange to Test Lights

ST. LOUIS, Mo., June 27.—The St. Louis Automobile Dealers' Association has made arrangements with the Nelson Motor Car Maintenance Co., 3337 Lawton avenue for free testing of automobile lights for the police department and all dealer members. A standard test board has been installed in the Nelson Garage. Dave G. Nelson, head of the company will test lights for all persons sent to him by the police and dealers may send new and used cars to him.

Robert E. Lees, manager of the association, said his organization was taking this method as a means of reducing the number of arrests for illegal lights.

A demonstration of the testing system was made by Jesse H. Phelps, illuminating engineer for the Minneapolis Electric Lamp Co., of Minneapolis, Minn., aided by Dave Nelson. Carl H. Christine, safety engineer of the St. Louis Safety Council, Lee and a delegation from the police motorcycle squad attended. A number of cars showing a variety of lighting equipments were placed on the test range and lights were adjusted by experts.

Kearney Heads Club

MONTREAL, June 27.—W. P. Kearney has been elected director of the Automotive Booster Club of Montreal. Mr. Kearney is vice-president of the Dominion Chain Company, Ltd., manufacturers of the Weed chains and bumpers. He also is chairman of the "On to Montreal" committee for the 1926 A. E. A. Summer convention.

Syracuse Dealers Celebrate

SYRACUSE, N. Y., June 27.—Members of the Syracuse Automobile Dealers' Association held their annual picnic at Bayshore Inn, Oneida Lake last week with dealers from Utica, Cortland, Auburn and other nearby cities as guests. An "athletic" program and stunts followed by a chicken dinner made the event an enjoyable one. C. W. Bull was chairman of the picnic committee which had as other members C. H. Hayes, secretary of the association, J. F. O'Connor, H. Munro Gere, Ed Moyer, George Fonda, Joseph Martlew and B. L. Eskridge.

Advertising Planned

NEW YORK, June 27.—At the last meeting of the National Battery Manufacturers' Association, it was voted to enter into a co-operative advertising campaign on a small scale for the purpose of improving the market situation in the battery field. This matter was given careful consideration, being discussed from all angles.

A committee was appointed, consisting of J. B. Perlman, of the Hartford Battery Company, L. E. Murray of Automotive Electricity, O. B. Towne, the commissioner of the association, and David Beecroft of the Chilton-Class Journal Company, which will have this matter in charge and present a plan at the next meeting.

In order that this work may be put under way and reach the field where the most immediate good may be done, it was voted that the advertising planned be confined to the dealers.

Bus Men to Meet

TORONTO, June 27.—A number of the leading motor truck and bus owners of the Province of Ontario will convene in Toronto soon for the annual meeting of the Ontario Motor Truck Owners' Association. After the election of officers several short addresses will be delivered by authorities on the various phases of motor truck transportation.

Truck Association Outing

PHILADELPHIA, June 27.—The Motor Truck Association of Philadelphia held its annual outing and dinner at the Rifle Club, Old Schuetzen Park, recently.

Battle Over Insurance Rates Is Believed Near Conclusion

Directors of N. A. C. C. Will Consider Plans for Surety Company of Their Own

NEW YORK, June 27.—The decision of the directors of the National Automobile Chamber of Commerce to consider plans for a cooperative insurance company to bring down automobile coverage rates marks the culmination of a long-standing controversy between the manufacturers and the underwriters.

For the last 15 years the automobile producers have been dissatisfied with the existing insurance conditions. In 1914 a movement similar to the present one was launched, and the Manufacturers & Dealers Motor Underwriters, Inc., was organized with two independent insurance companies participating. Internal disagreements brought the enterprise to an early end, but the manufacturers have kept the idea in mind to be brought out again at the opportune moment.

Several recent actions of the underwriters, it is learned, led to the revival of the project by the N. A. C. C. Theft rates on closed cars have been advanced, and although the schedules on open cars were lowered at the same time, the manufacturers feel that the insurance burden has been considerably increased, in view of the large proportion of closed cars in current production.

It was revealed that the underwritings have grievances of their own. Frequent price reductions made abruptly and without warning have created a moral hazard, they say, since a purchaser frequently finds himself with a car bought at $1,500, for example, and insured accordingly, and now listed at $1250. If such a car can be "stolen" the assured may make $250 profit.

It was held that the popularity of certain cars with bootleggers had led to an unusual number of thefts of these vehicles and consequently to an advance in the rates. What the rum runner particularly looks for in a car is roomy tonneau space, quick getaway and high speed. All the car rates, it was said, are based on experience tables, and represent the lowest that can be quoted if the insurance companies are to continue in business.

Closed car rates, said the underwriters' spokesmen, were advanced because thieves are finding these models the easiest to dispose of. The lock question, they added, had been agitated for five years, and despite their conviction that the coincidental lock is the best type, its adoption had been deferred again and again in deference to the manufacturers.

Considerable skepticism with regard to the manufacturers' project was expressed by the insurance men.

"They are welcome to the effort," said one underwriter. "The insurance market is free and open. There is a great deal of competition and no company could make large profits for very long. The commercial records are strewn with the wrecks of underwriting companies and if the automobile manufacturers think they can succeed where others have failed, let them by all means make the attempt."

Coming Motor Events

Automobile Shows

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition.

Dallas, Tex. ..... Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis. ..... Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal. ..... Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich. ..... Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla. ..... Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal. ..... Sept. 6-12
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La. ..... Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va. ..... Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt. ..... Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina ..... Oct. 3-13
Pan-American Road Congress.

London, England ..... Oct. 8-17
Olympia Passenger Car Show.

London, England ..... Oct. 29-Nov. 7
Annual Truck Show.

Races

Altoona, Pa. ..... Sept. 7

Belgium ..... July 5
European Grand Prix Race.

Charlotte, N. C. ..... Oct. 24

Fresno, CaCl. ..... Sept. 30

Laurel, Md. ..... Oct. 10
A. A. A. Race, Baltimore-Washington Speedway.

Los Angeles, Cal. ..... Nov. 26

Monza, Italy ..... Sept. 6
Italian Grand Prix Race.

Paris Montlhery track ..... July 26
French Grand Prix.

Conventions

Buenos Aires, Argentine ..... Oct. 3-13
Pan-American Road Congress.

Cleveland ..... Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland ..... Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia. ..... Nov. 12-13
Automotive Merchants' Association Convention.

Everett, Wash. ..... July
Annual state convention Washington Automotive Trades Association.

Montreal, Que. ..... Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia ..... September
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa. ..... Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis ..... Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Tuscaloosa, Ala. ..... July 20-21
Midsummer meeting of the Alabama Automotive Trades Association

BLACKHAWK CHANGES NAME

In order that the firm name may be in keeping with the trade name of its products, the American Grinder Mfg. Co., Milwaukee, Wis., has changed its name to Blackhawk Mfg. Co. This company has manufactured for years the Blackhawk line of welded wrenches, consisting of fixed and detachable handle socket wrenches, and special service wrenches.

SERVICE SECTION TO MOVE

NEW CASTLE, Ind., June 27.—The service department of Maxwell Motor Corporation will be removed from this city to Dayton, O., according to an announcement made by company officers. The transfer will be made to give the company more room in its New Castle plant for its drop forge, transmission, screw machine and axle departments. Considerable production will be done at Dayton in making of parts for Maxwell cars built previous to 1925. All parts will be supplied from the Dayton plant which will do a business estimated at $5,000,000 to $6,000,000 annually.

Noise Elimination Features S. A. E. Summer Convention

Lubrication, Steam Cooling, Brakes, Riding Qualities and Transmission Discussed

WHITE SULPHUR SPRINGS, W. Va., June 27.—Noise elimination, lubrication, riding qualities, brakes and transmissions were among the important subjects discussed at the summer meeting of the Society of Automotive Engineers here last week.

Running through many of the sessions in a subsidiary way and receiving major emphasis in one or two instances were the topics of noise elimination and the desirability of a broader conception of commercial problems on the part of the automotive engineers.

T. J. Little, Jr., chief engineer of the Lincoln Motor Co., was nominated for the presidency of the society. The meeting followed the precedent set last year of having numerous demonstrations and exhibits to accompany the various papers.

Experiments in noise measurement were performed, details of bearing lubrication were visualized by motion pictures, and H. L. Horning had an engine in operation to illustrate his ideas on steam cooling.

New standards adopted covered valves, piston pins and battery ratings. The term "motorcoach" also was adopted in preference to "motor bus." The engineers showed a great deal of interest in the possibilities of infinitely variable transmissions, R. M. Heldt, engineering editor of Automotive Industries presenting a paper on developments in this field, but the impression was that in the immediate future attention will be centered on the development of present types.

Steam cooling received considerable attention not only through the discussion initiated by Mr. Horning, but also by the remarks of A. Ludlow Clayden.

Rice Made Chairman of U. S. Delegation to Road Meeting

WASHINGTON, June 27.—Herbert E. Rice, of Detroit, vice president of General Motors, former president of the Cadillac Company, and at the present time special assistant to President Sloan of General Motors was this week named by President Coolidge to be chairman of the Pan-American Roads Congress Commission, meeting in Buenos Aires, October 3 to 13.

Mr. Rice is succeeding J. Walter Drake, assistant secretary of commerce, who has resigned from the commission. The appointment of Mr. Rice was on the recommendation of Mr. Drake, made just before the latter sailed for Brussels last week as a delegate to the International Chamber of Commerce. He will not return from Europe until the latter part of August and the delegation sails for Latin America on September 3.

SQUEEKS and RATTLES

CALL THE WAGON



Mrs. McNutt: "Why did the Ladies' Aid try to have that man arrested yesterday?"

Mrs. Blab: "The brute choked his car 'till he killed the engine.

PAGE MR. LONGFELLOW

The shades of night were falling fast,
The guy stepped on it and rushed past;
A crash—he died without a sound,
They opened up his head and found
—Excelsior!

—Baltimore Sun.

ETHYL WHAT?

"How far do you get on a gallon?"

"All depends on what's in the gallon."

—Juggler.

1: "Say, what is a hubbub?"

2: "It's part of a wheel; but don't call me any more nicknames."

—Texas Ranger.

The machine was crossing the railroad track
To beat the train it tried
And they buried the car with the occupants
Because the engine died.

—Carnegie Tech Puppet.

Some open minds should be closed for repairs.

—Williams Purple Cow.

REPAIRS

Judge: "Why did you steal that monkey-wrench and crowbar?"

Prisoner: "I wuz broke yer honor."

Judge (waxing wise): "What do you think you are—an automobile?"

Prisoner (waxing wiser): "No, yer honor—I wanted to mend my ways."

—N. Y. U. Medley.

TWO GOOD METHODS

Here lie two men whom we agree
Have won the cut-glass bonnet;
The first of them blew out the gas;
The other stepped upon it.

—Gas Gazette.

FIFTH ROW CENTER

Motor Cop: "I've a good mind to give you a ticket."

Speeder: "Well, if you must, make it for a musical comedy."

—N. Y. U. Medley.

A CINCH

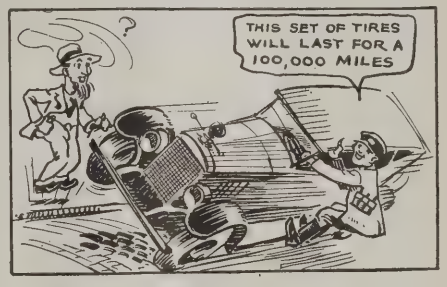
"Take a dollar chance on an automobile?"

"But I don't want one."

"That's all right. You may not get it."

—Hamilton Royal Gaboon.

HE'S NEEDED



"Is your chauffeur economical?"

"Very; he never runs the car on more than two wheels or three cylinders."

—University of Chicago Phoenix.

NEW VELIE DEALERS

MOLINE, Ill., June 27.—New dealers were added to the organization of the Velie Motors Corporation during May as follows:

Iron Mountain Velie Co., Iron Mountain, Mich.; Mr. B. Hall Green, Cambria, Wyoming; Ulrich Velie Service, Massillon, Ohio; Canton Mitchell Co., Canton, O.; L. H. Stenhilber, Montrose, Minn.; Hank Wade Motors, Philadelphia.

North Canton Chevrolet Sales, North Canton, O.; Shields Auto Company, Waseca, Minn.; August J. Biederbick, Grand Meadow, Minn.; Frank A. Pratt, Worthington, Minn.; J. H. Stoner, Logan, Ia.; Marin Velie Co., San Rafael, Cal.; Clarence H. Sackett, Placerville, Cal.; J. B. Harris, Marysville, Cal.

H. A. Hannum, Springfield, Mass.; Kepple Brothers, Brackenridge, Pa.; Hubbard & Wood, Tacoma, Wash.; J. A. Patterson, Carbondale, Ill.—Dealer; E. F. Sensor, Elgin, Ill.; Temple St. Service Garage, Willimantic, Conn.; Bush Auto Sales, East Stroudsburg, Pa.

Fletcher & Ehipple, Wyanet, Ill.; Post and Post, Brookfield, Ill.; Knut Mathisen Motor Co., Gardner, Ill.; Royal Motor Sales Co., Gary, Ind.; Julius Spieker, Raymond, Minn.; Michael Swift, Stafford, Conn.

PACKARD EARNINGS CLIMB

DETROIT, June 27.—Net earnings for the Packard Motor Car Co., for March, April and May, the third quarter of the company's fiscal year, in a statement just issued, are $3,299,385, which exceeds the net earnings for the first half of the company's fiscal year. The total net earnings for the nine months are $6,254,128. Increased volume of production coupled with a continuing demand for cars points to the probability of 1925 being the most profitable year in the history of the company. The present schedule calls for the shipment of 40 per cent more cars in the fourth quarter than in the quarter recently ended.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
------	5-p	Phaeton	$1,575
3100	5-p	Sp. Phaeton	1,650
3145	5-p	Coupe	2,050
3470	5-p	Sp. Sedan	2,100
------	5-p	Brougham	2,050
		"ST 8"	
------	5-p	Sp. Phaeton	1,995
------	3-p	Coupe	2,450
------	4-p	Brougham	2,450
------	5-p	Sedan	2,595
AUBURN "4"			
------	5-p	Touring	$795
		"6-66"	
------	6-p	Roadster	1,495
------	5-p	Brougham	1,595
------	5-p	Sedan	1,795
		"8-88"	
------	6-p	Roadster	1,975
------	4-p	Sport Roadster	1,975
------	4-p	Club Roadster	2,075
------	4-p	Sport Brougham	2,250
------	5-p	Sedan	2,350
BARLEY "6" 6-50			
2750	5-p	Touring	$1,395
2800	5-p	Sp. Touring	1,495
3100	5-p	Sedan	1,850
3150	5-p	Sp. Sedan	2,250
BUICK "Standard"			
2750	2-p	Roadster	$1,150
2920	5-p	Touring	1,175
2960	2-p	Coupe	1,375
3075	4-p	Coupe	1,565
3185	5-p	Dbl. Srv. Sedan	1,475
3245	5-p	Sedan	1,665
3050	5-p	Coach	1,295
		"Master" (120 in. W. B.)	
3285	2-p	Roadster	1,365
3465	5-p	Touring	1,395
3850	5-p	Sedan	2,225
3560	5-p	Coach	1,495
		(128 in. W. B.)	
3485	3-p	Sp. Roadster	1,750
3550	5-p	Sp. Touring	1,800
3610	7-p	Touring	1,625
3745	3-p	Country Club	2,075
3770	4-p	Coupe	2,125
3905	5-p	Brougham Sedan	2,350
4030	7-p	Limousine	2,525
3995	7-p	Sedan	2,425
3850	7-p	Town Car	2,925
CADILLAC "V-63 Standard Line"			
4190	2-p	Roadster	$3,185
4280	7-p	Touring	3,185
4200	4-p	Phaeton	3,185
4240	5-p	Coach	3,185
4610	7-p	Sedan	3,885
4525	5-p	Landau	3,835
4655	7-p	Std. Imperial	4,010
		"Custom Built" (132 in.)	
4260	2-p	Coupe	3,975
		(138 in.)	
4400	5-p	Coupe	4,350
4490	5-p	Sedan	4,550
4590	7-p	Suburban	4,650
4655	7-p	Imp. Suburban	4,950
CASE J. I. C.			
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4820	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3034	5-p	Touring	1,595
3923	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHANDLER (Cont'd)			
3309	5-p	Coach	$1,595
3309	5-p	Chummy Sedan	2,045
3469	5-p	Met. Sedan	2,195
3428	5-p	Sedan 4 d.	1,995
3521	7-p	Sedan	2,195
3598	7-p	Limousine	3,095
CHEVROLET "Superior" (Series K)			
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	715
2110	5-p	Coach	735
2220	5-p	Sedan	825
CHRYSLER "Four" (109 in. W. B.)			
------	5-p	Touring	$895
------	2-p	Club Coupe	995
------	5-p	Coach	1,045
------	5-p	Std. Sedan	1,095
"Six" (112¾ in. W. B.)			
2805	4-p	Roadster	$1,625
2780	5-p	Touring	1,395
2785	5-p	Phaeton	1,495
------	5-p	Coach	1,545
2935	4-p	Brougham	1,895
3060	5-p	Sedan	1,825
3085	5-p	Imperial Sedan	2,065
3090	5-p	Crown Sedan	2,195
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3040	5-p	Sedan	1,495
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport	1,725
2990	5-p	Brougham	1,545
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM "V-6"			
4600	7-p	Touring	$6,300
4500	4-p	Sp. Touring	5,800
4700	4-p	Coupe	7,150
5000	6-p	Limousine	7,650
DAGMAR "6-70"			
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	2-p	Roadster	1,785
3200	4-p	Sp. Touring	1,785
3150	5-p	Touring	1,985
3400	2-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS "90"			
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
------	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,995
2700	5-p	Brougham	1,595
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
3050	5-p	Brougham	1,895
------	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,205
DIANA "St. 8"			
------	5-p	Roadster	$1,895
------	5-p	Phaeton	1,895
------	5-p	Std. Sedan	1,995
------	5-p	De Luxe Sedan	2,195
------	5-p	Cabriolet	2,095
------	5-p	Brougham	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	885
2695	5-p	Spec. Touring	985
2708	2-p	Coupe "B"	995
2823	2-p	Spec. Coupe "B"	1,095
2995	5-p	"B" Sedan	1,095
3077	5-p	Spec. "B" Sedan	1,195
3020	5-p	Sedan A	1,245
3107	5-p	Spec. "A" Sedan	1,330
2723	5-p	Coach	1,095
2823	5-p	Spec. Coach	1,195

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DORRIS "6-80"			
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800
DUESENBERG Straight "8"			
3920	3-p	Roadster	$6,850
3700	5-p	Phaeton	6,500
3920	7-p	Phaeton	6,850
3980	4-p	Sp. Phaeton	6,850
------	4-p	Coupe	7,500
------	5-p	Sedan	7,700
4350	7-p	Sedan	8,300
DU PONT "D"			
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT A-22			
2300	2-p	Roadster	$1,080
------	2-p	Sp. Roadster	900
3225	5-p	Touring	830
------	5-p	Spec. Touring	950
2395	4-p	Coupe	1,160
------	4-p	Spec. Coupe	1,235
2505	5-p	Sedan	1,190
------	5-p	Spec. Sedan	1,310
2430	5-p	Coach	1,050
------	5-p	Spec. Coach	1,100
ELCAR "4-55"			
------	5-p	Touring	$1,095
------	5-p	Coach	1,195
------	5-p	Sedan	1,395
		"6-65"	
------	5-p	Touring	1,295
------	5-p	Coach	1,395
------	5-p	Sedan	1,595
		"8-80"	
------	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
------	7-p	Sp. Touring	2,265
3000	3-p	Coupe Roadster	2,315
------	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2130	5-p	Touring	$850
2395	5-p	Coach	850
FLINT "55"			
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD			
Without Starter and Dem. Rims			
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-6	Touring	290
		With Balloon Tires	335
With Starter and Dem. Rims			
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN "11-A"			
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	7-p	Cabriolet	4,400
GARDNER "Series 5"			
2680	5-p	Coupe	$1,275
2895	5-p	Sedan	1,475
3070	5-p	Sp. Sedan	1,595
		"6"	
3010	5-p	Touring	1,395
3240	5-p	Brougham	1,595
3310	5-p	Sedan	1,795
------	5-p	Sport Sedan	1,895
		"8"	
3350	5-p	Touring	1,995
3510	5-p	Brougham	1,995
3600	5-p	Sedan	2,495
GRAY "O"			
1750	5-p	Touring	$630
1880	3-p	Coupe	845
2020	5-p	Sedan	895
2130	5-p	Royal Sedan	975

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HAYNES "60"			
3295	5-p	Touring	$1,600
3650	5-p	Brougham	2,200
3765	5-p	Sedan	2,300
HERTZ D-1			
3360	5-p	Sedan	$1,695
HUDSON "Super Six"			
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,250
3425	4-p	Brougham 4 d.	1,595
3675	7-p	Sedan	1,795
HUPMOBILE "R" 4			
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT "23-25"			
3025	4-p	Roadster	$1,630
2835	5-p	Touring	1,205
3015	5-p	De Luxe Touring	1,320
2835	2-p	Bus. Coupe	1,340
3025	5-p	Sedan	1,580
3305	5-p	De Luxe Sedan	1,780
3000	5-p	Coach	1,260
JORDAN Series "A"			
3330	2-p	Playboy Road.	$2,575
3340	5-p	Touring	2,575
3450	3-p	Friendly "3"	2,875
3625	5-p	Brougham	2,875
3520	4-p	Victoria	2,775
3525	5-p	Sedan	2,975
3470	7-p	Sedan	3,325
3800	7-p	Suburban Sedan	3,375
KISSEL "55"			
3130	2-p	Speedster	$1,895
------	2-p	Sp'dster De Luxe	2,185
------	4-p	Speedster	1,995
------	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
------	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
------	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
------	7-p	Touring	1,785
------	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
------	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	2,250
------	5-p	Broug. Sed. DeL.	2,685
------	5-p	Brougham 2 d	1,895
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
------	5-p	Victoria De Luxe	2,685
		"75"	
------	2-p	Speedster	2,195
------	2-p	Speedster De L.	2,485
------	4-p	Speedster	2,295
------	4-p	Speedster De L.	2,585
------	2-p	Speedster De L.	2,585
------	2-p	Enc. Sp'd'r DeL.	2,985
------	4-p	Tourster	2,195
------	4-p	Tourster De L.	2,385
------	5-p	Phaeton	1,985
------	5-p	Phaeton De Luxe	2,185
------	7-p	Touring	2,085
------	7-p	Touring De Luxe	2,285
------	4-p	Coupe	2,485
------	4-p	Coupe De Luxe	2,885
------	5-p	Brougham Sedan	2,550
------	5-p	Broug. Sed. DeL.	2,985
------	5-p	Brougham 2 d.	2,195
------	7-p	Sedan De Luxe	3,485
------	7-p	Berl. Sed. De L.	3,585
------	7-p	Victoria	2,585
------	7-p	Victoria De Luxe	2,985
LEXINGTON "Concord"			
------	5-p	Touring	$1,595
------	5-p	Touring (Enc.)	1,695
------	5-p	Spec. Touring	1,795
------	5-p	Sedan	2,185
------	5-p	Spec. Sedan	2,445
		"Minute Man"	
------	2-p	Roadster	2,145
------	5-p	Touring	2,095
------	7-p	Touring	2,195
------	5-p	Lark Touring	2,345
------	5-p	Cal. Touring	2,495
------	7-p	Cal. Touring	2,495
------	5-p	Royal Coach	2,495
------	5-p	Brougham	2,595
------	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000

MOTOR AGE

Reg. U. S. Pat. Office

VOL. XLVIII No. 2

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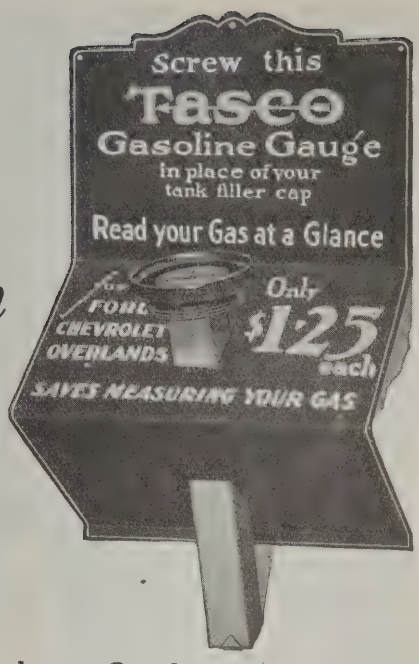
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Subscriptions accepted only from the Automotive Trade
Entered as Second Class Matter Sept. 19, 1899, at the Post Office at Chicago, Ill., under Act of March 6, 1879.

To Sell 'em at the Pump



When Ford, Chevrolet or Overland owners drive up for gas—call their attention to the Tasco Gasoline Gauge hanging on your pump equipment—and more than half of them will buy.
That's the experience of dealers who've tried it.
You "ask 'em to buy" at the very moment when the need for a good gauge is greatest.
Sells on sight—put one out where your customers can see it—and they'll do the rest. Liberal profit for you.

SELLING POINTS:

Guaranteed for the life of the car
Made by a reputable manufacturer
"Lift the seat and look" much easier than the old fashioned measuring stick method
No more guess work
No more "out of gas"—with business appointments delayed, family cross or sweetheart discouraged
Screws in place of the filler-cap so anyone can read the gas at a glance

Sells Quick at **$1.25** Retail

Order Tasco **Gauges** today.
Be sure to include some for the 1925 Chevrolet and Overland models.
Most jobbers have them—ask yours—if he hasn't—ask us.

NOTE: Dealers now handling Tasco Gauges should write the factory for this new steel outdoor display rack. Mention jobber's name. Send post-card at once.

THE AKRON-SELLE COMPANY
"40 Years in Business"
AKRON, OHIO



More People Use TASCO Gauges—than any other kind. Look for this Dial

FORDS, CHEVROLETS and OVERLANDS


Sure!
The Only Way to Save Time, Money, Labor
I peel 'em
So does everyone in the business who wants to cut bearing adjustment costs in half. And a much *better* job—accurate and smooth. PEEL 'em for profit. Your jobber sells Laminum. There's a shim for every type of engine.
LAMINATED SHIM COMPANY, INC.
14th Street & Governor Place Long Island City, N. Y.
St. Louis: Mazura Mfg. Co.
LAMINUM

MOTOR AGE

Vol. XLVIII July 9, 1925 No. 2

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

SALES conditions are still better than normal although slackening 10 to 15 per cent below June high mark. Page 32.

Kissel announces price reduction. Page 32.

Goodyear, Miller and General tire and rubber companies increase prices on tires and tubes from 10 to 15 per cent as result of British restriction act. Page 43.

Preliminary estimates of June automobile production place number shipped from Detroit at about 400,000. Best former output was 386,539 in June of 1923. Page 39.

Indianapolis survey shows used car trade in good shape with about four-fifths of present stock being current makes and models. Page 34.

Hope for national organization of truck and bus operators is blasted at convention of A. A. A. Page 33.

A. L. Haskell, general manager of General Motors Export Co. resigns. Page 33.

President A. B. C. Hardy of Olds Motor Works resigns position to stay in Lansing for few months for rest. Page 39.

Twenty automobile dealers in Huntington, W. Va. open "Buy-a-New-Car-This-Year" campaign. Page 43.

Dealers in North Carolina report business has increased with early June setting record for sales in like period. Page 35.

Mississippi registrations in first six months of 1925 are double those of like period of 1924. Page 37.

Mooring mast is completed at Ford's Detroit Airport. Flying Club is given 120-acre aviation field on lake front. Page 38.

Salt Lake reports sale of new cars continues satisfactorily with registration advancing steadily. Page 39.

Officers of Southern Automotive Jobbers' Association pick Asheville, N. C., for summer convention July 23-25. Page 34.

New laws enacted at last session of Oregon legislature are expected to materially curtail automobile thefts. Page 35.

Sales in Louisville during June register big advance with all prices moving well, many of them better than same period last year. Page 35.

Paige-Jewett opens nation-wide sales contest with trips to factory as prizes. Contest closes October 1. Page 37.

Sales in Milwaukee are expected to continue upward trend throughout July, April, May and June are quiet months. Page 38.

Marmon earnings for first six months of 1925 are reported as $1,178,198 by President Williams. Page 38.

Rim and Wheel Distributors Association, organized recently, plans to standardize service methods and catalogs. Page 42.

Night air mail service between New York and Chicago is inaugurated July 2 by Postoffice Department. Page 42.

Prizes are awarded in sales contest held by Ford Motor Company of Canada, Ltd. Page 37.

In Next Week's Issue—Writing the Used Car Ad

Licking the Gyp in Used Car Advertising



Competition of Misrepresentations in Classified Page Faces Legitimate Dealers With a Real Problem That Must Be Solved

By CLARENCE PHILLIPS

IN the sale of used cars the trade has become a liberal patron of the daily newspaper's classified columns. The amount of money spent by automobile dealers of this country on such insertions is necessarily enormous and the sums spent by individual companies often runs into large figures.

Demand by the trade for classified space has established this section of the daily paper as a standing directory for the used car shopper.

When he wants to buy a used car the first thing he does ordinarily is consult the classified ads. Most often he has an idea as to the makes of car he prefers and he knows definitely how much money he can allow for the purchase. What he is looking for is the car that will fit both his pocketbook and his notions.

What he is looking out for is the proposition that does not hit him as exactly square and honest. To begin with the used car shopper is a decidedly suspicious and skeptical person. He is exactly in the same frame of mind as the man who shops for a lot or a house or an opportunity to invest his money profitably. There are many gold bricks and gold brick artists in the world and his first desire is to give them as wide a berth as possible. He wants an honest buy.

The Resistance of Suspicion

This typifies the group of prospects that you deal with when you cast into the classified section of the daily paper for used car leads. To make a sale you must batter down his suspicions and win his confidence. You must convince him that you do not belong to the gold brick colony, that he can depend upon your merchandise as being of the quality represented. That goes, of course, with a sale of any sort—whether a suit of clothes or a piano—but the resistance of suspicion is so pronounced in the case of the used car shopper the dealer is called upon to present assurances that are exceptionally strong. There is no denying that in the automobile section of the classified page are many misrepresentations. Gyp dealers are given to practicing much black art in this direction while private owners often run the gyps a close second or even exceed their best efforts.

The advertising committee of the Chicago Automobile Trade Association, recognizing the general evils of this sort of advertising, is conducting an investigation through which it is hoped a remedy will be realized. The committee sees the legitimate trade is in competition with unscrupulous persons who have used cars for sale and who will go to any limit to sell their cars. Misrepresenting facts concerning a car is the least of the worries of this element, especially when the house has no reputation to preserve or when the individual has but one car to sell.

But such falsifications do untold damage to the legitimate business of selling used cars and it is the legitimate trade which suffers in later days and years from the effects of this wholesale bilking.

If the Chicago association arrives at some effective method for eradicating or reducing this evil it will accomplish much toward facilitating the movement of used car sales through the proper channels. It will score a great accomplishment if it merely succeeds in drawing the line, so the public will see it, between dishonest methods on one side and honest methods on the other—the side of the legitimate automobile dealer.

The Safest Place to Buy

In fact, the public has been rapidly learning that the safest place to buy a used car is from the reputable dealer whose integrity is known and who is in a position to give a wide range of service. The proportion of this business going to the reputable dealer is constantly growing greater—and it will grow in the future commensurate with the trade's success in convincing the public that the risk is always less when the buyer does business with the legitimate merchant.

There is but one way in which the trade can successfully meet this competition of misrepresentations. That is for the trade to sell the public on its integrity. It must match its honesty against all comers and be ready at all times to fight for its good name.

Right now, however, in Chicago and elsewhere the problem of the individual dealer who makes use of classified space is—how most effectively to use such space in the development of leads, notwithstanding misrepresentations by unscrupulous competition and other present complications. Some day, we hope, conditions will justify the used car shopper in refusing to question the veracity of adver-

tisements but today he is that same skeptical, suspicious individual who thinks there is someone on each corner plotting to take him in.

He is the fellow you are addressing when you prepare copy for the used car ad in the classified section and he is the fellow whose confidence you must win.

Broadly we find ourselves now on the subject of the best classified effectives generally, and in the absence of statistical information the only way to find out what policies and what sort of copy get the most satisfying results is to go to the trade for notes on experience. Even then considerable off-hand opinion must be accepted for there is little effort to check up except as to what newspapers prove the best mediums and many dealers will say frankly that they do not even know that.

Shifting the Attack

The pulling power of the different styles of copy for the classified section can best be judged, therefore, by the average results in moving stocks under their obvious influence. When one type of copy does not seem to be getting results the average dealer will try another type, shifting the attack until he lights on what seems to be the most desirable device. While numbers of dealers believe they do better by a process of continual shifting there is a tendency among most successful used car movers to settle eventually to a great extent, upon some preferred form of copy. In other words, out of their experience, they draw up standards for this part of the work. An investigation to ascertain the policies of a large group of successful used car merchandisers produced the following revelations:

That the first rule is constancy and consistency. All are what we would call "constant advertisers."

That the integrity of the house is put behind cars listed for sale and that all misleading statements are studiously avoided.

That, in a majority of cases, the advertisement giving a rather full description of the car, is the most freely used device, and that the "singleshot" ad, relating to a single model and giving full description is considered particularly strong.

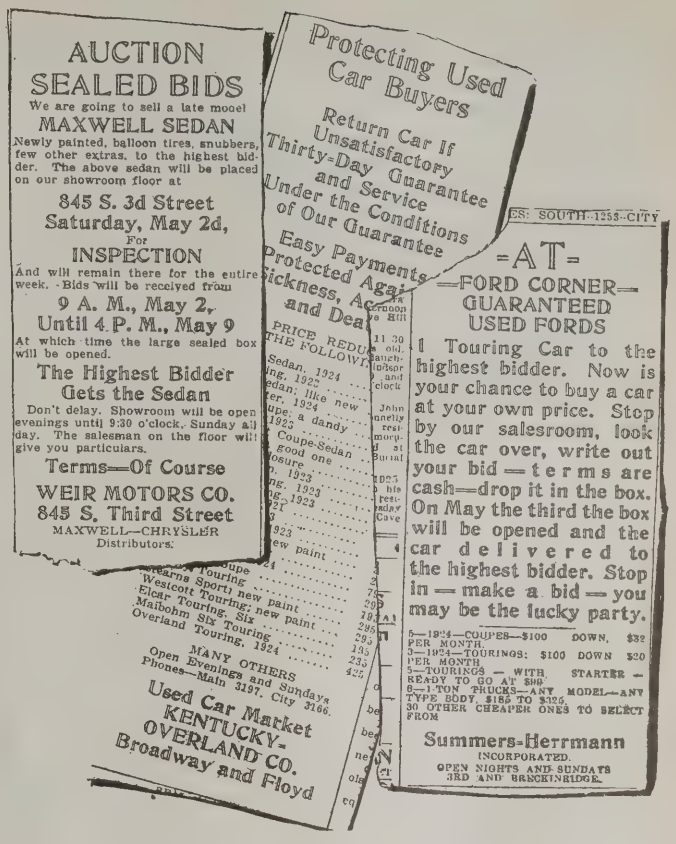
That the group ad which lists a number of different cars is considered most effective when yearly model and price are given—and better yet when some description is given with each car listed.

That the practice of giving the salesman's residence address is not being resorted to as much as formerly, having been entirely discarded in many instances.

That models bearing unusual names should always be described in such a manner that the reader will be able clearly to visualize the car types.



This is the way two St. Louis houses make their ads stand out in the classified page. Newspaper rules usually render such treatment impossible but it is being done in St. Louis by the Weber Implement & Auto Co. and the Weber Motor Car Company



Specimens of a type of copy that has proven effective were found in Louisville. With bidding for a new car as the chief attraction the stunt develops prospects for both new and used cars. And get the "punch" in the Kentucky-Overland Company's ad, also in Louisville. If the shopper wants "assurances"—there they are

In view of the fact that there is so much bald misrepresentation in used car advertising the shopper can not be blamed for refusing to believe everything he sees and hears. And in view of the fact that suspicion among used car shoppers is a condition affecting the trade that actually exists and prevails to an alarming extent—it is no wonder that an outstanding element of success attained by the group of dealers to which we have just referred is—" truth in advertising," with the integrity of their establishments behind the representations made in the newspapers.

The so-called "gyp" will smile when you suggest that it is more forceful and better "business" to avoid falsification in the used car ad, but the records of successful merchants who command high places in public respect and opinion—are decidedly against the logic upon which the gyp bases his belief.

These "big" merchants are doing a volume of profitable business which by comparison would literally dwarf the business of any equal number of gyps and, moreover—they will continue doing profitable business in large volume long after the gyps of today have passed on and been forgotten. It is refreshing to go into such establishments and note what a big part integrity plays in general policies, to observe on what a high plane business is conducted—and then to dwell upon the significant fact that such dealers as these compose the real leadership of the trade.

They are the ones who have solved the problem of overcoming the used car shopper's suspicions and they have set forth one fundamental rule by which the legitimate and scrupulous tradesman can down the competitor in the classified columns who resorts to misrepresentations.

In casting into the classified columns for used car leads it is apparent that the first essential is for the dealer to put the veracity and integrity of his house behind his merchandise. The heavier the trade's pressure along this line the more completely will the falsifier be crowded out.

The type of copy used by the dealer who has seen to this first requirement is much a matter of opinion.

But it does stand out in the investigation just made that the ad carrying a more or less full description of the car offered for sale is proving the most effective. Which seems logical if you will put yourself in the place of the prospective buyer. Not only does he want to know what the car is worth, what type of car it is and that the house listing the car can be relied upon—but he likes certain details. Your ad which merely gives the make, model and price might draw the prospect to your store, which would be ideal, but he is more likely to go to the place offering a car fully and effectively described. A number of striking instances have been found wherein "stickers" were moved by taking them out of group lists and using the single ad with free description. In one case a dealer had been given considerable grief by a car of ancient design that seemed impossible to move. It had become the joke of the place. It had appeared in the group lists time and again, disappearing from print entirely for a while and reappearing again—one of the patent standbys. The price was $125, a ten line classified ad was used in which the car was fully and candidly described—and it sold at once. Another dealer declares that while he usually starts the hard-moving model in the group list he seldom moves it until he advertises it separately.

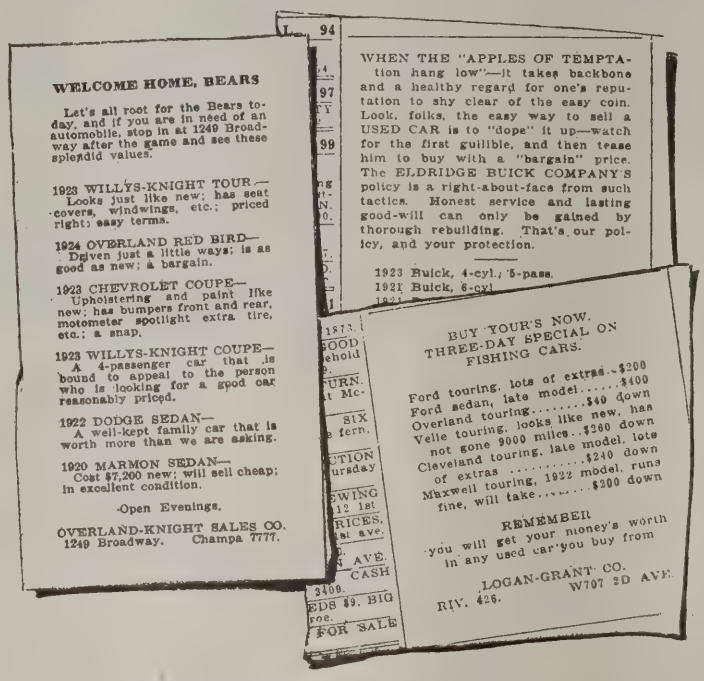
One of the most convincing group insertions in an issue of an eastern paper recently contained rather full descriptions of cars offered at $120 and $75 respectively. The notices stated frankly that the cars were old models and not in the best condition but that they would serve the purposes of certain owners who would accept them without guarantee. The other cars listed were offered as values that the company would stand behind, and the natural reaction of the person reading the ad was that this company was doing its best to correctly represent its merchandise. There is nothing wrong in capitalizing your honesty. In fact, the merchant who expects to be permanent must capitalize it in one way or another.

But if full information is a good effective in classified advertising many dealers throughout the country must be missing frequent opportunities, for a study of numerous classified pages reveals that a large percentage of automobile copy fails to give more than very meager information.

If it is a fact that vital importance attaches to giving the price many dealers are constantly overlooking good bets. There are those who appear carefully to avoid stating price.

That considerable effort is lost through merely giving the name of a model which bears an unusual factory name without classifying the model to its general type, as open or closed, etc., or in other words, giving the shopper a definite picture as to what is offered for sale—is one fact which is clearly apparent. Newspapers contain many insertions of this character. The point made here might be illustrated with reference to questions which were put to 20 persons selected at random.

The first question was: "What is a phaeton?" Six of the 20 admitted they did not know and while most of those remaining seemed to know the phaeton some were doubtful. The next question was: "What is a brougham?" Thirteen gave more or less satisfactory replies while seven were unable to classify the brougham. The third question was: "What is a victoria?" Five knew and there was either total ignorance or doubt in each of the other 15 who answered.



The timely thought frequently adds to the force of a classified ad. Here is where a Denver dealer capitalized the opening of baseball season while a Spokane dealer exploited fishing season. The Eldridge Buick Co., Spokane, used the third ad in this group which makes a bid for attention with its novelty

These are some of the better known "odd names," we might say, in automobile terminology. Phaetons and broughams are so well known in the parlance of the trade that a dealer might think the names would convey a definite conception practically to every member of America's automobile-wise public, from which we draw prospects, but the general public even in automobile-wise America, is not so conversant with automotive terms as is the person who is in the automobile business.

Hence, to advertise a car with the odd designation of model it is clearly wiser always to accompany the notice with enough description to let the shopper know the general type of body.

Otherwise, while it might be the very type of car for which he is seeking, the advertisement will fail to tell him as much and he will simply give it a passing glance and "shop on down the column."

Discussion of classified advertising could be carried on indefinitely but after all has been said and we seek for the outstanding essential in effective advertising we arrive at this fundamental generalization: That the forces making for effective advertising are found in the policy of the house.

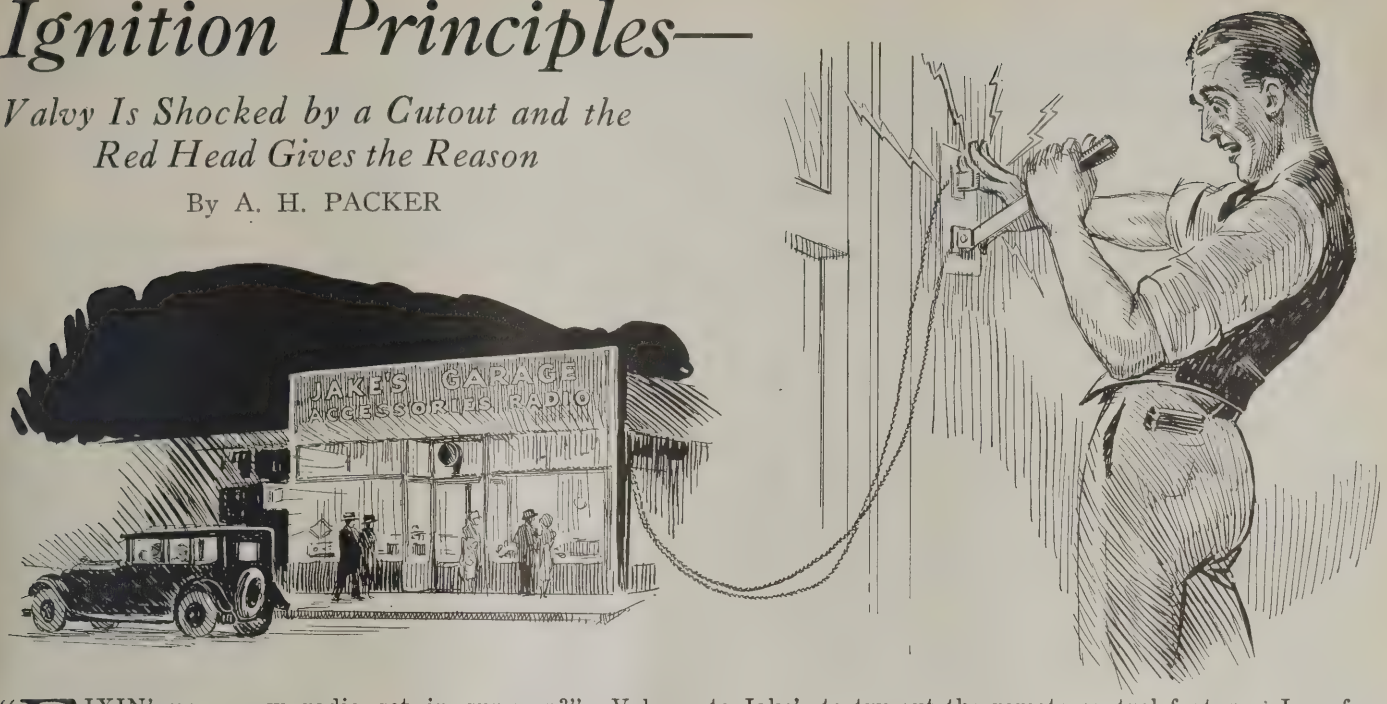
Effectiveness begins with TRUTH and a reputation for fair dealing.

It does not take the public long to identify and locate the merchant upon whose representations it can depend. And it is just as quick in locating the merchant of the other variety.

Ignition Principles—

Valvy Is Shocked by a Cutout and the Red Head Gives the Reason

By A. H. PACKER



"FIXIN' up a new radio set in summer?" Valvy stared in wide-eyed astonishment, as he opened the shop door and saw Jake hard at it so early in the morning. "Thought you had enough to do without monkeying with that stuff this time of year." Jake only smiled.

"It may look queer, at that," said Jake. "The fact is, this is a new stunt, that's one reason. This attachment is supposed to bring in extra long waves, while this other jigger brings in the short ones. That part of it doesn't interest me so much, but I want to get all ready for the fall business. These folks round here do not have much to do and they will take to radio more this next season than ever before. If I start now, I can take it easy, doing a little each day and have everything the way I want it when the season starts in. Not only that but I will know something about the set I decide to handle."

Just then Red came in.

"One thing bothers me, though," continued Jake. "I want to rig this set up, so I can leave it turned on nights, working the lour speaker over the transom of the shop, and be able to turn it off from my house, which is about 500 feet away."

"You might run your A battery current over to the house and back, and have a switch there," said Valvy.

"But the voltage you would have left at the tubes, you could put in your eye," said Red. "Perhaps a relay of some sort would do the trick. We might even use an old cutout, disconnect the series winding and use the shunt coil to close our circuit. Then we would only carry about one-thirtieth of an ampere over to the house and back instead of nearly two amperes."

Jake decided to rig up such a scheme if Red would figure out the details, so a few days later, everything had been completed and Red went over to Jake's to try out the remote control feature. In a few moments he came running back to the shop, surprise written all over his face, easily traceable in spite of the dirt.

"What 'jer think," he wailed. "I got a whale of a shock off that there switch, and nothin' connected but a six volt battery."

"Except the radio set and the cutout," added the Red Head.

"What's the radio got to do with it," Valvy whimpered. "I betcher there's high tension juice got inter those wires. I most got knocked onter the floor."

"Oh, it's not that bad," said Red. "There's no hot stuff there, and the radio is probably innocent, but the fine winding of the cutout will give you a good jolt if your fingers are sweaty and you break the circuit just right. What you get is not due to the battery itself, but to the sudden voltage produced by the changing magnetism in the cutout when the current dies down. It's a jolt of that sort that fires the gas in a make and break ignition system, but it doesn't feel so good in your human system. Everything in its place you know."

Valvy was still far from placated, but Jake's interest was roused, and during their lunch hour he insisted that Red explain the whole thing to him.

"It's about this way," said Red when they had a chance to sit down and talk things over. "We figured out the way that electricity produces magnetism, and I suppose it's no more than fair that there is also a way that magnetism can produce electricity.

"When we had a wire wound around a piece of iron or steel, there was no magnetism produced until there was a current flowing in the wire. That is we had to have *electricity in motion.* In similar manner we find that it

BILL FIXIT STORIES
No. 7

PREVIOUS installments in this series by A. H. Packer were published March 19, April 2, April 16, May 7, May 21 and June 18, 1925.

SYNOPSIS: Bill Fixit's electrical trouble shooting men start on a trip in a Speedway car. They stop at various places along the way and at the Welsh mines are requested by Sandy, the foreman, to help out in fixing up a gasoline pumping engine, some strikers having wrecked the steam pumps. While there the money they had is stolen from the car, so they are forced to seek employment in Coal City with Jake Penders, the local electrician.

While at Jake's place a customer buys a tire, paying for it with a bill that Red afterwards recognizes as one stolen from them. Red goes after a job of wiring trouble that Jake had previously fallen down on, fixes it and then tells how it was done. At another time he explains the principle of electro magnets, and shows how understanding of the principles would help out on an occasional job.

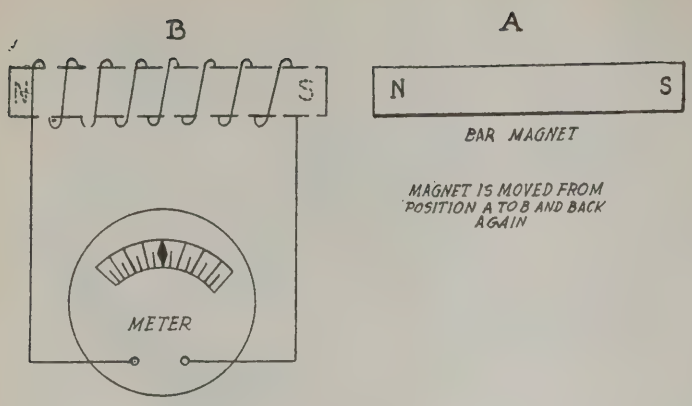


Fig. 1. Changing the magnetism in a coil generates a voltage

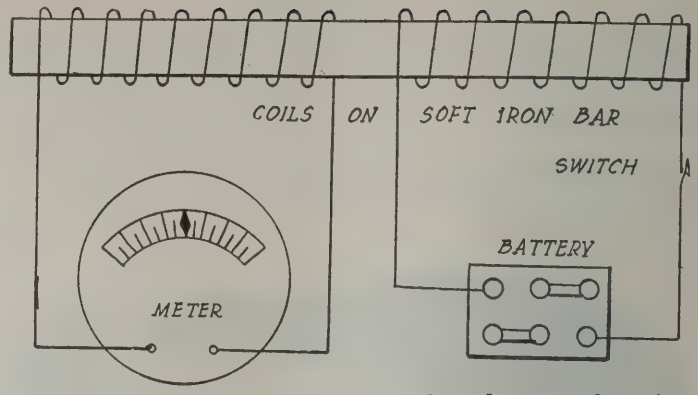


Fig. 2. Changing current in one coil produces a voltage in the other coil

magnetism by itself does not produce electricity, but it has to be *magnetism in motion* or *change in magnetism.*

"If we want to do a little experimenting after a while we can wind up a coil of wire and connect it to a meter. Then we can use a magnetized piece of steel or permanent bar maget and move it in and out of the hollow coil which is connected to the meter. Doing this will generate an electrical pressure or voltage in each turn of wire in the coil. (Fig. 1.)

"If we try to use an ordinary ammeter, nothing much will happen for the current that will flow in the coil will be slight. If we take a voltmeter we may get a slight movement of the needle. The best bet however is a millivoltmeter. If we did not have our testing set here we could try the experiment by taking one of the old style ammeters used on the higher priced cars, and cut the shunt in two to make a sort of millivoltmeter out of it. Then in the test (Fig. 1) we would find that the needle is considerably affected.

"We would also find that moving the magnet quickly gave a greater deflection than moving it slowly; that moving it out reversed the needle deflection as compared with moving it in and that leaving the magnet stand, either in or out of the coil would generate no voltage.

"We would then conclude that the voltage generated is proportional to the speed with which the magnetism from the bar cuts across the turns of the coil and that as far as the coils are concerned, it is *change* in magnetism, rather than magnetism which does the work.

What Probably Happened

"When Valvy was working the switch over at the house he probably got hold of both live sides of it when he jerked it open, thinking only of the fact that we had but six volts on the line. The current flowing through the cutout coil, however, made it a differenft proposition, for there was an inductive kick or sudden voltage generated which though it lasted but an instant, may have been 150 volts, or so, being produced by the dying magnetism, which cut through the turns of the coil while the current was dying out.

"Working on the basis of changing magnetism and the fact that an electrical current in a coil can produce magnetism we have discovered the foundation principles of a battery ignition system. In Fig. 2 we have a long bar of iron, at the left of which we have a coil connected to a delicate meter, while at the right we have another coil connected through a switch to a battery.

"The coil at the right is going to magnetize the iron and the one at the left is going to have a voltage generated in it whenever the magnetic condition of the iron changes. We will then find that when closing the switch of the battery circuit, that the meter IN THE OTHER CIRCUIT will kick to one side, and when we open the switch again the meter will kick to the other side. With the switch left open or closed however, we find that the hand on the meter settles back to zero, showing again that change in magnetism and not just magnetism generates electrical voltage.

Variation of Experiment

"In Fig. 3 we have a variation of this experiment. We still have the left-hand coil connected to a delicate meter, but the one at the right now has an ammeter and rheostat connected to it as well as the battery. We can now close the switch and turn the rheostat slowly and we will find that there is a slight deflection of the meter connected to the coil at the left. If we turn the rheostat rapidly the deflection will be greater, so we see that THE FASTER THE CHANGE IN MAGNETISM THE GREATER THE VOLTAGE PRODUCED.

"Another experiment might be made with the circuits of Fig. 3 by changing the number of turns of wire in the coil at the left, and if we did this and left other conditions the same we would find that with a coil of many turns there would be a greater deflection of the meter needle, showing that, THE GREATER THE NUMBER OF TURNS, THE GREATER THE VOLTAGE INDUCED. This is just common sense, for all the turns of wire on the bar are affected by the magnetism and as they are in series with each other their voltages add up.

"We then come to the conclusion that for a battery ignition coil we want many turns of fine wire to get a high voltage for producing the spark, and that the quicker we can change the magnetism, the better the results will be. The fine wire is used, not because the size affects the voltage, but because with fine wire we can get a large number of turns in a coil of reasonable size.

"It is one thing to say that we want a sudden change in magnetism, and it is another thing to get it. If we close the switch in Fig. 3 and watch the ammeter at the right closely we will see that its hand comes up rapidly but not immediately to the current reading. If we would take the same wire that is in the right-hand coil and stretch it out in a large loop, instead of winding it on a bar we would find the meter hand a little quicker. In other words, the current builds up slowly in a magnetic circuit.

"If we figure the reason, we find that the current in rising builds up magnetism, and this rising or changing

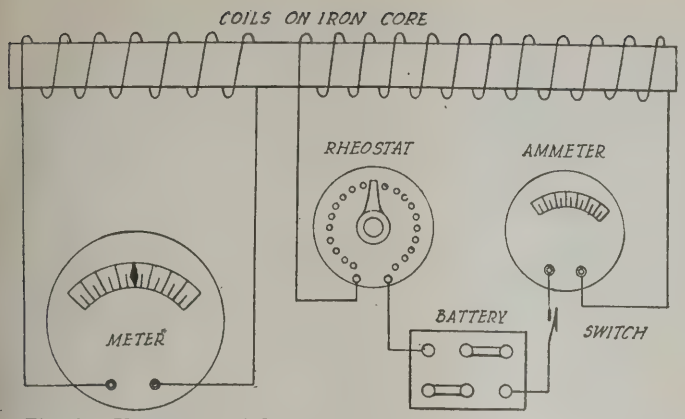


Fig. 3. Variations of battery current in circuit at the right produce induced currents in left hand circuit

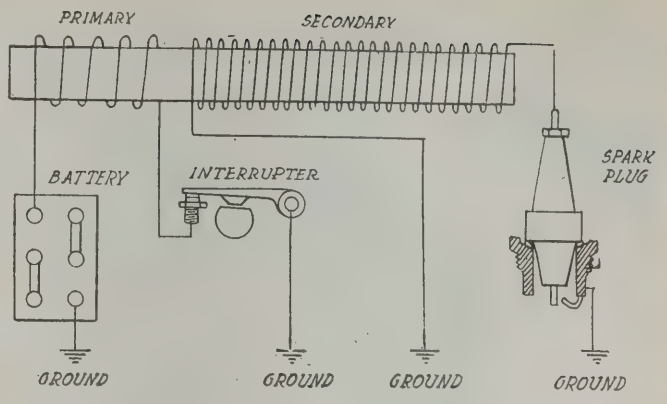


Fig. 4. Elementary battery ignition circuits. Without a condenser at the points the results are poor

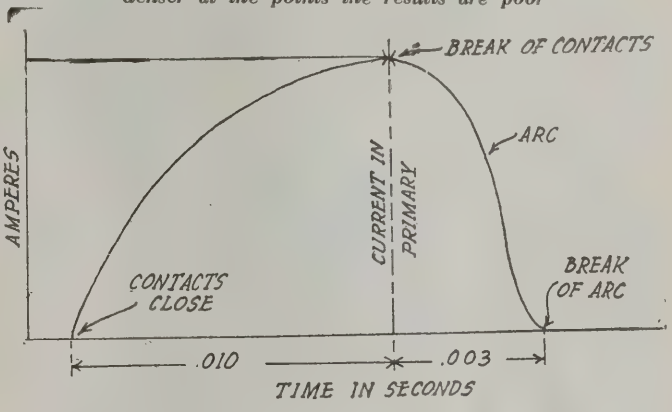


Fig. 5. Self inductance makes current slow to build up or die out in a magnetic circuit

magnetism generates a voltage, not only in the other winding, but also in the winding carrying the battery current. This voltage is always contrary, and opposes the action producing it so that when we are trying to quickly magnetize the bar, it has just the opposite effect.

"Referring now to Fig. 4 we have shown the elements of a battery ignition circuit, where a battery sends current through a coil and through an interrupter or pair of contacts, back to the battery. In this illustration we have shown one terminal of the battery and one of the interrupter contacts grounded. To ground a circuit means to connect it to the engine, or the frame or to any metal part of the car connected to the engine or frame. In this way the car frame carries the current back to the battery and saves a wire.

"We have also in Fig. 4 shown a secondary winding connected, one end to the frame or ground and the other end to a spark plug. The winding connected to battery we call the primary because its action is first or primary.

"Referring now to Fig. 5 we have a curve or sort of picture showing what happens in our ignition circuit. Distances measured up means amperes or current while distances from left to right indicate time. Starting near the left on the horizontal line we have a time indicated where the points close. As soon as this happens the current starts to flow in the primary winding but it comes up slowly due to the bucking voltage of self inductance. With a slow rise in current we get a slow rise in magnetism and consequently a poor result in the secondary winding.

"It is for this reason that no ignition systems are made which have the spark occurring when the points close and the current builds up in the primary.

"The next possibility is to have a spark when the interrupter points open and the primary current and consequently the magnetism dies out. Here however, we find the same opposing force or self inductance working, for when we try to kill the primary current, this action tries to maintain it. This accounts for the arcing at switch contacts when a circuit is broken, and the more highly magnetic the circuit, the greater the tendency for arcing.

Current Drops Off Slowly

"In fact the arcing at the interrupter contacts will be so bad that the current instead of dying out immediately drops off slowly as shown in the right part of the curve of Fig. 5 so that again we get no secondary spark worth having.

"It is at this point that the battery ignition idea is saved by an electrical device known as a condenser, which acts as an electrical shock absorber and stops the arcing at the contacts to a great extent, thereby giving a sudden break to the current and accordingly a high voltage and spark in the secondary winding."

Valvy had been listening in on Red's explanation to Jake, but it was old stuff to him. The new radio set with its many dials was a constant attraction. He slipped on the phones, threw the switch of the long wave attachment, lighted the filaments and took a whirl at the adjusting dials. Not much chance of picking up anything this time of day, but as in fishing, there was always hope.

Just as he thought, nothing doing. But what was that? A voice, indistinct and yet strangely familiar. A closer adjustment and the voice came in clear. "Ten truck loads tonight. No there's no danger. On this wave length no one can get us. And tomorrow night at one, remember."

"Bootleggers," thought Valvy, and jumped up, bumping the table. The long wave attachment teetered violently and Valvy grabbed it as it rocked dangerously near the table edge.

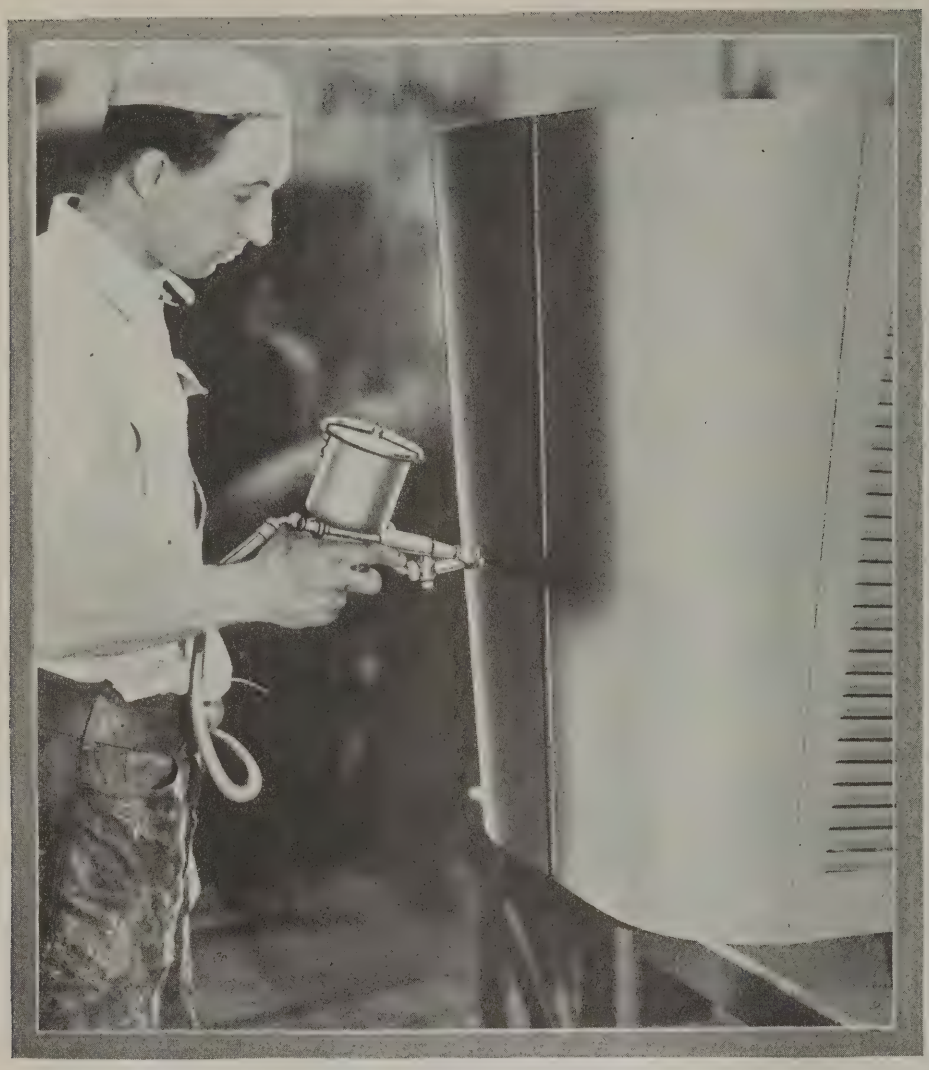
"What's the excitement?" cried Jake.

"Crooks planning somethin'," said Valvy. "A voice I've heard before."

"Some of your friends," said Red. "Let's have the phones, perhaps we can get the goods on 'em with this set." And Red listened intently, but there was no further conversation to be heard.

"Where'd you have the dials set, before you half knocked over the table?" Red wanted to know.

Valvy stared at the set and sweat broke out on his brow. "I'll be d-d-d-durned if I know," he stuttered.



Parts such as the hood can be placed on a stand for spraying

Applying a Pyroxylin Finish to a Car

Handling the Spray Equipment—Putting on the Undercoats

By B. M. IKERT

AFTER a car has been stripped of all the old finish the bare metal should be primed as soon thereafter as possible. It is well to call attention once more to the great importance of making sure that all moisture and foreign matter has been removed from under the mouldings and so forth. The time to do this is before the primer is applied and a few minutes spent in doing this will more than make up for the extra time required later on to remedy trouble caused by foreign matter.

So far as the application of the materials is concerned a great deal will depend upon the particular make of equipment used as well as the materials themselves. It is common to apply three or more coats of pyroxylin finishes to a motor car, the exact number of coats depending largely upon the hiding power of the color used. As to the air pressure needed this depends entirely upon the make and style of air gun used and here it is best to consult the instructions sent with each air gun by the maker.

At this point it may be well to call attention to some of the things which must be observed in spraying pyroxylin finishes. What is commonly known as "spray dust" is caused by incorrect air pressure on the gun or by poor ventilation. In fact in the majority of cases it is the latter which causes this spray dust. Experienced operators are able to remove this spray dust by going over the whole surface of the car with a soft rag moistened in the solvent or thinner. It is also possible to remove spray dust by spraying a very light coat of the thinner over the car after the application of the enamels and before rubbing and polishing. However, this is a difficult job for the less experienced to perform, because the light spray of the solvent causes a reflow of the finish. It is this reflow of course, which removes the spray dust and smooths out the pebbled effect, and while this is the thing desired it usually can be done only by a skilled workman.

Mention has been made in previous articles that the application of pyroxylin finishes differs very materially from the ordinary varnish finishes, and whereas imperfections in the priming coats can be remedied with the following coats in a varnish finish, this is not so with a pyroxylin finish.

After the priming coat has been applied, in case of a pyroxylin finish and on top of this the surfacing coats it is the last chance the operator has to get the surface smooth and at this point a careful examination should be made of the entire surface of the car before the application of the enamel. Any imperfections, rough spots and ridges in the undercoats are greatly emphasized with the application of the final coats.

In using the air gun hold it about 6 or 8 inches from the metal to be sprayed and at a slight angle with the nozzle of the gun usually pointing slightly upward. The air gun should be worked lengthwise of the body of the cars and the spray laps should be brought quite close together, that is the gun should be swung from right to left and the material should not stop flowing from the gun when the latter is at arms length. It should be brought immediately back in the other direction so it will overlap the lower side of the material just applied by the swing in the other direction.

Spray on Thin Coats

It is always a good plan to spray on thin coats of the material used. This is because the solvents may attack the priming and surfacing coats and if a heavy coat of the material is applied the surfacing materials may rise and form blisters and bulges.

The results obtained with an air gun in the application of pyroxylin finishes depends very largely upon the operator. Almost in every case where trouble is experienced it is due to the way in which the gun or material is being handled, assuming of course that the surfaces are clean and that the necessary precautions have been taken up to the point of spraying the material.

Some Things to Be Observed

"Curtains, sags and runs," are caused by applying too much of the material in one spot which naturally creates a run and the result is a heavy mass which hardens very quickly and is very difficult to remove. Such runs can be overcome almost entirely by properly using the air brush for which no specific directions can be given other than those which apply to the details of the gun itself.

Practically all of the material to be sprayed must be reduced about 5 per cent more than when applied by hand brush method as this proportion of the solvent or thinner is atomized out of the material when it is applied. It is very important to regulate the pressure correctly for the specific material as insufficient pressure will cause a rough or spotted finish while the proper pressure produces a smooth glass-like finish. Light liquids are applied usually with pressures as low as 30 or 40 lbs. while very heavy liquids are applied with pressures as high as 80 to 100 lbs.

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How to Use the Air Gun

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Every now and then the operator runs into a condition when applying a pyroxylin finish wherein the coat turns color. This happens occasionally in some climates and in the language of the paint shop is known as blushing and the remedy for this usually is to spray on a coat of solvent or thinner which can be applied over the wet pyroxylin material and which should bring the color back to its original shade.

The first coat applied to a car in a complete nitrocellulose system is called the priming coat and forms the foundation of the whole structure. The primer usually carries sufficiently finely ground color of some kind such as red oxide of iron to enable the operator to see whether or not an even coat has been applied over the entire surface.

In use the primer must be stirred thoroughly from the bottom of the can up. Then it should be strained through a double layer of gauze or cheesecloth, pouring it from the can to the container used on the air gun. A thin or medium coat of primer is recommended. If the primer is too thin it will not stand the sandpapering operation which follows and if too heavy a coat is applied it may not dry quickly enough. Usually the primer will air dry in twenty-four hours at a temperature of 60 degrees Fahrenheit.

After the primer is dry the surfacing coat or the "gunglaze" can be applied. This coat is the "go-between" of the primer and enamel and literally forms the keystone of the arch of the whole job. The gunglaze or surfacer must adhere perfectly to the primer and form a perfect surface on which the enamel coats are applied later on. It corresponds to the rough stuff or sealer coats in a varnish finish job and for smooth metal the proper proportions are usually equal parts of surfacer and solvent by volumes. Where the surfaces are rough it may be used in the proportion of two parts of surfacer to one of solvent by volume.

Putty Glazing Is Necessary

Before applying the surfacing coat all of the rough spots, file marks, hammer marks and so forth should be filled in with putty glaze. Judgment should be used as to how much putty glazing has to be done, the idea of the operation is to secure a smooth surface for the application of the enamel. The putty glaze is applied with an ordinary flexible putty knife and it should be applied so that just enough of the putty is used to fill up the indentations. It is possible to thin putty glaze with turpentine to a consistency where it can be sprayed on. The putty glaze usually dries in from six to fifteen hours. And where the metal is very rough it is recommended to use three or more thin applications of putty glaze allowing the usual drying time between each application. If sufficient time is not given to dry these applications thick layers of putty will "surface dry" only resulting in bulges when the lacquer is sprayed on.

After the putty glaze is thoroughly dry it can be sandpapered to take out all rough spots made by the putty. The sandpaper can be used dry for this operation. After this operation the body should be wiped off with a rag to take off the putty dust.

The car is now ready for the surfacing coats and in preparing the surfacer the material should be strained exactly as was done with the primer. The surfacer is applied with the air gun in the same manner as the primer and the number of coats depends entirely on the condition of the body. A very good rubbing surface can be had by spraying four light coats of the surfacer on the putty coat. Usually this is done by spraying two coats a day, one in the forenoon and the other in the afternoon.

No sandpapering should be done between the surfacing coats but it is a good plan to spray on what is called a "guide" coat of yellow ochre and hour or so after the last coat has been sprayed. The purpose of this guide coat is to assist the operator when it comes to rubbing and will prevent him from going through spots to the metal or primer.

In next week's issue of MOTOR AGE the application of the enamel or lacquer coats will be discussed.

A Big City Sales and *Service Plan*



Henry R. Levy, president Studebaker Sales Corporation of Chicago

Intensive Analysis of Business and Residence Areas of Chicago Has Enabled Studebaker Sales Corporation to So Place Stores and Maintenance Shops That Business Was Increased 43 Per Cent in One Year.

By HENRY R. LEVY

President Studebaker Sales Corporation of Chicago

IN more densely populated communities, where automobile dealers maintain branch salesrooms and service stations, profits have been reaped by understanding dealers who carry these branches to the people instead of suiting their own convenience.

Where shall a branch be opened? Where shall a service station unit be maintained? Where shall the headquarters of both services be maintained?

Too often, the answers to these questions are based on the price of ground rents or leases, the convenience of the dealer, a temporary burst of sales in some locality, or temporary demand for service in another locality.

In fact, the answer should be dictated by a study of the present and future of these localities with a view to continued service to the car owners themselves, regardless of rental costs or other considerations. If this means scattering branches and equipment over a wide territory, it must be made the most of. The car owner's convenience must be paramount.

Where, in the whole community, are the centers of residential population of a character that buys or can buy motor cars?

In what section is the greater growth of such communities?

Where are the centers of transient, or less permanent residence, or the hotel and office building districts?

The effect of the right answer to these three questions upon sales and satisfied service will be found profitable by any dealer, as we have found them profitable.

Realizing that to criticize a condition, without supplying a tested cure, is pure theory, an example will be given that has been worked out by us in Chicago.

We maintain seven sales and service plants in Metropolitan Chicago. It is such solely because we have analyzed the demand in the district of Greater Chicago and have tried to fit our answer to the need.

First we identified the center of the transient occupancy, such as office building and hotel communities. We found this embraced the "Loop" of the city and ran south along Wabash and Michigan avenues for two miles.

What kind of service would car owners in such a district desire?

They wanted quick repair or adjustment work, embracing even major repairs. While they were in their offices during the day, or between two days; while stopping at hotels temporarily; where they could discuss rehabilitation of their car as a business matter, without bringing in the whole family—that was the time, that was the circumstance surrounding the work they wanted done.

So we located our central service station close to this district, and we put it adjoining a railroad, because we found many owners passing through Chicago who wanted a lacquer job or major repair done and the car shipped ahead to them.

In this central service station, which covers a whole block, we put equipment sufficient to rebuild entirely any model of our car since 1911. We installed the most complete lacquer plant outside any motor car or body building factory.

During the office hours of a day, or between days, we can handle almost

IN this article Mr. Levy tells how he planned the location of his extensive sales and service organization in Chicago which now embraces seven immense plants and a payroll of 468 employes. The fundamental principle upon which he worked was to place his sales and service conveniently to the centers of large and prosperous populations. It is a principle that the dealer or maintenance man, in large or small community, can well afford to observe. It enabled Mr. Levy to increase his business 43 per cent in one year.

any repair or overhaul job that is brought to us. Literally hundreds of such jobs are turned out weekly for men who, thereby, do not loose the service of their cars for a single day. There, every week, we handle quickly-done but thorough jobs of overhauling, adjustment or replenishment for transient motorists stopping at hotels.

General Sales Problem

Then there was the general sales problem. Where to locate the main sales room, convenient to business men's offices, or to those who normally come to the business district for shopping? General inquiries, arising from no salesman's activity, but from outside source, come most often to the main office, often located, by those unfamiliar with the concern, through the telephone directory. The main office must be near the business district.

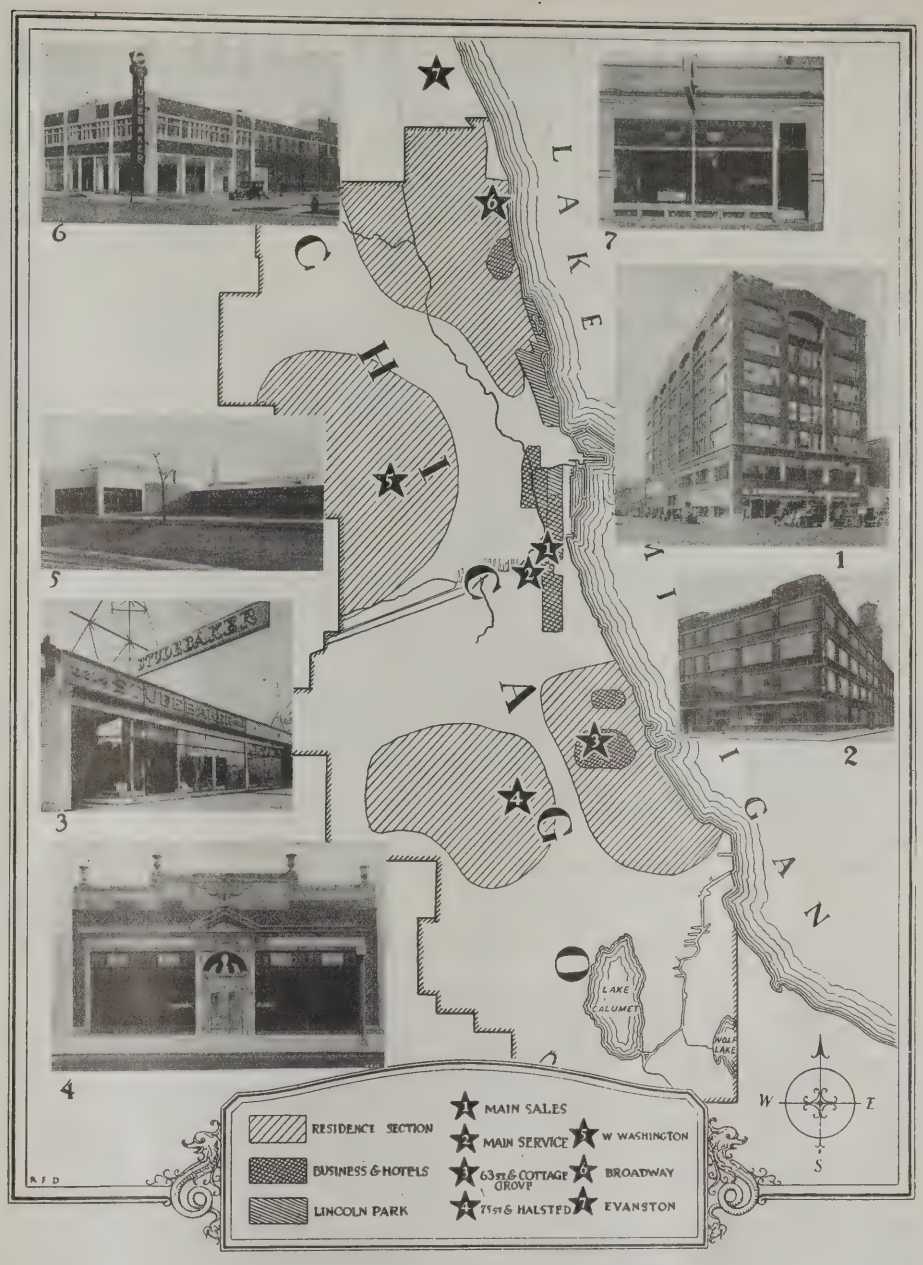
So we must have our 6-story main sales room not alone near that district, but near the main service station, for the same reason.

In Chicago there is almost a separate business community, like a city within another, around Cottage Grove Avenue and Sixty - third Street. Around it is a residence community of high character, and not far away another hotel section.

In the heart of this district we have located a sales and service station, at 6212 Cottage Grove avenue.

South of this center, and a little to the east, there has been a rapid growth in high class residences and apartments within the last few years. So we have a branch salesroom at 7434 Stony Island Avenue, in its center.

Wider boulevards, newly located industrial centers and opening of new highway arteries there have brought about a gigantic business and residential development in Chicago's southwestern section in recent years. Business is centralizing around Seventy-fifth and Halsted Streets. So we have a similar branch at 7605 South Halsted Street.



Map of the city of Chicago showing how seven Studebaker sales and service stations have been placed with reference to populations and business centers. Photographs of the various establishments are shown in the inserts.

Until recently, there never has been any adequate provision for the great West Side of Chicago and the rich suburban districts beyond it. Now we have a branch at 4653 West Washington boulevard, in its center.

Just a few years ago, the better part of Chicago's "Gold Coast," or more prosperous North Side residential section, reached no farther than Wilson avenue, which is just six miles north of the "Loop."

But the character of building permits which were being taken out indicated this would be a rich community for another three miles north, reaching to the boundaries of "Exclusive Evanston." So our North Side branch was located in the center of that new district; at the time it was thought we had missed the mark on convenience, but time has justified our analysis, and a new "Motor Row" is reaching up to us, even now.

North of Chicago, the Lake Shore communities, homes of the wealthy and independent, reach for miles. For their accommodation, a branch has been established in Evanston.

But every family in Metropolitan Chicago can now go to see our product, or to have it demonstrated, close to that family's own home. Our branch manager is a member of each intra-urban business community. Service work is done close to the convenience of everyone, so it may be done more quickly, may be inspected while "in work" if the owner wishes to be in personal touch with the progress or nature of the work done and yet each branch has, at a few minutes' command, the entire equipment of the completely equipped central service station for special attention.

To do this has meant a substantial investment in properties. It has meant a payroll of 468 employes.

But to it we attribute in part the fact that our sales for the first quarter of this year exceeded those of the same quarter last year by 43 per cent.

To it we attribute in part the fact that 72.1 per cent of our sales are to former owners of our product.

New Stewart-Warner Carbureter Has Several Novel Features

SEVERAL innovations in mixture proportion control and in control of accelerating fuel are embodied in the new Stewart-Warner carbureter, designed and developed by P. S. Tice of the Stewart-Warner Speedometer Corporation, Chicago.

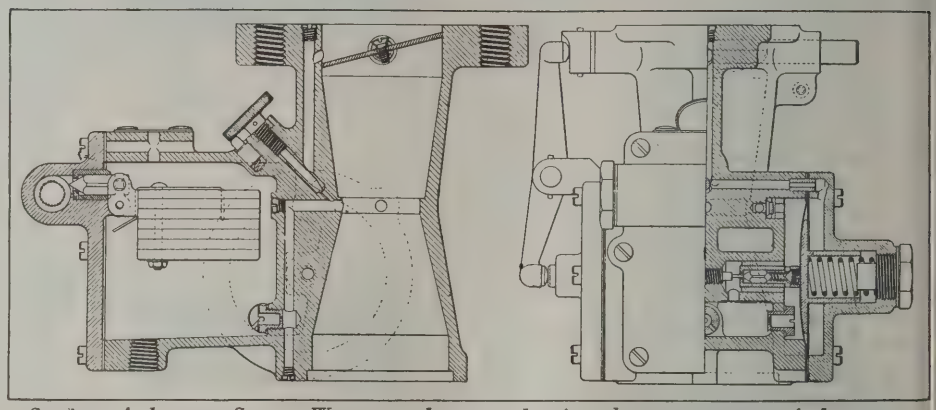
As will be seen in the sectional views, the single air passage is constructed to form a throat into which the fuel is discharged after passing through metering plugs or jets. All three jets are submerged and discharge at the periphery of the throat, thus keeping the throat clear of jets or standpipes and their supporting bosses. The absence of these latter contributes to a high pressure recovery or small drop across the carbureter.

Particular attention has been given in the design of this carbureter to securing fine spraying and consequent wide diffusion and high entrainment of fuel. This result is accomplished by the operation of the idling bypass directly upon the main fuel discharge passage, by the peripheral communication of the fuel outlets with the throat, and by the jog or step in the throat just above the fuel outlets. This latter is of particular value at wide open throttle at very low engine speeds.

The fundamental operating principle of this carbureter is such that the mixture proportion is constant or nearly so, and superimposed upon this general characteristic are design features that cause a richening at both ends of the load range.

Throat Communication

The second and smaller of the two fixed jets communicates with the throat by way of a chamber, one wall of which is a flexible diaphragm. The outer side of the diaphragm is pressed upon by a plunger backed up by a spring, and is subjected to the pressures in the intake above the throttle valve. As this pressure changes the position of the diaphragm changes, thus altering the volume of the chamber through which the fuel passes on its way to the throat. Since the entrance to this chamber is by way of a small metering orifice and the outlet is large and free, inward motion of the diaphragm following a rise in intake pressure causes the ejection into the throat, at a high rate, of fuel in excess of that normally flowing, the amount of such fuel being proportional to the motion of the diaphragm, which in turn is related to the change in intake pressure. To keep the diaphragm chamber filled with liquid and thus enable it to repeat such discharge no matter how rapidly or frequently it is called upon to do so, a free check of flapper form is built into its outlet passage to prevent the entrance of air from the throat on the "out" stroke of the diaphragm following a reduction in the intake pressure.



Section of the new Stewart-Warner carbureter, showing the arrangement of the parts and passages controlling both the steady running mixture proportion and the accelerating fuel

The third jet is in the form of a floating plug in the end of which is a hole normally closed by a small triangular spring-seated valve having an integral spigot or pin projecting through the hole. As the diaphragm is pushed inwardly by its spring plunger following a rise in the pressure in the intake, it in turn pushes the plug containing the valve ahead of it. Throughout the greater part of the diaphragm motion nothing is changed with respect to the plug and its valve, but the latter part of the motion presses the spigot against a stop and progressively opens the valve. This increases the total area of fuel jet passage between float chamber and throat and enriches the mixture correspondingly.

Since the diaphragm position, and therefore the extent of opening of the jet in the floating plug, is a function of the intake pressure, it is clear that the enrichment thus brought about is also dependent upon the pressure and therefore upon the relative air supply or relative air supply or relative load.

The entire setting of the carbureter is fixed by the specifications, with the single exception of the idling mixture, which is left adjustable.

In controlling the accelerating fuel the diaphragm is ordinarily utilized to handle about one-half of the total quantity of fuel needed for full acceleration, depending upon the engine to which it is applied. The rate at which this portion of the accelerating fuel is supplied closely approximates the rate of change of pressure in the intake. The remainder of the total accelerating fuel is applied by means of a positively actuated diaphragm pump arranged on the side of the carbureter opposite the pressure actuated diaphragm. A rocker lever transmits motion from a cam to the diaphragm through a plunger, and the diaphragm is returned by an opposing spring-backed plunger, when the cam releases it. The cam is mounted on the throttle spindle and engages the lever to move the diaphragm only after the spindle has been rotated to open the throttle through 15 to 18 deg. of its possible 75 deg. total motion. Thus, when operating at usual engine speeds, the mechanical pump does not come into action until from about 80 to 65 per cent of the relative air is flowing. The accelerating fuel control system in both its pressure and its mechanically actuated portions, is very flexible and is capable of close fitting to the acceleration requirements for maximum responsiveness in any given case.

Structure Simple and Rugged

Structurally the whole mechanism is simple and rugged. The diaphragms are of a hard rolled alloy that has been proven to have physical qualities that make it capable of long life in this service. None of the springs are delicate or sensitive as to strength; and none of the passages are so small or so located that they are liable to obstruction.

The float mechanism in its entirety is mounted by six machine screws; and fuel can reach the float valve only after passing through a screen of 100 mesh having a useful area of 2 sq. in. This screen is made up as a sleeve through which the fuel passes from the inside to the outside; and it thus retains all accumlated dirt which is withdrawn from the carbureter when the screen mounting is unscrewed. This latter is accomplished without disconnecting the fuel line.

The objectives aimed at in the design of this carbureter are stated to be: maintenance of the mixture proportion at the most economical value, except when the maximum output is demanded; and the supplying of accelerating fuel in such a manner and in such quantity as to give maximum responsiveness in all accelerations, large or small.

Chandler Adds Sedan Body Model

Appearance of Radiator Changed by Adding Three Vertical Bars. Body Lines Also Altered and Better Vision Provided for Passengers in Metropolitan Sedan

A NEW vogue in radiator design following closely European standards has been set by the Chandler Motor Car Company in presenting its 1926 line of cars. But for addition of one new body model, slight changes in the "Metropolitan" sedan, several engine modifications and the new radiator style, the latest Chandler cars are substantially the same as the 1925 models, there being no change in prices or company policy.

Three Vertical Radiator Strips

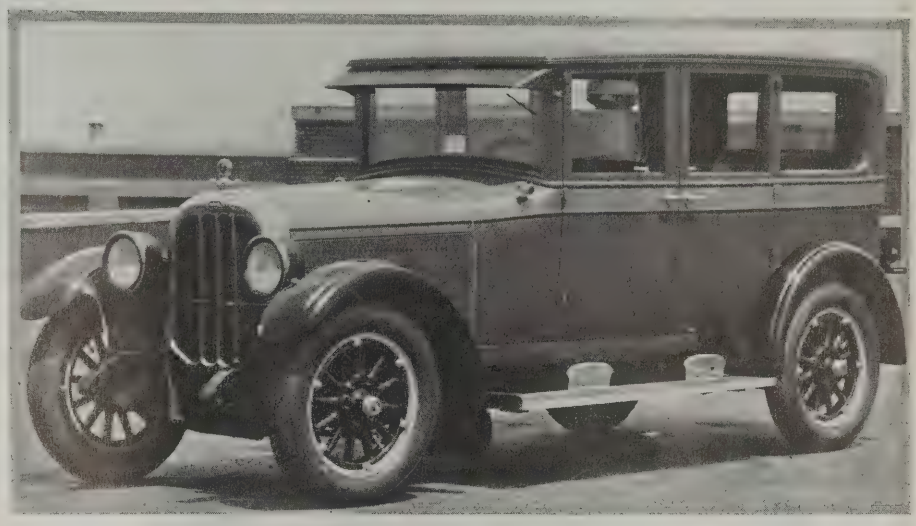
While the general contour of the new radiator is identical with the previous models, an individual and exclusive style is achieved by having three vertical strips spaced about 4 in. apart and at the front of the radiator. These triple bars which are of channel section are pressed out of the same stock and in the same operation forming the steel radiator shell, which including the vertical bars, is heavily nickel plated. A new name plate made of gun-metal having the letters in white enamel and mounted on a black background with a gold border and ending around the design is now employed.

The new sedan seating seven lists at $1795, replacing the former model at $1895 price. The most noticeable change in appearance of the new sedan over the former model is the rounding of the corners of the rear quarter upper section, the employing of heavy beading accentuating the double belt effect, the use of a one-piece vision ventilating windshield and a new color scheme. The last mentioned is a Duco two-toned brown finish while a blue brush green is offered at no additional cost.

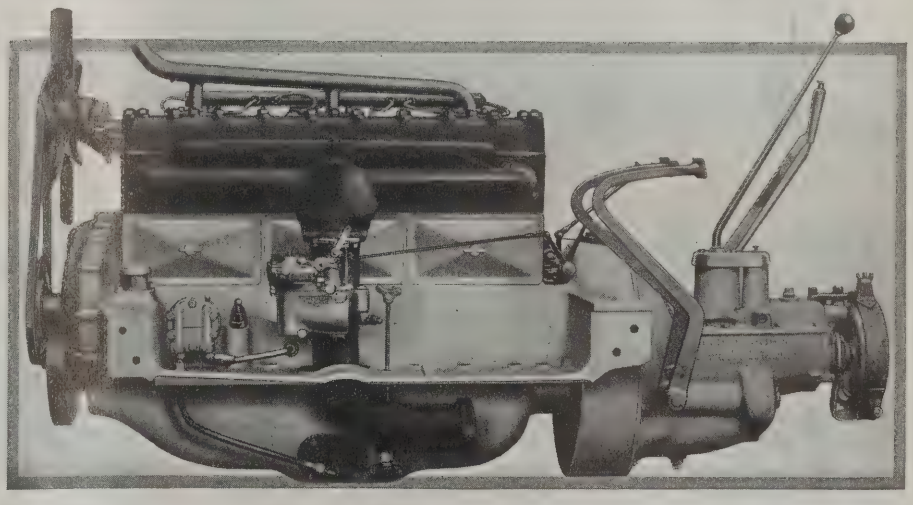
To allow greater vision and visibility for the passengers in the tonneau, changes have been made on the "Metropolitan" sedan. The landau bows formerly mounted on each side of the body at the rear have been eliminated and their place taken by windows of larger dimensions than previously used. Leather which formerly used to cover the rear quarter upper section which is now enclosed by a pressed steel stamping. Except for the addition of an automatic windshield cleaner on the seven passenger sedan the equipment is the same as on the model it supersedes.

Refinements Are Made

In line with the company policy of annually making announcements of changes in design at definite annual periods, the following refinements have been incorporated in the Chandler cars during the past several months. The ignition system which used to be mounted on a separate platform and driven through a coupling from the rear of the generator is now a part of the latter forming a single unit. The position of the generator remains unchanged while the make of the unit is American Bosch as formerly.



New Chandler seven-passenger sedan. The appearance of the body has been enhanced by moulding extending the full length of the car



Left side of the Chandler engine, showing the small flywheel at the front end. As will be noted the engine is very accessible

Reduced engine vibration, smoother running and fuel economy have been attained by the addition of a small flywheel carried at the forward end of the crankshaft and a newly developed manifold.

Unusual design of the manifold now permits the exhaust gases to flow through a separate passage cast in the intake manifold and from there the gases are carried behind the centrally located carbureter to the muffler pipe. The exhaust manifold which is a separate casting is now ribbed on the top with five fins to assist cooling the gases and is secured to the intake manifold by two cap screws. On the previous engines, the mixture was pre-heated by a hot spot forming part of the intake which was bolted to the exhaust manifold. The exhaust pipe also instead of leaving the manifold at the middle of the engine was carried down the front of the powerplant just behind the radiator. Slight modifications in the clutch have reduced the overall length of the transmission housing by 2 in. while minor changes have been made in the transmission brake hook-up.

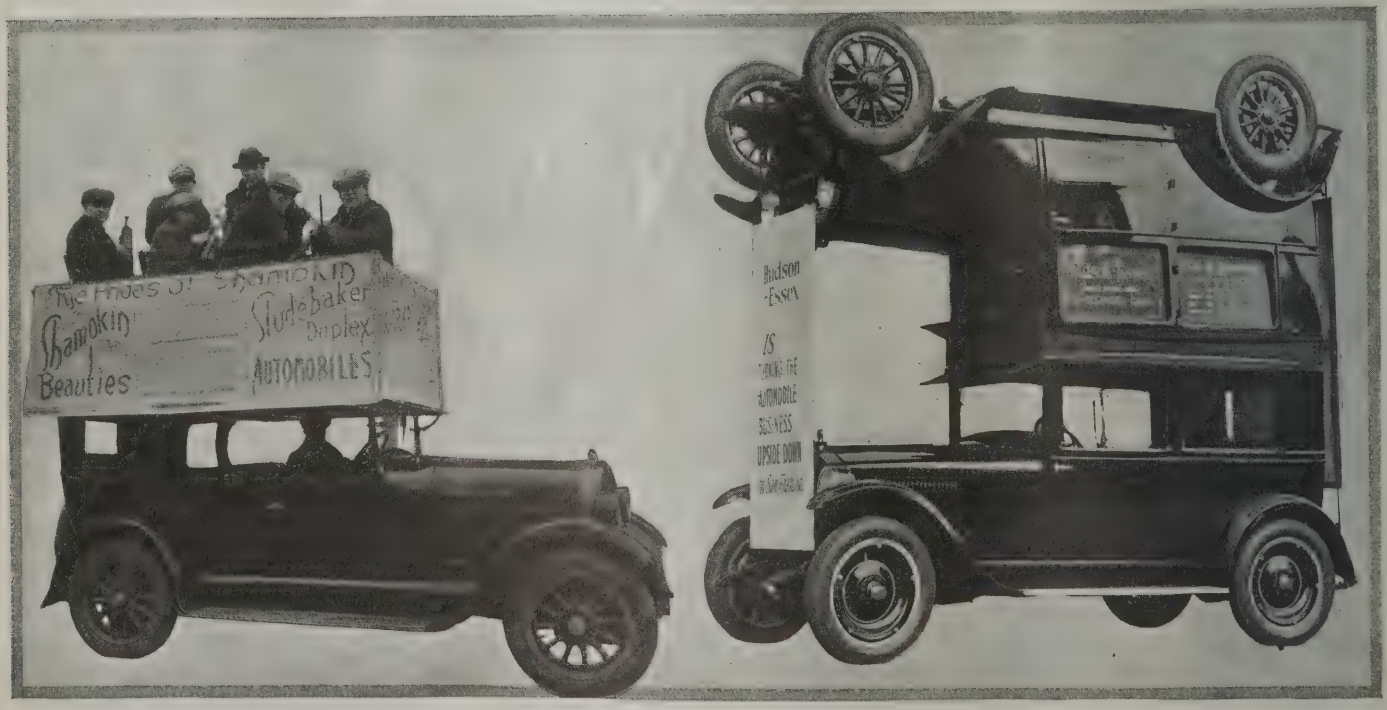
MOTOR AGE'S PICTURE PAGES





TEA FOR THREE. This young matron uses her Chandler Coach Imperial for more than transportation. When she takes the children for an outing and they get hungry, she simply spreads their picnic luncheon in the coach. The back of the front seat folds forward, making a convenient table.

ON NON-STOP TRIP. Lieut. Leigh Wade, one of the pilots in the American around-the-world flight, and Linton Wells, a newspaper writer, are shown in a Packard eight before starting on a non-stop drive from New York to Los Angeles.



SOMETHING TO MAKE 'EM LOOK. Dealers are constantly devising new stunts to attract attention to automobiles. At left is a Studebaker Standard Six Duplex-Phaeton with a six-piece orchestra on top. This led a parade at Shamokin, Pa. At right, one Essex coach carries another upside down. This stunt was staged by H. O. Harrison Co. of San Francisco, and the big banner says: "Hudson-Essex is turning the automobile business upside down in San Francico."

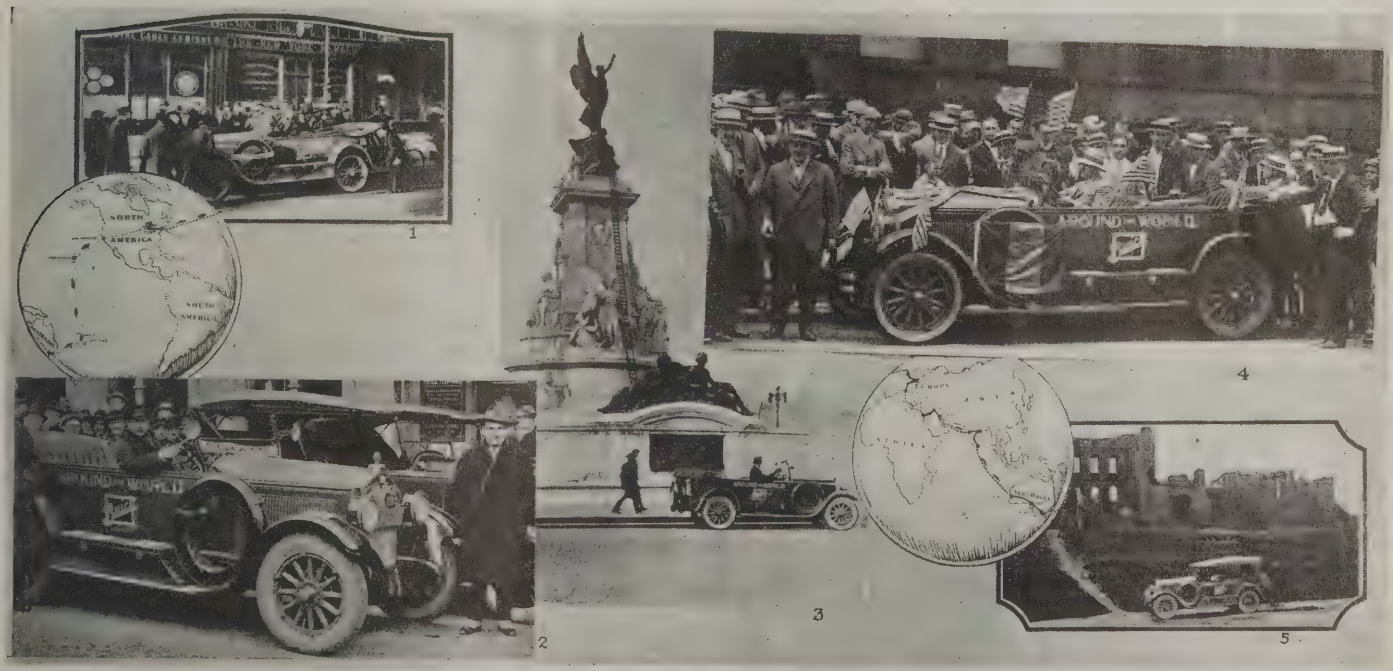
OF AUTOMOTIVE INTEREST



AERIAL ADVERTISING. A balloon is floated over their New Orleans establishment by Gabriel Snubbers. People can't help looking up to this kind of publicity.



INDIANS AWAIT OPENING OF YELLOWSTONE NATIONAL PARK. A group of Blackfoot Indians waiting behind the bars. The gate was opened with much ceremony, the governors of each state removing one of the bars. The park was then thrown open for the 53rd year. No doubt many automobile tourists will visit it this year.



AUTOMOBILE COMPLETES GLOBE TOUR. To demonstrate the world-wide availability of its service, the Buick company sent one of its Standard Six Touring models around the world. The company's agents in different sections took turns driving it. The views shown are as follows: 1—Paris office of the New York Herald; 2—Brussels, Belgium, with Brussels dealer in front; 3—Queen Victoria memorial outside Buckingham Palace, London; 4—The car as it drew up outside the Hotel Majestic, New York, Patrick Keating, at the wheel, completed the last lap from Flint, Mich.; 5—Kenilworth Castle, Warwick, England.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Splash More Oil to Save Main Bearings

Q.—About four months ago I tightened the connecting rods, main bearings, and installed new rings and ground the valves on a 23-54 Buick. After I did this the motor worked fine for about 1,000 miles, when it developed a knock. I then took the pan down again and examined the bearings, finding them all in first-class condition. The piston pins were all O-K, which, I forgot to mention, I had put in new before. However, the pistons were a little loose, having about .008 to .010 clearance at the top of the cylinder. I installed a new set of pistons of factory duplicates.

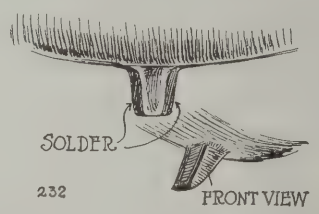
The cylinders were honed true to .010 oversize and the pistons were given .003 clearance. After reassembling motor the second time it still had the same knock. Connecting rods were aligned and new fiber timing gears installed. The car has been driven about 2,500 miles since and the knock is just the same. I will now try to explain the nature of the knock. When idling the engine doesn't sound bad although it has a sort of hollow knock which seems to be in pistons. The knock is worse when the car is on a constant speed of about 35 miles per hour and up. When pulling on pick up you can't hear a sound in engine but just as soon as you gain a constant speed it develops a clatter which is very loud, and not on one particular cylinder but on all six of them, and the higher the speed the louder the clatter.

Retarding the spark will do away with the knock, but also takes the pep, of which the motor has plenty. I have had engine down since installing pistons and find both pistons and cylinder true within .002 inch and pistons fit perfectly. The valve cages are all setting O-K.—Weichert Auto Service, Ellis, Kas.

May Be Caused by Bearing Looseness

It is probable that the noise is caused from looseness of the center rear bearing. You will find that the upper shell of this bearing is probably worn or burned slightly, allowing movement of the shaft up and down, even though the cap fits tight against the journal. To check on this point it is advisable to remove all of the cotter pins from all of the main bearings. Carefully unscrew the nuts, and when the shaft has dropped not more than one-eighth of an inch, or just enough so that it will not unmesh at the timing gears, jack it in position and then remove the bearing cap. With this done it will allow examination of the upper shell, and at this time very carefully examine the upper shell of the center rear bearing. If it shows signs of burning or poor contact it will necessitate pulling the engine and refitting the upper shells. The fact that the main bearing caps are tight does not necessarily mean that the shaft is properly bedded in the bearing, as in many cases it is possible for the upper shell to wear faster than the lower and for one upper shell to wear faster than its neighbor, in which case the shaft becomes unsupported at that point.

Q.—I have another Buick, a 22-45 model,



Widening oil dipper with solder

with exactly the same knock. I have installed two sets of pistons in this car, but the first set I installed were crown head with centered piston pin. When I put these in I honed the cylinders to fit the pistons very tight, that is, just so that I could push them through. When I assembled this engine and started it it sounded fine—exceptionally good for valve-in-head engine. After the owner had driven the car about 300 miles he stuck motor and scored the cylinders so I honed out the block again and put in .015 oversize pistons of same type and gave them .003 clearance and car has had same knock, which I have described, after about 50 miles.

The opinion of the local Buick factory branch is to the effect that the knock in this engine is due to the same cause as produced the noise in the 23 model. It has been suggested by this organization that to provide better lubrication you remove the crankcase sub-base trough covers and that you also widen the dippers on the conecting rods, one-eighth inch, that is, one-sixteenth inch on each side, by soldering (Fig. 232).

The Readers' Clearing House

THIS department is conducted to assist dealers and maintenance station executives in the solution of their problems.

All questions are answered direct by letter, so the name and address should be given in full. This saves waiting for the answer to be published, which sometimes occurs several weeks late, depending upon the space available.

Readers' names will not be published with articles, if a request to this effect is received with the letter. Inquiries not of general interest will be answered by personal letter only. Emergency questions will be replied to by letter or telegram.

Also state whether a permanent file of MOTOR AGE is kept, for many times inquiries of an identical nature have been made and these are answered by reference to previous issues.

Addresses of business firms will not be published in this department but will be supplied by letter.

Technical questions answered by B. M. Ikert, and A. H. Packer; Legal, by Wellington Gustin; Paint, by G. King Franklin; Architectural, by Tom Wilder; Tires, by a practical tire man; General Business questions, by MOTOR AGE organization in conference.

HOLDING THE OIL IN WITH VARNISH

Q.—We are having trouble with a Fordson tractor which flings oil from the pulley attachment. When this pulley was first installed and the tractor and pulley were new the pulley was not used to any great extent until it began to fling oil. We have removed the pulley several times and examined everything, also put in new felt. It would be all right for a little while and then would start to fling oil again. We know of other tractors that have been used more than this one which have never flung any oil. Carlos Farris, Tilford, Ky.

One possibility is that when the power attachment is used the tractor is not on level ground and the right side is lower than the left. This will tend to cause oil from the transmission to work out. Carrying the oil level too high in the transmission will also tend to produce leakage. Another possibility is that the casting which holds the bearing is upside down, so that the drain hole is on top. Another possibility is that the castings are somewhat porous and one recommendation is to remove the pulley and the pulley housing and varnish both of these units inside and out with machine varnish.

PISTONS REMOVED FROM BELOW

Q.—We have been having some trouble and argument over the removal of the pistons and rods from the Essex six. Are these assemblies supposed to come down in the regular manner on all models of this car, or only on some. Numbers two and five seem to be the joke on some. —Edgar, D. Best, 1533 S. 3rd Street Charlestown, Ill.

We have been advised from official sources that the pistons and rods are removable from below. In some rare cases the cylinder block casting is not uniform, so there is not sufficient space between the crankshaft and the sides of the case to allow withdrawal from below. In these rare cases it is necessary to push the piston up toward the top as far as possible, remove the piston pin and then withdraw the rod from below. Always heat the piston slightly before removing the pin.

Planning Your New Building

By TOM WILDER

The READERS' CLEARING HOUSE

A Large Building With Limited Frontage

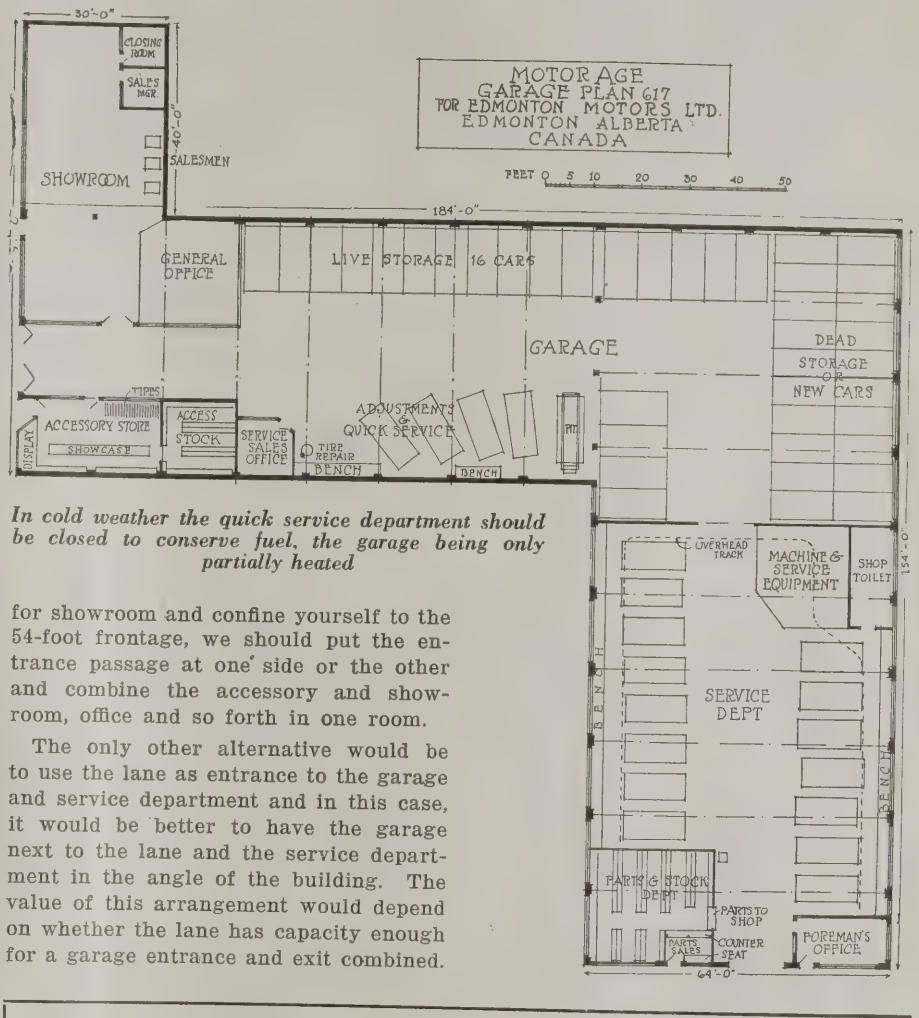
Q—We are enclosing a rough sketch of the approximate dimensions and size of a garage we are expecting to have built, and would like to work out several plans of what you consider the best way of arranging the layout, and return to us as early as possible. The nature of our business is exclusive Chevrolet franchise for Edmonton, and the number of Chevrolet cars operating in our territory approximately eight hundred. The lane indicated in the sketch is an ordinary lane, twenty feet wide. We will be pleased if you will draw us plans of both with and without the thirty by forty foot lot adjoining the property. The frontage faces on one of the principle streets of the city, and I think it would be advisable for us to take on the thirty by forty foot lot adjoining. —Edmonton Motors, Ltd., Edmonton, Alberta, Canada.

Your request for several layouts so that you could see which one you like best is quite out of the question, since there are so many waiting for plans that it would be quite unreasonable for us to make several for you and keep the rest waiting. Besides this, the layout which we have made works out so well that we doubt very much if we could make one that could be improved.

We think you would be very wise to add the forty feet to your frontage, using this space for showroom at one side of the car entrance, while at the other side you can have an accessory store. Back of these departments is the garage with space for quick service and adjustments at one side just behind the service sales office. As cars come in for service they are inspected by the service salesman in charge and sent either to the quick service department or to the main repair shop at the other end of the building. In case the repair shop is full, the car can be stored in the garage and called for when needed.

The retail parts sales department is in a little corner of the stockroom facing on the lane. There the stock keeper can take care of sales and also supply the shop with necessary parts.

In the angle of the building well secluded and out of harm's way there is a good space for new car shortage. While both sides of the service department are well supplied with windows and lighting space, it would improve the center of this section very much to install several good sized skylights or a continuous transom extending the full length of this section. The quick service department should also be supplied with skylights, as here there is no chance for outside windows. In case you do not use the 40-foot frontage for showroom and confine yourself to the 54-foot frontage, we should put the entrance passage at one side or the other and combine the accessory and showroom, office and so forth in one room.



In cold weather the quick service department should be closed to conserve fuel, the garage being only partially heated

The only other alternative would be to use the lane as entrance to the garage and service department and in this case, it would be better to have the garage next to the lane and the service department in the angle of the building. The value of this arrangement would depend on whether the lane has capacity enough for a garage entrance and exit combined.

LEGAL QUESTIONS ANSWERED

By WELLINGTON GUSTIN
of the Chicago Bar

Q.—Does Tennessee allow a lien for work done on automobiles?

Section No. 3592a-5 of the Code of Tennessee gives you a lien for "any repairs or improvements made, or fixtures or machinery furnished" on any vehicle. The law is broad enough to include tires furnished. This lien is good for one year after "the work is finished or repairs made or materials furnished" and until the decision of any suit that may be brought within that time for the debt. This lien is good against the automobile and the improvements thereon, provided the automobile has not been transferred in the meantime to a purchaser in good faith and without notice.

You see no recording of your claim is necessary to keep your lien alive during the period of one year as in most states. However, to prevent a sale in good faith to an innocent purchaser which would defeat your lien, you should have your lien recorded immediately after it is created. Recording is for the purpose of giving notice to all of your claim.

Your lien is subordinate to the claim of a seller of the car, retaining the title until fully paid for, so say the courts in your state.

You may send out and get the repaired cars, provided you do so in a legal manner.

The law allows levy of execution on the lien property and this is safer where an attempt to evade the lien is feared; otherwise a simple suit is the least expensive method.

Clearing Up Electrical

The Readers' Clearing House

EDITED BY A. H. PACKER

Tests O. K. But Generator Puts Out Only 4 Amps.

Q—We have a Remy generator from a 1918 Oakland which formerly generated 20 amperes until the thermostat cut in and then generated about 10 amperes. Recently it will only generate about three or four amperes, either cold or hot. We have dressed up the cutout points as they were somewhat burnt. We tried separate wires from cutout to battery with a separate ammeter in the circuit, so as to eliminate the regular wiring.

We also tried eliminating the cutout thinking the trouble might be there. As none of these experiments did any good we took the generator apart and cleaned it out. The commutator was in fine shape, well undercut and showed no burnt segments. We then tested the armature with one cell of a battery which showed about 18 amperes from one segment to the next all the way around. It would show 20 amperes on short circuiting the test points.

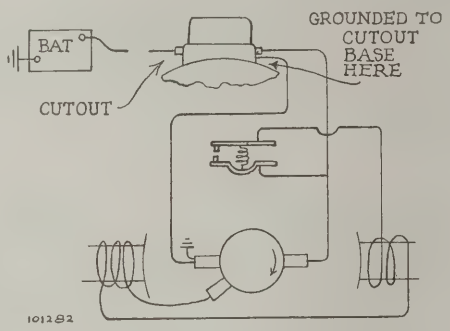
We figured that if any two coils or segments were shorted, you would get a higher reading than 18 amperes and if open a lower reading. A 110 volt test with a light showed no ground. The field coils were also clear of ground and with one cell of a battery showed two amperes through both fields and from the middle connection through either coil showed four amperes. We drew a platinum file between the points of thermostat a few times, as much as we dared, to clean them up. We taped up all brush leads where they were bare but none of these seemed to be causing the trouble. We did not try changing the position of the third brush as it had not been moved from the time when the generator was operating properly. We are enclosing a sketch showing the internal circuits of this machine.—Anaheim Reader.

Nothing Wrong With Internal Wiring

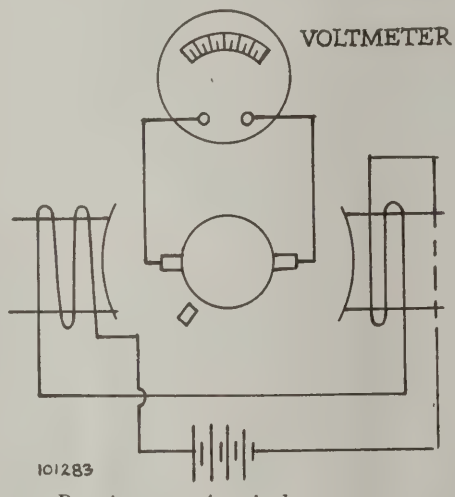
We are reproducing two sketches, one of which is the one you sent to us. We can find nothing wrong with this internal wiring. While you cleaned up the contact points of the thermostat you did not eliminate the thermostat entirely from the circuit. You could do this by connecting the lead from the field which normally goes to the thermostat directly to the insulated main brush. This would be a way of making sure that the trouble is not in the thermostat. Another test you might make which you did not mention is to use the 110 volt lamp test to see if any of the brush holders are grounded, that is, omitting the main brush holder which is supposed to be grounded. You might also check the thermostat to see if it is grounded. You have certainly done nearly everything possible.

It occurs to us that there may be trouble in the armature which only shows up when the armature is rotating, when centrifugal force which tends to throw the wires out, makes them short or ground. To detect this you might make a test like the one shown in the other sketch which we are also publishing. To make this test you can connect a dry cell to the field, disconnecting the shunt field from the third brush and also from the themostat. If you wish to you may connect several dry cells or several storage cells. Then run the generator on a test bench and read the voltage which should vary in exact proportion to the speed, for the magnetic field is constant as it is supplied by the battery.

If you find that the voltage increases



Reader's test circuits—they seem O. K.



Running test for faulty armature

in proportion to the speed but at some point suddenly becomes unsteady, and the voltmeter needle drops back then you will know that something has happened in the armature. As a last resort you might try changing the position of the third brush just to see what will happen although of course it should not be necessary if the present position is one in which operation was formerly O. K. We assume that the battery is O. K. and that it operates the starter. If so, it should be all right and take current from the generator. If one cell of the battery should be shorted however, it would maintain a low voltage at the generator and probably reduce the charging current. This is a very interesting case and would like to hear from you if you have a chance to make the voltmeter test we have indicated.

Come and Go Interrupter Trouble

Q—We have a 1924 Star touring car and of late it has been stopping very suddenly because of no spark in the distributer. The starter cranks the engine but the engine will not start until the interrupter points have been wiped off with a cloth and a slight adjustment made. In addition to working on this car ourselves, we have had it in two electrical service stations where the men are supposed to be competent on this sort of work. They have told us that the points of the distributor do not need replacing and are working satisfactorily, but it seems they can only effect temporary repair because after the car has been driven a while the old trouble returns.—Herbert J. Kersten, 511 N. Lee Street, Bloomington, Ill.

This appears to be a condtiion of defective interrupter contacts. These contacts are made of Tungsten and when this material is rolled it occasionally has impurities in it, these being in the nature of slag. When such interrupter contacts are encountered it is possible to file the surface and get perfect operation for a while, then the metal burns down to the point where the stony substance or slag makes contact and no current flows.

How to Test for Trouble

If the points are disturbed slightly they may again strike metal to metal and the operation is O. K. until the old trouble recurs. You can easily test to see whether this is the condition or not the next time the trouble happens. When the engine fails to start look at the ammeter and see if it shows discharge when the ignition switch is turned on and the engine is turned over. If it does not, remove the distributer cap and turn the engine until you can see that the interrupter points are touching. Then look at the ammeter again and see if it shows discharge.

If it again does not show discharge, take a piece of wire and touch one end of it to the interrupter terminal and the other end to the frame of the engine. If the trouble is due to the points not making electrical contact you should get a circuit and the ammeter should show discharge of about five amperes. You can then make another test by touching the wire from one point to the other and you can also press the interrupter contacts more tightly together and move them slightly to see if this makes the ammeter show discharge. If the trouble is at this point in the circuit any one of these tests will be indicated by the ammeter reading, but if you cannot get current to flow then test from one of the coil terminals to the frame of the engine, working back with a test light or with a piece of wire making contact from the ignition circuit to the frame of the car until you find the point where you get current.

Trouble With Bill Fixit

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

How a Growler Finds Short Circuits

Q.—I received your letter of May 11th in regard to the Remy generator on an Oakland car. In this letter you suggested testing the armature by running the machine with battery current flowing through the field winding, and taking voltage readings at the main brushes. I had previously tested this generator armature by using a dry cell and an ammeter, but found no trouble according to this test.

As I suspected the armature was at fault, I took it to another shop where they have a growler and it showed a strong attraction in two places. Can you explain why my test would not show this trouble? Would also like to have you explain the action of a growler and how it causes magnetic attraction when the winding is shorted.—Anaheim Reader.

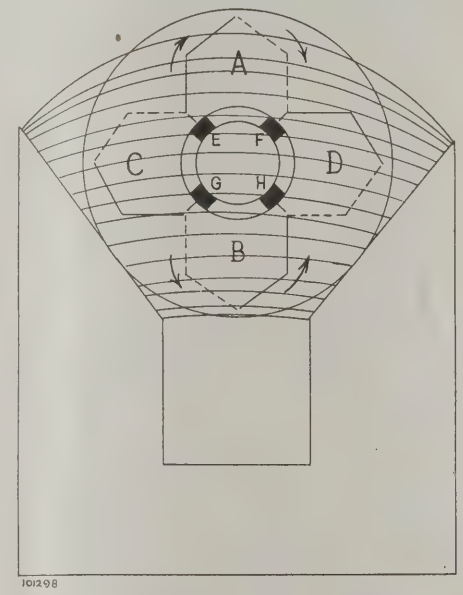
In your test the ammeter would indicate 20 amperes when you held the test points together and would indicate 18 amperes on a normal coil. The difference was so slight that you may have had a slight short circuit which would cause trouble when the armature was running and yet would not be of low enough resistance to enable you to tell the difference. That is, it might have been reading 18.1 instead of 18 amperes and you could not tell whether there was trouble existing or not. Another possibility is that the short circuit does not actually exist, when the armature is perfectly still, but when running, or when being vibrated slightly by the growler, the short circuit will exist and show up on a test of this kind.

Armature Running Test Probably Would Have Located Trouble

We believe you would also have found the trouble if you had been able to make the armature running test which we indicated. In the illustration we are showing the way a growler works and the reason for a shorted coil showing magnetic attraction. Instead of a regular armature, we have shown a very simple one with 4 segments and only 4 coils, the coils being A-B-C and D and the segments being E-F-G and H. The windings on the growler would produce magnetism which would first go from left to right and then from right to left, reversing 120 times a second with 60 cycle current. We will assume that at a certain instant of reversal that voltages are generated in coils A and B in the direction shown by the arrows. Coil A would be trying to send current around to the right and coil B would be trying to send current around to the left and these two voltages would neutralize so that practically no current would flow.

There would probably be some voltage generated in coils C and D and in any other coils that might be in the armature, but we would find in all cases that these voltages would practically cancel out so that no appreciable current would flow. in the armature winding when the armature is in good condition. Suppose however, that there should be short circuit between commutator segments E and F at the bottom of coil A. This would allow the voltage generated in coil A to send current around through the winding of that particular coil. In similar manner, it would allow coil B to send current through coil D, then across from commutator bar F to E and back through coil C to coil B again.

In this way we would have two coils with current flowing in them, but the current would be stronger in coil A because the resistance is lower, while coil B had to send its current through all the rest of the winding with the exception of one coil. We know that where current flows through a coil it has a magnetic effect and this will show up as a



Coils produced by growler magnetism

local magnetic pole at the center of the defective coil. In some cases the winding varies so that a single short circuit will produce two magnetic poles on the armature. This would be true in a wave winding, whereas the one we have shown is a lap winding. Believe that from this however, you will get the general idea and understand why a short circuit produces a magnetic effect while a good armature shows no appreciable magnetism.

Does armature testing "get your goat"? The first article on page 26 tells what the Anaheim Reader was up against and the first article on page 27 tells what he found and how.

Special Machine for C. P. Charging

Q.—I have a motor generator set for charging batteries. I would like to know if it is possible to get a voltage regulator for this set so as to make it a constant potential charging outfit.—LaSalle.

A motor generator set designed to charge a number of batteries in series is not properly designed to operate as a constant potential charging machine. A set of this sort may be designed to give out 10 or 15 amperes at a voltage of from 75 to 100, while the constant potential machine is designed to give out a high current of 100 to 150 amperes or more at low voltages, such as 7 to 15. Accordingly, the parts are not the right size, and, in the high current machine, the armature conductors, brushes and all connections which carry the charging current would have to be very heavy. Consequently the mere addition of a voltage regulator would not make the machine suitable for this purpose.

MOTOR FOR IGNITION TESTER

Q—How can I vary the speed of a horn motor which I wish to use for driving the circuit breaker of a testing set which will be used in testing ignition coils and magneto armatures.—West Coast Reader.

Horn motors are series wound and the speed cannot be controlled very accurately. You can put a coil wire rheostat in series with the motor and while this will make it go slower it will also cut down the torque. You may find that this will work all right or you may find that when you try to make the interrupter run slower that it will occasionally stop. You might try connecting the horn motor field in parallel with the armature and putting a fairly high resistance rheostat in the field circuit only. Weakening the shunt field will make the motor speed up. On the other hand you might first find it necessary to rewind the field with finer wire.

Q—In testing a magneto armature with a circuit breaker and six volt storage battery should the current flowing through the primary winding be limited to a certain number of amperes or should the primary winding be allowed to take whatever it will carry under a pressure of 6 volts.

We would suggest letting it take as much current as it will except that a test should not be run long enough to permit the armature to get hot. If it draws five or six amperes with the contact points together, it will be about the equivalent of testing an ignition coil. If it draws 10 or 12 amperes with points touching it may cause some sparking at your interrupter, and a test of this sort should not be continued very long. You will accordingly have to gauge your test in accordance with the current taken and the tendency for the armature winding to heat up. It is essential to provide a spark gap of about $\frac{3}{8}$ inch before starting it or you will strain the insulation of the secondary winding.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Automobile Owners Like Flat Rate Charge System

Club Endorses Flat Rate

Worcester, Mass.

To the Editor of Motor Age:

In our contact with service through many members we have come to the conclusion that the theory of a standardized flat rate charge for repairs, overhauling, etc., is altogether practical, sound and just in every way and at an early date this club is going to pass a formal resolution endorsing and approving of its general adoption.

Only a short time ago the president of this club, passing through Jacksonville, Fla., had occasion to have a small but important piece of repair work done, and upon completion and being informed of the charge told the service man "that is exactly the same price as I paid for the same job in Worcester, Mass.," and the reply was, "Yes; we presume you Worcester service man had adopted the flat rate charge."

Your advocacy of this has been mentioned at our directors' meeting, and while no formal expression has been made as yet we are prompted to again express our appreciation of the fine work you are doing and compliment you upon the advocacy of a measure which means so much to the owners of automobiles.

If it be convenient for you will you tell us how many and which of the automobile manufacturers through their sales and service have adopted the practice of a flat rate charge.

We are going to have a special article in our local papers concerning this very soon and shall endeavor, of course, to give you full credit for your part in the matter.—Bancroft Automobile Club, Inc.

Franklin and Reo Prices

To The Editor of Motor Age:

In your issue of April 30 your flat rate chart has a notation stating "Franklin and Reo prices include labor and material." We would like to have a fuller explanation of this. For instance, a valve grinding job on a Franklin E-14, $20.42 could not include new valves. Operation E-63, taken on a Franklin is listed $154.25. What parts should this include? We do not think that the prices will include the parts needed on the ordinary Franklin. What parts would you suggest furnishing for this price? How many hours does this price allow? Kindly send us another copy of the April 30 MOTOR AGE—Middagh Motor.

The operation E-63 concerns the overhauling of the engine and this means grinding the block to .015 in. oversize, new pistons, wrist pins, new timing chain, new oil reservoir screen, new ignition points all new gaskets and whatever small parts are needed in overhauling the carbureter.

The operation does not include new main bearings or valves as you will note that it is clearly stated that the bearings are to be taken up only and the valves reground. You will also notice that the operation E-14 as given in the MOTOR AGE Flat Rate Manual reads as follows: "Clean carbon, grind valves and E-13," the latter being the operation number for tuning the engine.

In both the Franklin and Reo prices material is included. For example in the operation E-59 "Fit all pistons, cylinders out" you will notice that the price for this operation on the Franklin 10-C is $44.10. Now if you compare this price with that for the same job on other cars you will find the Franklin price far above them, but that is because the Franklin price includes the pistons, rings and wrist pins.

The same is true of other flat rate operations for Franklin where the price seems high in comparison to the price of the same operations on other makes of cars. It is quite difficult to give the time necessary for the overhauling operation E-63 since this includes the material and it is impossible to divide the price of $154.25 by $1.50 per hour and thereby get the approximate number of hours for the job. Probably 100 hours comes pretty close to it.

Readers Like Flat Rate Manual

MOTOR AGE has received numerous letters from its readers testifying their appreciation of the utility and practicability of the Flat Rate Manual, published in the April 30 issue. Likewise the discussions which have appeared on this page have proven of interest to the trade, judging from the letters that have been received. MOTOR AGE welcomes letters on flat rate problems. So write in and let us have your views on this important question.

MOTOR AGE'S FLAT RATE FORUM

No. 20

FLAT RATE PRICES FOR

BRAKE LINING OPERATIONS*

Make and Model	Service	Emergency
Auburn 6-39	$11.50	$19.50
Buick "4" 4-Wh. Br.	19.00	23.00
Buick "6" 4-Wh. Br.	21.50	26.25
Cadillac V-63 4-Wh. Br.	25.00	33.00
Chandler	11.75	19.00
Chevrolet FB	10.00	16.50
Chrysler	17.50	29.25
Cleveland 43	21.00	25.00
Dodge Bros.	11.25	25.00
Durant "4"	10.50	16.75
Durant "6"	11.25	18.50
Essex "6"	10.50	17.25
Flint	11.00	18.25
Franklin	10.00	15.00
Haynes	12.75	17.00
Hudson	13.25	22.50
Hupmobile	9.75	15.50
Jewett	11.00	14.75
Jordan "M"	10.50	17.75
Lincoln	17.75	27.50
Marmon	13.00	20.50
Moon	11.25	18.75
Nash "4"—4-Wh. Br.	14.00	19.50
Nash "6"—4-Wh. Br.	15.00	22.00
Oakland—4-Wh. Br.	16.50	20.50
Oldsmobile "30"	8.70	12.00
Overland	8.50	12.50
Packard "6"—"8"—4-Wh. Br.	12.50	23.50
Paige "6-66"	12.50	21.00
Peerless	12.50	22.75
Pierce-Arrow	16.75	25.50
Reo	13.50	22.75
Rickenbacker 4-Wh. Br.	19.75	23.75
Star	8.25	12.75
Stearns-Knight	13.50	21.25
Studebaker Stand.	10.50	17.00
Studebaker Big and Special "6"	11:50	18.50
Stutz 695	13.25	23.50
Velie	10.75	17.25
Wills St. Claire	11.25	18.00
Willys Knight	12.50	18.75

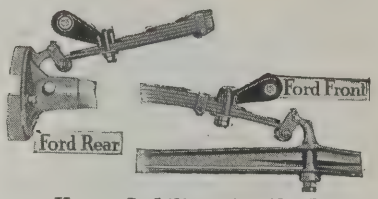
*Includes material.

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Harve Stabilizer for Fords

A NEW model Harve stabilizer for Fords has been developed by the Continental Co., Springfield, O. The design of the special Ford type is much the same as the regular model, controlling spring action through the basic principle of inertia of an offset weight. The following specific advantages in the Ford model are pointed out by the Continental Company: No part of the car is tampered with in making installation; Harves do not add auxiliary springs to the car in an attempt to absorb shock and check rebound; elimination of side-sway; excessive spring action, both shock and rebound, is controlled without destroying the natural flexibility of the car springs by tying the body of the car down to the axle.

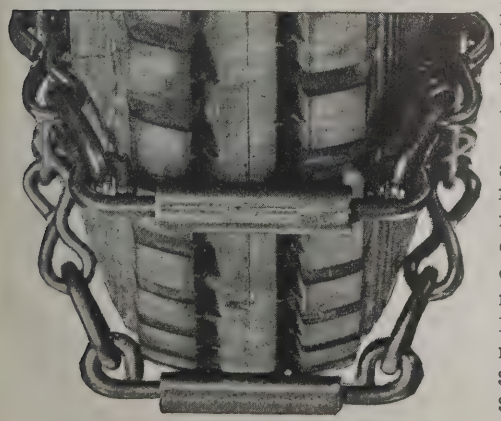


Harve Stabilizer for Fords

New Rectigon Charger

The Westinghouse Electric & Manufacturing Company has developed a new Rectigon battery charger which will handle any A or B storage battery used for radio work as well as any three to six cell automobile battery. The charging rate is two amperes except when B batteries are being charged. The transformer winding which supplies the current to the battery is entirely insulated from the winding which is connected to the A. C. source of power. The use of the insulated winding gives added safety in charging a battery which is connected to a raido set.





Hoff Tire Chain showing cross member

Sell the Homefolk Before They Go

There are two opportunities to catch business from the summer automobile tourist.

One is to sell him when he is stopping in or passing through your town. The other is to sell him BEFORE he starts out on the trip.

The dealer's first consideration is to supply the local resident who contemplates a long motor tour. He means more than the transient because the local resident will return and possibly buy again.

Now is the time to watch newspapers and be otherwise alert to find out what homefolk are going on automobile trips. Plenty of information at the store as to roads and routes, hotels and camps will offer a form of "free service" that will make contacts for selling opportunity.

Bring the buyer to the store.

Hoff Tire Chains

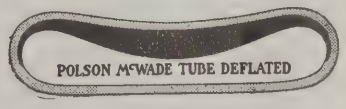
THE Hoff Metal Products Company, 70 East 45th Street, New York, contributes a departure to the accessory market in its Hoff tire chains and cross members. The cross members of this tire chain, instead of being in the form of the usual links, are in the nature of rotatable triangular tubes which it is claimed offer a number of distinctive advantages. In addition to embodying good features of the older style chain it is said the Hoff product obtains better traction, preventing side-slip and skidding under any road condition. The company further recommends its chain as one that will not break or pound fenders and not injure tires.

It is said to be easily taken on and off and that worn cross members can be readily replaced. The Hoff cross members may be used in a chain made on the cross-chain plan. Replacements of Hoff cross members for cross-chains can be made as the old cross-chains wear out. Prices for Hoff chains with Hoff cross members range from $4.75 per pair to $10.25. Cross member prices range from $9 up for lots of 100. The company will furnish other prices and details.

Puncture Sealing Tubes

EMPLOYING a principle which produces a high compression area upon the rubber of the inside, triple-thick treadside surface of the tube punctures are automatically and effectually sealed in the Polson-McWade Puncture-Sealing Inner Tubes, according to the claims of the makers, the Polson Rubber Co., 1783 E. 11th St., Cleveland, O. A nail, wire or other object entering the tube is immediately surrounded by compressed rubber and there is no escapment of air. As the puncturing object is withdrawn it is said surplus rubber flows into the hole and seals it as though vulcanized. The tube is not sold as "puncture proof," the manufacturers stressing its sealing feature.

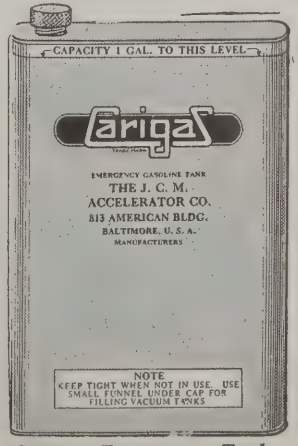
It is claimed by the manufacturers that the tube is made of 93 per cent rubber of the highest grade, the average tensile strength being 2500 pounds to the square inch in the new tube. The tensile strength increases with age. It is claimed further that the compound from which this tube is constructed gives exceptionally long life to the unit. Repairs may be readily accomplished and the tube is easily installed.



Puncture Sealing Tube

Carigas Emergency Tank

THE Carigas Emergency Gasoline Tank is manufactured by the J. C. M. Accelerator Co., 813 American Bldg., Baltimore, Md. This is a container of one gallon capacity made to fit under the seat of any stock car. It uses a brass machine threaded cap and a funnel for filling vacuum systems and carries a guarantee against leakage or evaporation. The Carigas tank is 2½ in. thick, 8 in. wide and 13 in. high. The list price is $1.25.



Carigas Emergency Tank

GETTING MORE OUT of the SHOP

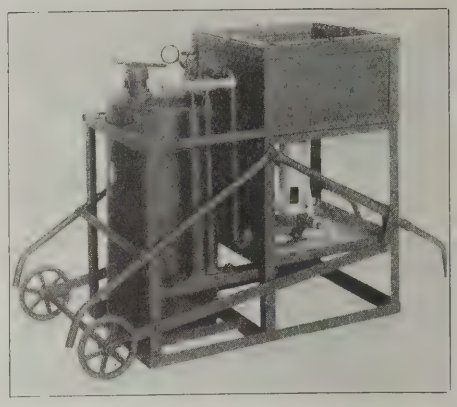
Chausse Portable Furnace

A portable furnace for use in melting lead, babbit, cyanide and other similar surfaces, has recently been produced by the Chausse Oil Burner Co., Elkhart, Ind. This machine as illustrated, is a combination of a Chausse oil burning torch equipment with a retort and mounted on a framework with wheels.

This Chausse forge weighs about 160 lbs. empty, and its overall dimensions are as follows: width 20 in., length 36 in., and height 33 in. The heating chamber is 14 in. x 14 in. x 16 in. high and is lined with fire brick with the flame entrance at the bottom. The kerosene tank holds 12 gal. which is sufficient for 12 hours operation at maximum temperature. The burners, consuming 1 gal. per hour, will deliver sufficient heat to melt 200 lbs. of lead in from 20 to 30 min. from a cold start. The maximum temperature generated by the burners is 1,800 deg., and any reduction in the amount of heat generated, will of course, decrease the fuel consumption. Pressure on the tank is maintained between 10 and 20 lbs. by one Chausse hand pump.

An interesting feature of this machine is the movement of the wheels, so that when stationary the forge sets horizontally on its base. By lifting on the handles at the rear, the side opposite the wheels, the wheels are lowered, and the machine can be moved from place to place without tilting. When it is set down, the wheels rise.

The features of this machine meet a requirement in a number of industries. It was designed as a lead and babbit melter for municipal water works and for babbitting engine bearings. It has been found satisfactory for melting cyanide for case hardening, for boiling water, for heating pipe to be bended, for expanding gears or collars and wherever an oil burning forge can be used to produce a high degree of heat.



Chausse portable furnace

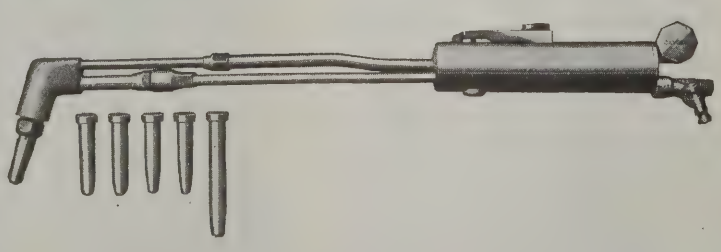
Milburn Low Pressure Combination Cutting and Welding Torch

A low pressure torch which will operate on either low pressure or high pressure gas with equal efficiency, is made by the Alexander Milburn Co., Baltimore, Md. It is especially constructed to operate with low pressure acetylene gas, city gas or hydrogen. It is excellent for use with a low pressure acetylene generator, it is stated.

It insures a correct and intimate mixture of the oxygen and acetylene resulting in "super mixing" and non-flashback qualities, it is claimed.

This torch is adapted to perform welding as well as cutting work by the mere interchange of tips. It performs practically all the cutting and welding operations within range of the process with efficiency and economy.

The torch is of bronze forgings and special seamless tubing, constructed to withstand constant service. The tips are made of solid copper and are interchangeable with a large number of low pressure torches of other makes.

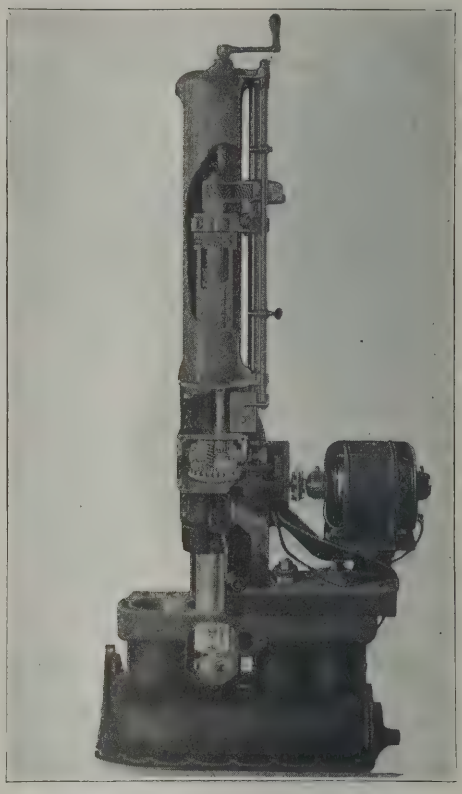


Milburn low pressure combination cutting and welding torch

Jiffy-Jordan Cylinder Regrinder

The Jiffy-Jordan cylinder grinder is of the portable type and in use the block does not have to be removed from the car. The machine has a boring bar 30⅝ in. long by 2¾ in. in diameter with over 12 inches of bearing surface. Gear drive is used throughout.

The construction of the machine, it is claimed, prevents the boring bar from following the old hole. The bar is centered over the cylinder by a three point centering head and the machine is then clamped to the face of the block by two heavy clamp bolts. By thus securing the machine, it is stated that there is every assurance that the new hole will be at right angles to the crankshaft.



Jiffy-Jordan cylinder regrinder

The grinding wheel is attached to the grinding spindle by an arbor and revolves at 5250 r.p.m. The spindle travels the full length of the boring bar through an eccentric sleeve which in turn passes through the boring bar. In use the boring tool is used first to straighten the out of round cylinder taking out both the oval and taper. The machine is made by the Jordan Machine Tool Company, Longfellow, avenue and East 28th street, Minneapolis, Minn.

NEW UNIVERSAL CATALOG OF BATTERY PARTS AND SHOP EQUIPMENT

The Universal Battery Co., 3410 South LaSalle Street, Chicago, announce a new catalog, which is bulletin No. 90-E, which will be sent without charge to battery shops on request. In the front of the book is the Universal Creed, which outlines ten progressive steps which any battery shop can take to improve its business methods. The catalog lists all battery parts, complete batteries of all types for both automobile, radio and farm lighting service, and includes practically every tool that could be used in a battery shop. The catalog may be had by addressing Department MA of the company.

EDITORIAL

Bigger and Better Associations

DEFINITE steps taken by two of the largest and most influential associations in the automotive industry to effect a consolidation of organization and activities are to be commended. The most effective argument in favor of such consolidation is that of economy and no less a person than Secretary Hoover of the Department of Commerce is a most powerful advocate of this method of eliminating waste.

The two organizations actively working toward consolidation are the Automotive Equipment Association and the Motor and Accessory Manufacturers' Association. Of these two the one best known to the retail trade is the Automotive Equipment Association on account of its active cooperation with jobbers and dealers in the promotion of better and more profitable merchandising methods.

The Motor and Accessory Manufacturers' Association, however, has a long record of useful activity in its particular field and the influence of its work no doubt has been felt very definitely by the retail trade. The A. E. A. is composed almost equally of jobbers and manufacturers; the M. & A. M. A. has only manufacturers as members. There is considerable duplication of manufacturer membership in the two organizations. The elimination of this duplication through consolidation would effect a saving to manufacturers both in dues and in the time of officials necessarily devoted to association activities.

It is to be hoped that this movement, heartily indorsed by the A. E. A. membership at its Colorado Springs convention, will be developed along broad and unselfish lines. It is certain that if the general welfare of the industry is considered and factional interests relegated to the background the consolidation will eventually take place and result in great benefit to the industry and worthwhile saving to the individual concerns composing the membership.

Traffic and Children

ONE very important angle of the campaign for greater street and highway safety relates to the child. Something like a third of the victims of traffic fatalities is made up of children.

Children often play in the streets because, in many instances, there is no other place for them to play. Under present-day conditions of traffic the public thoroughfare is less adapted than ever for use as a playground and the public thoroughfare was not a safe playground even in the days of the horsedrawn vehicle.

We believe the automotive trade should take a leading part in the movement for more public playgrounds. During last year 231 cities opened 635 new play areas, representing 1924 as a forward year in this connection—but the number of playgrounds in existence now must be increased many fold before the demand will be met.

Some cities are far ahead of others in playground development. Dealers who live in those cities which are trailing behind would do well to put their shoulders to the wheel. The interest of the automotive trade in safety projects should be made outstanding. It sells "safe transportation." It wants conditions corrected which militate against all elements of highway safety.

Good Work at Indianapolis

WE can hardly think of a better activity for a local automobile dealers' association than the taking of a census of used cars in the hands of dealers, as was recently done at Indianapolis by the Indianapolis Automotive Trade Association. This census gave the make, model and year of all used cars on hand as of the date the census was taken. The detailed report was furnished to every member of the association. To the intelligent merchant this information is of great value as indicating the supply of used cars available in the particular market. But the Indianapolis association proposes to go further and make such a used car survey once a month. When that is done the automobile dealers will be able to file the monthly reports and by comparison they can readily determine the demand of the used car market and also the makes and models that sell best. No more useful function can be performed by a trade association than this, and this alone should be worth many times the cost of membership.

A Code of Ethics for Motorists

PROPOSAL of a national code of ethics for motorists by Thomas P. Henry at the three A's Atlantic City convention suggests a question: What has become of the old fashioned motorist who was always willing to lend a helping hand to another motorist in trouble on the road?

When you are stalled along the highway the offers of help from passing automobilists are not so frequent as they were a few years ago. Accommodation by the other fellow has become a moribund element. Save on rare occasions today he is utterly indifferent to the grief of anyone but himself.

Various changes in conditions doubtless have helped bring about this state of disinterest, but a code of ethics which essentially would emphasize a Golden Rule for those making up vehicular traffic, would be capable measurably of restoring the fine old institutions of highway accommodation and courtesy. A code of ethics would not likely preach accommodation but the influence of thinking along ethical lines would reach far in that direction.

Sales Continue Better Than Normal

Slowing Down From June Pace Is Observed, However

Rate of Production About 10 to 15 Per Cent Lower Than That of Early Last Month

NEW YORK, July 8.—Some slowing down in output and sales of automobiles was observed during the week just past, and in the industry as a whole the rate of production is now from 10 to 15 per cent below the average maintained during the early part of June.

Conditions are, however, still better than normal for this time of year and optimism at the factories is unabated. Those concerns which have closed down to prepare for new models are expecting a big summer business, and in the case of several large producers output has not yet caught up with sales.

The July total of production for the industry, it is expected will be rather seriously affected by a two-weeks' closing down of a leading factory which has up to now been turning out cars at a record-breaking rate.

Truck sales are showing a downward tendency, but they are still running well ahead of last year at this time.

Exports in all automotive lines are continuing at the highest rate in the history of the industry.

With the seasonal decline under way, the manufacturers are bending their efforts to solve pressing merchandising problems, with the idea of bringing down costs and increasing distribution. The most important of these is insurance, and several plans under consideration are all intended to lower rates, which have been on the upgrade recently and have tended to increase resistance from new car buyers.

The manufacturers are also seeking to win back some of the lucrative replacement parts business which they have been steadily losing to independent makers of these parts. Quicker service and lower prices, it is held, will bring about the end desired.

Dealers were never in better shape reflecting the sound policies followed since the first of the year by the factories in limiting production to sales, maintaining prices during the peak of the sales season, and withholding the introduction of new models until the peak had passed.

USED CARS IN DEMAND

ST. LOUIS, Mo., July 6.—Because he feels that used cars are in great demand in St. Louis and asserts that his company has been unable to fill the demand for nine used cars per day, Phillip H. Brookman, president of the De Luxe Automobile Co., Oldsmobile distributor in St. Louis has announced and advertised that his company will accept used cars as first payment on a new Oldsmobile.

Ford of Canada Will Build And Distribute in Australia

FORD CITY, Ont., July 6.—The Ford Motor Company of Canada, Ltd., through its subsidiary companies, the Ford Manufacturing Company of Australia Proprietory, Ltd., and the Ford Motor Company of Australia Proprietory, Ltd., has taken over the assembly and distribution of its products in Australia.

Each of the Australian companies are capitalized at £1,500,000 and are now erecting five plants to take care of the growing Ford business in that country.

Ford bodies and such other parts that can be produced will be made by the manufacturing company while the assembly and distribution of the products will be carried out by the sales company. Both companies have headquarters at Geelong while the sales company will have branches at Perth, Adelaide, Brisbane and Sidney.

Since 1905 when the shipment of Ford products began until 1911-12 when over 1,000 cars were shipped, the number has gradually increased until upwards of 21,000 were shipped from here to Australia in 1923. This will be even higher for 1924 when final figures are released.

YELLOW-G. M. MERGER ON

CHICAGO, July 6.—Rumors of a proposed merger of Yellow Cab manufacturing interests with the General Motors Corporation were confirmed here today. Details await to be worked out before any announcement will be made as to how the transfer of stock and property will be effected.

Velie Reports One of Best Years in Company's History

MOLINE, Ill., July 6.—Velie Motors Corporation, of Moline, Ill., is having one of the best years in its history, according to C. W. Hadden, general sales manager. Shipments from the Velie factory during the past nine months have exceeded the corresponding months of the previous year with one exception, Mr. Hadden says.

March shipments were the greatest for that month in four years. Shipments for May showed 12 per cent increase over May in 1924 and Mr. Hadden predicts that June will show at least a 15 per cent increase over June shipments of last year.

Velie export business has greatly increased under the promotion of L. F. Murphy, assistant sales manager. Export shipments for the first five months of 1925 were approximately 50 per cent greater than during the corresponding period of last year, according to Mr. Hadden.

Kissel Motor Car Company Announces Price Reductions

Standard Models Undergo Several Changes and Two Speedster Designs Are Added

HARTFORD, Wis., July 6.—Announcement is made by G. A. Kissel, President of the Kissel Motor Car Company, that prices on all popular models in the Kissel line have been reduced.

The price of the five passenger six cylinder brougham has been lowered from $1895 to $1795. The eight cylinder four door brougham sedan has been reduced from $2550 to $2395 f. o. b. factory.

In addition to this price reduction the factory announces certain new improvements in models. All models are now mounted on the new Kissel stabilized chassis which is said to mean a frame with greater rigidity and longer life.

The eight cylinder special sedan mounted on 137 inch wheelbase now has wide 32 inch doors. In addition to these changes Kissel is now building a four passenger open speedster and four passenger closed speedster.

The company also is bringing out wider doors on all four door models. These doors are 30 inches wide. Moreover, the windows which are low and extremely wide enhance the appearance of the cars.

Race Driver of Automobile's Early Day, Now Merchandising

COLUMBUS, O., July 6.—T. W. Pickard, head of the T. W. Pickard Co., Ohio distributor for Panyard Piston rights has the distinction of being among the first racing drivers of the Middle West if not the country at large. In 1903, while superintendent of a carriage factory he conceived the idea of building an automobile which he finshied early in 1904.

It consisted of a horizontal air-cooled motor with two cylinders. He named it the Imperial and exhibited at the Madison Garden Show of 1904 and took many orders. He entered the Glidden tour in the race from Pittsburgh to St. Louis with about 250 cars of all kinds, winning the tour by rolling into St. Louis first. His place of business which was recently opened is located at 228 North Fourth St., Columbus.

GENERAL ISSUES WARNING

AKRON, O., July 6.—The General Tire & Rubber Co. has sent word to its distributors throughout the country, warning them against over-stocking with tires now that prices are rising. The warning includes an intimation that by buying more tires now than are needed for normal requirements, the manufacturers are forced to buy rubber at a high price, and dealers automatically raise prices on themselves and on the public.

Truck and Bus Delegates Bolt From A. A. A. Meeting

Hopes of National Organization for Mutual Aid Blasted at Convention

NEW YORK, July 6.—The automobile industry's hope for a powerful and unified national organization of truck and bus operators, that would be able to function effectively on such matters of common interest as taxation and highways, received a setback at the meeting of the American Automobile Association which just ended at Atlantic City.

A virtual secession took place there of a group of truck and bus men, mainly presidents of local organizations, who had until then been active in the Truck and Bus Division of the A. A. A., which was supported by the National Automobile Chamber of Commerce. It was the avowed intention of these men, headed by Ralph W. Sanborn of Cleveland and George P. McCallum, president of the Michigan Transportation Association, to establish as an independent organization the National Bus Association.

The National Bus Association was formed recently in Chicago at a meeting in which the Truck and Bus Division of the A. A. A. was prominent, and the burning question immediately arose as to whether it should be affiliated with the car owners' body. At the Atlantic City meeting disagreement on this point came to an issue, and resulted in the secession of the executive committee of the National Bus Association.

The "independents," as they have termed themselves, have expressed resentment at what they declare to be the intention of the manufacturers to dominate the truck and bus owners activities. The manufacturers, on the other hand, declare that they are interested in cooperation on matters in which both makers and owners are concerned.

The up shot of it all is that the tendency of local association and local owners to fight among themselves is complicated by disagreement on a national scale.

DUESENBERG PRICES

INDIANAPOLIS, July 6.—A new price list of Duesenberg models has been issued, quoting only the price on the five-passenger phaeton and the prices of the two chassis lengths. The four passenger coupe which was formerly listed at $7,500, has been discontinued by the company, but officials expect to replace the coupe with another model in a short time.

The list follows:

Duesenberg roadster—On application.
5-pass. phaeton—$6,650.
4-pass. sport—On application.
7-pass. phaeton—On application.
5-pass. sedan—On application.
7-pass. sedan—On application.
Chassis 134-inch—$5,550.
Chassis 141-inch—$5,650.

Sprinter and Buick Race in Traffic

MILWAUKEE, July 6.—George Breitbach, Buick dealer in West Allis and South Milwaukee, suburbs of Milwaukee, staged a novel publicity stunt when he engaged John J. Seiler known as "The Flying Yank," and a distance runner of great ability, to race through Milwaukee streets against a Buick.

The car was operated in high gear only and Seiler had advantages in the way of being able to go through traffic signals when the car had to stop. The race attracted considerable attention, largely because of the recent appearance in Milwaukee of Paavo Nurmi and the subsequent interest in running events.

Reo's June Sales Increase 90 Per Cent Over 1924

LANSING, July 3.—June with an increase of 90 per cent in shipments and company sales as compared to June 1924 was one of the best months in the history of Reo. The shipments last month according to sales officials means sales since dealers buy only as actually required.

The company went over into July with a third as many orders as its total June record. Heavy buying the latter part of the month boosted the July production schedule.

Because of the increasing demand for the new heavy speed wagon and also for the motor busses the company will not make the annual vacation general this year. The bus plant which is producing the new heavy is included in this decision as the sales are too heavy, company officials assert, to let down for two weeks.

Continental Motors Declares Regular Quarterly Dividend

DETROIT, July 6.—At the regular meeting of the board of directors of Continental Motors Corporation held recently the quarterly dividend at the rate of 80 cents per share per annum was declared payable July 30 to the stockholders of record July 15.

With this dividend, the company will have paid to stockholders during 1925 the sum of $1,056,507.

In discussing prospects for business for the coming quarter, Ross W. Judson, president of the company said, "Our production and sales are more than holding their own, and indications point to a very successful quarter. Our customers are maintaining their schedules, and it is particularly gratifying to us to see the way our business in the industrial division is increasing. Both our Muskegon and Detroit plants are operating nearly to capacity, which is rather unusual at this time of the year."

Vice-President Haskell of G. M. Export Co. Resigns

L. R. Rumely to Succeed As General Manager—Harry Tipper in Charge of Sales

NEW YORK, July 6.—J. D. Mooney, president of General Motors Export Co., announces that A. L. Haskell, director, vice-president and general manager of the company, has resigned to engage in business enterprises that will permit residing more permanently in New York.

Leo M. Rumely, vice-president and regional director of Australasia, has been appointed to succeed Mr. Haskell. Mr. Rumely joined the export company in 1920 and during the last two years has been located in Sydney, Australia. Prior to his connection with General Motors he was engaged in the development of the implement business in foreign countries. His experience covers residence in Canada, South America and Russia.

J. H. Dreibelbis, who has been general sales manager, has been elected a director and vice-president. He will serve as executive assistant to Mr. Mooney.

Harry Tipper, secretary of the Chilton Class Journal Co., will become general sales manager of the General Motors Export Co., July 15. He has been engaged in sales and marketing work for the last 15 years, following his early work in engineering and shop management in England. For several years he was connected with sales engineering work in the marketing of mining machinery, and in 1908 joined the Texas Co., as sales engineer. Later he became advertising manager and member of the sales committee of that organization, remaining there until 1907 when he was made manager of The Automobile, now Automotive Industries.

STUTZ ADDS DEALERS

INDIANAPOLIS, July 3.—The merchandising department of the Stutz Motor Car Company reports that new dealers and distributors are being added to the organization steadily and that sales are continuing at a normal rate, keeping pace with normal factory production, which is being continued into the third quarter. The newest dealer additions reported are Harlan Fengler, Inc. of Hollywood, California, and the San Diego Stutz Company. Mr. Fengler, who heads his own selling organization, is the youthful speedway star who has retired from racing to merchandise Stutz cars.

STROMBERG OPENS K. C. BRANCH

CHICAGO, July 6.—Stromberg Motor Devices Company, builders of Stromberg carbureters, has established a new factory branch at 1809 McGee street, Kansas City, it was announced here today. It was found necessary to establish the factory branch on account of sales expansion in the Kansas City territory.

Indianapolis Used Car Trade In Good Shape, Survey Shows

About Four-Fifths of Present Stock Consists of Current Makes and Models

INDIANAPOLIS, July 6.—The used car inventory compiled by John Borman, manager of the Indianapolis Automobile Trade Association, during the latter half of June shows that there was a total of 1,615 cars on hand at that time in the city as reported by 69 distributors, dealers and used car exclusive dealers of the city. The cars were divided into three classes; current models and makes that are sold here dating from 1920 to the present; miscellaneous types and models of cars for the same years but which are not so readily saleable because there are no dealers for them in the city, and obsolete makes; and third, models of all sorts manufactured from 1912 to 1919.

Of the 42 makes of cars which are actively marketed here by new car dealers the total shows that almost four-fifths of the total stocks of used vehicles on hand at present are vehicles of this type, not more than five or six years old and but 50 of them are of earlier vintage than 1920. Thus approximately 1,300 of the total of 1,615 cars are current, active stocks of 42 makes not more than four years old. The black side of the sheet shows 273 vehicles of inactive types, with 236 ancient used vehicles from six to fifteen years of age.

The survey made a year ago with 61 dealers reporting showed 2,170 cars on hand, so this report shows a distinct gain of at least 20 per cent. While some dealers in both surveys may have failed to report exactly, the general improvement is none the less proved and the classification of all cars attempted for the first time in the current report shows that the great majority of all used cars are saleable, profitable stocks. Further the present total about equals the average month's sale of new cars in this county, as shown by monthly registration figures from the state registration bureau, and proves that the used car trade here is in a healthy state with approximately a month's supply on hand. The dealers here consider Orman's report and survey the most helpful one ever made.

N. A. F. C. Releases Brief on Recovery of "Booze Cars"

CHICAGO, July 6.—A seventeen page brief, prepared by John W. Creekmur, Chicago counsel for the National Association of Finance Companies, setting forth all court decisions having a bearing on recovery procedure in cases where automobiles have been confiscated for transporting liquor, has been released by Charles C. Hanch, general manager of the national association.

The brief has been issued to members of the organization, and covers fully the subject of title, recovery by the lienor of a car used without his knowlege for the transportation of liquor, and many other phases of the present problem which has arisen through confiscation of so-called "booze cars" by federal or state authorities. In many cases the title is still in the finance company, and the brief quotes decisions of various courts as to how the lienor may be protected should the car be confiscated.

"The brief is one of the latest instances of the aid the national association is extending to the member companies," said Charles C. Hanch. "It would cost an individual company between $500 and $1000 to prepare such a brief for its reference in cases of this kind."

DIVIDENDS DISTRIBUTED

TOLEDO, July 6.—Nearly a million dollars in dividends was distributed to stockholders of Toledo automotive plants this week. The Electric Auto-Lite Co., paid out $375,000 to its common shareholders, the Willys-Overland paid out $385,866 to its preferred stockholders, and several of the other closed corporations distributed earnings at the semi-annual date.

Pierce-Arrow Has Coach Design Body

THE Pierce Arrow Motor Car Company is the latest to reduce the differential in price between open and closed cars. On the model No. 80, lighter six cylinder chassis, a new custom built coach selling at $3,150, $55 less than the 4 passenger phaeton, has been announced, this being the first offering of a coach design body by Pierce Arrow.

Built entirely at the Buffalo factory, the body framework is constructed of Northern white ash having laminated joints whereever twisting or weaving strains occur. Both doors are double braced and fitted with weather strips to keep the body moisture proof. The body is covered with aluminum panels, hand hammered to provide perfect contour.

Six color schemes are offered for the exterior finish while a wide range of soil-proof upholstery is available. Entrance and exit from the tonneau without folding the tilting front seat is possible through the 36 inch doors, the latter carrying across the bottom a strip of carpet to match the velvet floor covering to protect the upholstery from feet marks. The rear seat is 50 inches wide, the 42 inch space between the two seats allows comfortable riding for the tallest passengers.

Royersford springs and curled hair are used for the cushions while the interior hardware is of Butler silver finish. A trunk protected by bars is carried at the rear and the interior equipment includes, silk roller curtains for the rear and rear quarter section, silk toggle grips, mahogany vanity and smoking cases, carpet covered foot rest and a dome light.

Southern Jobbers Will Meet at Asheville, N. C., July 23-25

Merchandising, Better Business Relations and Outlook Will Be Among Subjects Discussed

CHARLOTTE, N. C., July 6.—Officers of the Southern Automotive Jobbers' Association selected Asheville, N. C., as the place for holding the Summer convention, July 23-25 being the dates, according to an announcement by Thomas McP. Glasgow, of Charlotte, president, who made public details of the program. Holding the meeting at that famous resort city is expected to result in an unusually large attendance, Mr. Glasgow said.

One of the widely known men in the automotive trade world who will address the convention is Earle Hennecke, of Long Island City, N. Y., president of the Boyce Motometer Company. His address will deal with merchandising problems.

Arthur Mogge of Chicago, merchandising director of the Automotive equipment Association, will discuss that association's plans to create better business relations. Economic phases of the automobile jobbers' problems will be discussed by E. B. Galliher, of Norwalk, Conn., and a statistical analysis of the business outlook for the automotive jobbers will be given by Arthur Hope, of Hartford, Conn. In addition to the set addresses, members will engage in a general discussion of the numerous important business problems confronting them, Mr. Glasgow said.

The program also includes several elaborate social events.

Chicago Registrations Surpass 1924 Mark in First 6 Months

CHICAGO, July 6.—Automobiles paying a wheel tax to the city of Chicago for the first six months in 1925 numbered 259,759, City Collector Keane announced today. The total number registered in 1924 was 260,887, pointing to the registration in 1925 much greater than that of 1924. It was expected that the old total would be surpassed within a few days.

Delivery trucks have passed the old total, numbering 45,180 for the first six months while the 1924 aggregate was 44,931. The number of horsedrawn vehicles decreased from 21,071 to 17,452.

Money collected by the wheel tax office thus far this year amounts to $3,690,520. The first six months of 1924 brought in $3,374,170 and the total for the entire year 1924 was $3,562,458.

NEW AUBURN DEALERS

AUBURN, Ind., July 6.—New dealers recently added to the Auburn Automobile Company organization are:

J. A. Burkley, Findlay, O.; Fitz Auto Company, Linton, Ind.; Gallitto Motor Sales, Cleveland, O.; Frank S. Feeser Co., Indianapolis; W. C. Sacks, Penn Yan, N. Y.; Radio Motor Sales, 1834 W. Madison Street, Chicago, and Bondurant Motor Sales, Evanston, Ill.

New Oregon Laws Expected To Curtail Thefts of Cars

Three Statutes Effect More Rigid Control Over Title and Its Transfer

PORTLAND, Ore., July 3.—New mortor vehicle laws enacted by the last session of the Oregon legislature are expected to curtail in large measure automobile thefts in this state. Myer C. Rubin, general attorney for the Oregon State Motor Association, in outlining the provisions of the new statutes said:

"Three measures have a direct bearing on this question, although two of them only are included in the motor vehicle code and the other is general in its scope.

"Under the new provisions regulating the matter of title to automobiles, all applications for licenses made after July 1 must be accompanied by an application for certificates of title.

"This certificate, however, must be formally transferred whenever the car is sold. The placing of such records on file will, in a very shart time, provide a source of information which will be invaluable in keeping tab on the ownership of machines.

"Further clarifying the situation in Oregon is an improvement in the definition of terms. A distinction is now made between the owner of the car and the legal owner. In a case where a man purchases a car on time, and the dealer still holds actual title, the purchaser is listed as the owner, but the seller is still the legal owner, until the liens have been discharged.

"The general statute which materially affects the matter of theft of cars is one making it a crime to alter, counterfeit or change a serial number of any manufactured article with intent to defraud. A penalty of from $20 to $100 or six months in jail is provided for so doing, and also for selling the article without advising the purchaser of the change."

Sales Register Big Advance In Louisville During June

LOUISVILLE, Ky., July 3.—Sales of both new and used cars increased during June in Louisville and it is expected that figures for the entire month will show a decided increase over May of this year and June of last year. Sales on low priced cars are slightly off while dealers report an increase of nearly 50 per cent in sales of the car next above in price.

Medium priced cars show an increase of 20 per cent over the same month last year and about one-third more have been sold than in May of 1925. Higher priced automobiles are moving well. The check indicates that used car stocks are lower than usual with sales equal to if not slightly better than those of new cars.

General business conditions are excellent; very little unemployment is reported and these factors combined with good weather are pushing sales and causing repossessions to show a decided decrease each month. Collections are improving.

Tire dealers report a decided improvement in sales of balloons and regular pneumatics, sales being about 30 per cent above the same period last year. Truck solids are off a little but it is predicted that this branch of the tire business will improve during the summer months, some dealers expect record sales of balloons and regular pneumatics.

He Flies to Market



When Charles Blosser of Belleville, Kansas, one of the dealers furnished by the Chevrolet Motor Company's Kansas City branch, finds himself short of Chevrolet motor cars with which to make deliveries he no longer hops a train and spends seven hours in getting to the wholesale office in Kansas City. Mr. Blosser now flies to market in his own plane. On the left is the pilot

New England Racing to Be Revived

BOSTON, July 3.—New England is going to see a revival of motor racing which will recall memories when some of the best drivers developed in the United States were from Boston. On July 4 and Columbus Day, Oct. 12, there will be races at 100 miles on the new Rockingham Park Speedway at Salem, N. H., an hour's run from Boston. Jack Le Cain, former race driver, with several other men, bought the track recently from the Searles estate for $100,000 and they are spending half as much more putting it in shape. Le Cain has De Paolo, Milton, De Palma, Cooper, Elliott, and a number of other speedway stars signed up for the first opening July 4 when $20,000 will be given in prizes. He has received the A. A. A. sanction. The track is being reconstructed and it is expected that the drivers will show a speed of 100 miles an hour. Capt. E. V. Rickenbacker has been invited to pace the drivers on the first lap.

North Carolina Dealers Are Reporting Increased Business

CHARLOTTE, N. C., July 3.—The majority of automobile distributors in this center, third in importance in the South, are reporting a "rushing" business, with only two or three inclined to be gloomy. The Ford Motor Company's branch here has reported that total sales in this territory for the ten-day period ended June 10 exceeded by 500 cars the sales for the previous like period. Sales for the first ten days of June totaled 1,863 cars, the largest volume of business handled in a like period in this territory since it was established about two years ago with its present limits.

While this tremendous increase in sales is continuing, figures already in hand show, it will be some time before complete supplementary figures will be available, it was explained. An increase of at least 200 cars over the total for the first ten days of June was forecast for the second like period.

Production at the Charlotte plant has slumped sharply, for two important reasons, since May 1, when the local plant was operating on a schedule of about 450 cars per day. Production now on a basis of 221 cars daily, compared with 353 cars daily the middle of May. This decrease early in May was largely attributed to a slump in buying by farmers, who then began to devote almost all their time to field work in this territory.

Since that time, the opening of the Norfolk, Va., branch plant has been an important factor in cutting production here. Officials of the eompany here explained that the Norfolk plant can ship cars as far south as Raleigh, N. C., cheaper than they can be shipped from the Charlotte branch.

Cleveland Has New Sport Sedan at $1725



Cleveland Sport Sedan which is mounted on the model 43 chassis and finished in blue, with black upper structure and fenders

A NEW sport sedan mounted on the Cleveland 43 chassis and listing at $1725 has just been added to the line by the Cleveland Automobile Company. The latest 5-passenger closed model is patterned along the victoria type lines having oval windows with aluminum top bows built into the rear upper section and provided with an aluminum trunk rack and bars at the rear. The design of the body, which is by Fisher, gives the car a long, low hung effect.

Foch blue Duco with the beading in contrasting color, black finish above the belt and black fenders and running gear together with the nickel plated radiator shell carrying a motometer and bar gives the new model a very distinctive appearance.

Gray mohair of special shade constitutes the upholstery and color scheme. Comfort is provided by making the seats wide and high backed and providing an arm rest on each side of the rear seat.

Features of the body equipment are: Fisher "V-V" windshield and rectangular windows operated by crank regulators, instrument board finished in circassian walnut, silk curtain for rear window and dome light controlled by a push button.

Additional items as standard equipment include, automatic windshield cleaner, sun visor, rear view mirror and cowl lights.

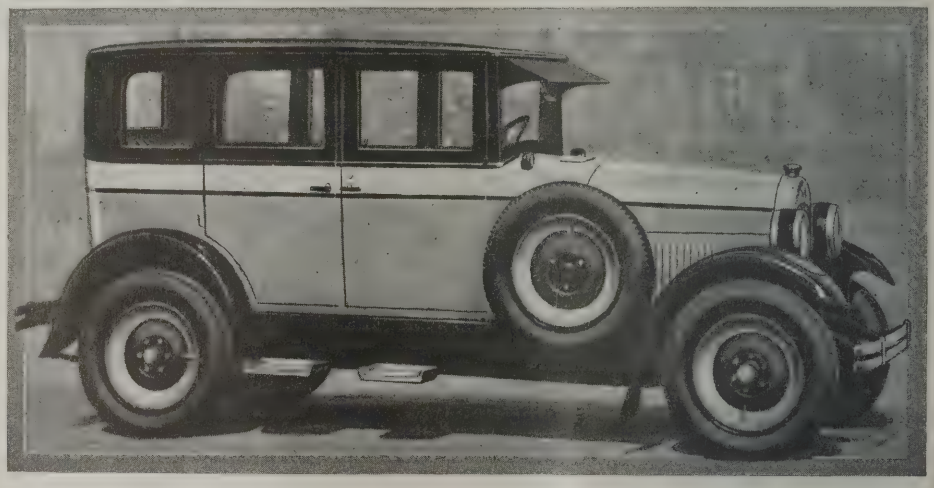
CANADA RUBBER RAISES

TORONTO, Ont., July 6.—Owing to rapid advances in prices of crude rubber, and in sympathy with the recent advances in quotations in the United States, prices locally have been advanced 5 per cent on tires and 10 per cent on tubes. It is stated that manufacturing costs warrant still higher prices in Canada, but that domestic competition is so keen that advances are held to very narrow margins. However, increasing costs of raw rubber may make it necessary for manufacturers to raise prices further on tires and other rubber goods.

Davis Announces a New Sedan

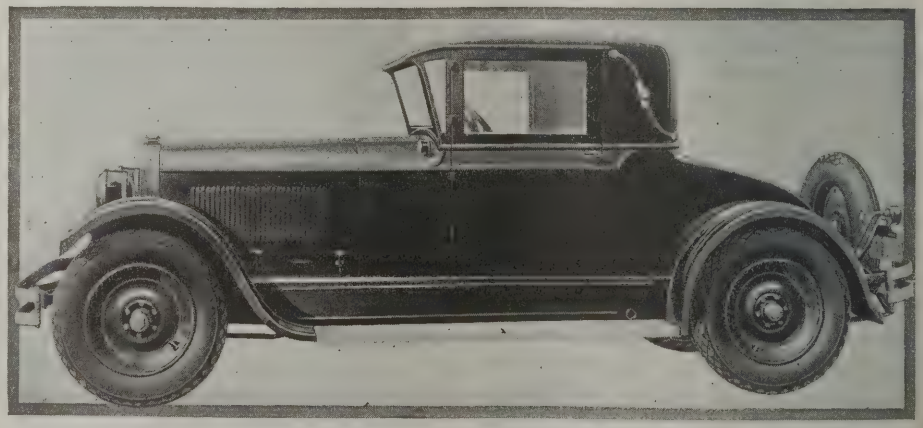
A NEW Davis Sedan, selling at only $200 more than the Davis phaeton, has been announced by the George W. Davis Motor Car Co., Richmond, Ind.

Three wide doors give easy access to both front and rear seats, and the interior of the car is exceptionally roomy. The interior of the car is finished throughout with upholstery of Baker velour. A new instrument board grouping, in which motor thermometer, oil gage, gasoline gage, ammeter and speedometer are assembled under an indirectly lighted oval glass panel, adds to the convenience of the driver.



The lines of the sedan are enhanced by a dual-tone finish, which is optional in combinations of either Algerian and Rolls-Royce blue or Brewster and Topango green, without additional cost. Radiator and bumpers are nickel-plated, and a spare disteel wheel is carried on the right side of the car. Balloon tires and Lockeed hydraulic four-wheel brakes are standard equipment. The new sedan is built on both the series 90 chassis and the larger Mountaineer series 91.

The Davis company also has announced price reductions of $200 on the Imperial and Berline sedans, bringing the prices of these models in the series 90 to $1,795 and in the Mountaineer series 91 to $2,095.



Gardner Eight-in-Line Foursome Cabriolet which has a windshield construction designed to eliminate "blind spots." There is a seat under the deck and a sliding plate glass window permits communication with passengers in the rear seat. The car with five Disteel wheels and 5.77 balloon tires lists for $2245, f. o. b., St. Louis

Paige-Jewett Opens Sales Contest to Close Oct. 1

Thirty Prizes Arranged in Four Classes, Each Being Trip to Factory

DETROIT, July 3. — Paige-Jewett salesmen throughout the country are given the opportunity of visiting the Paige-Jewett Motor Car Company factory here this fall at the expense of the organization through a competitive sales campaign which has just opened and which will close October 1.

Thirty prizes will be awarded in the four different classes that have been established, each prize being a trip to the factory with all expenses being paid by the organization.

The four classes under which the various contestants will compete are:

Class One. Limited to salesmen employed by distributors, dealers or associate dealers participating in the Paige direct-by-mail campaign in or having selling rights in cities of 500,000 population or over. Ten prizes will be awarded in this class.

Class Two. Limited to salesmen employed by distributors, dealers or associate dealers participating in the Paige direct-by-mail campaign in or having selling rights in cities between 150,000 and 500,000 population. Ten prizes will be awarded in this class.

Class Three. Open to salesmen, retail sales managers and dealers employed by or being distributors, dealers or associate dealers participating in the Paige direct-by-mail campaign in or having selling rights in cities between 50,000 and 150,000 population. Five prizes will be awarded in this class.

Class Four. Open to salesmen, retail sales managers and dealers employed by or being distributors, dealers or associate dealers participating in the Paige direct-by-mail campaign in cities having under 50,000 population and having no selling rights in cities of larger population.

In case of ties, awards will be made on a basis of sales from October 1 to November 1. Should two salesmen be tied at the end of the contest for the last place in their class, the salesmen selling the most cars between October 1 and November 1 will be awarded the trip.

Canadian Ford Prizes Are Awarded in Sales Contest

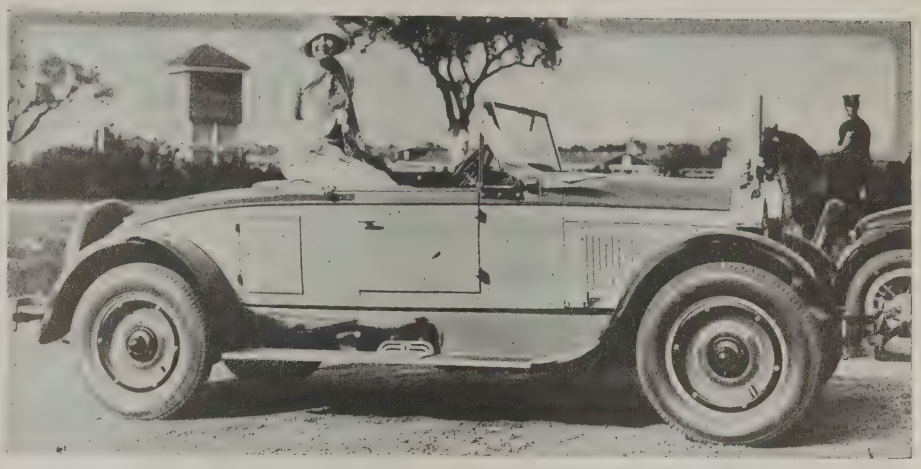
FORD, Ont., July 6.—In the sales contest just ended which was held by the Ford Motor Company of Canada, Ltd., two prizes of $1,000 each and two of $500 were awarded to salesmen. In addition weekly prizes of $100 were awarded the salesmen who sold the most new and used cars to the classified trades and professions.

In the first divisions, the two salesmen who at the end of the 23 weeks lead the whole Dominion with the largest totals were H. P. Latter, Dominion Motor Company, Ltd., Winnipeg and N. H. Doyle, Universal Car Agency, Ltd., Windsor, Ont. In the second division, those who lead with the highest totals of clean sales were C. E. Jarry, of Jarry and Frere, Quebec, and E. McDermott, Vancouver Motors, Ltd., Vancouver, B. C.

The weekly prizes found their way to salesmen all over the country, the prizes being evenly distributed in the smaller and large communities.

The second phase of the Farmer-Ford-owner contest conducted by the Ford Motor Company of Canada, Ltd., has been brought to an end with thousands of farmers throughout Canada participating. The prizes were new Fords, Fordsons and attachments. Prizes were awarded in each of the eight branch territories throughout the Dominion.

Reo Roadster Wins Pageant



Feminine finery and latest fashions in motor cars went on parade in New Orleans together recently. The above is the winner of the pageant—the Reo roadster which Miss Lucille Mooney drove in the parade

ASSOCIATE DEALERS NAMED

SPRINGFIELD, Mass., July 3. — Continuing its policy of naming associate dealers for the Hudson and Essex, J. S. Harrington, Inc., has appointed these new concerns in that capacity: Jack Stone and Henry Puggeoli, Springfield; John C. Schmidt, Longmeadow; Zobek Motors, Inc., Indian Orchard; W. R. Taylor, West Springfield. Walter Phillips, associate dealer in Springfield, now conducts two establishments.

CHRYSLER SALES JUMP

WINDSOR, Ont., July 3.—Sales of Maxwell and the Chrysler six-passenger cars in Canada for the first six months of 1925 will more than surpass the total sales for 1924 or 1923, John D. Mansfield, president and general manager of Chrysler Motor Co., Ltd., of Canada, has announced. Ontario and Quebec are the provinces where the heaviest buying has been taking place. In the agricultural districts of the west, the outlook for the next three months is good. With good crops reported in the wheat sections and with indication of the farmers getting a good price for their goods, the sales of automobiles are expected to show a corresponding jump.

Ford Plans to Run Airplane Freight Service to Cleveland

DETROIT, July 3.—Extension of the air freight service of the Ford Motor company beginning July 1 to Cleveland has been announced here by the company. A third plane now being thoroughly air tested will be used. In case of emergency, one of the Chicago planes can be switched over to the new run.

Further extension of the air freight service is under consideration at the present time, although plans are still indefinite and may not assume shape for months. These extensions would include Pittsburgh, Philadelphia, New York, Boston, Buffalo, and St. Louis.

The arrival of the air freighter next Wednesday will formally open the new Cleveland municipal aviation field. Its cargo will consist of a knockdown Ford chassis which will be assembled on the field and then driven away under its own power.

There also will be on board the plane, the first bundle of mail to be carried by plane between the Ford company here and its Cleveland plant and some packages sent along by members of the Ford family as mementoes.

Registrations in Mississippi Are Double Those of 1924

NEW ORLEANS, La., July 6.—142,600 motor vehicles were registered in Mississippi from January 1 to June 1, 1925, with license collections amounting to more than $1,500,000 which is in excess of the revenue received during the entire year of 1924, according to figures made public at the motor department of the state auditor's office in Jackson, Miss., recently.

A total of 134,657 vehicles were registered during 1924 in Mississippi, from which license collections of $1,125,908.72 were made. On June 1 of last year the motor registration had reached 108,136 as compared with 142,600 for the same period of 1925.

Milwaukee Sales Expected To Climb Throughout July

April, May and June See Lethargy Predominating Northern Field

MILWAUKEE, July 3.—July will witness a sharp increase in the number of automobiles sold in Milwaukee and Wisconsin, in the opinion of leading distributors of Milwaukee. The fact that many manufacturers will introduce new models during July is expected to have a decisive influence in stimulating sales to a point more on a level with last year. Anticipation of price cuts to occur in July or early in August is another factor prompting local expectation of big sales for these months.

During June there was a pronouncedly lethargic condition current in the automobile sales business in Milwuakee and Wisconsin. Distributors ascribed the lack of snap in the sales end largely to the fact that bank accounts of otherwise prospective buyers were not normal and that there was some stricture in the money situation as it affects the average citizen.

That May was not entirely a month of losses is well indicated in the experience of Nash, this company forging ahead to new records, with a May, 1925, sale of 538 as compared with only 317 for the same month last year. Another substantial gain was that of Hudson, 399 of these cars being sold in Wisconsin in May of 1925, as compared with but 215 in May, 1924. A big upward jump was taken also by Essex with May sales for this year of 430 as against only 337 in May, 1924. Studebaker sold 477 cars this May and 440 in May, 1924.

These gains while large in themselves, in many instances being as high as 66 per cent increase, are all the more noteworthy in the face of the general sales trend which is something like 30 per cent below May of 1924. It is patent then, that the cars listed as registering gains of 60 per cent, are in reality about 90 per cent above average. It is also a fact that the cars leading in sales gain in May are those which led in April and in March.

VELIE ORGANIZATION MEETS

MOLINE, Ill., July 3.—Distributors from all over the nation and district representatives of the Velie Motors Corporation were gathered at the plant here this week for the first of a series of distributors' sales meetings, announced recently by C. W. Hadden, general sales manager. Mr. Hadden pointed out that Velie sales in the last nine months have exceeded those of every corresponding month in the previous period, with the exception of one and predicted that July sales would exceed the 1924 month by 15 per cent. Export business in the first five months has increased 50 per cent over 1924 he said and gave every indication that this will be a banner year for the Velie.

MONTREAL ORDERS COACHES

MONTREAL, July 6.—Fourteen coaches to cost $146,818 have been ordered by the Montreal Tramways Company, for the bus services which it intends to operate beginning in August. Six are to be bought from the White Company, Montreal, at $9,550 delivered here; four from the Six-Wheel Company of Philadelphia, at $12,968 including delivery, duty and sales tax, and four from the Yellow Coach Manufacturing Company of Chicago at $11,661.52.

Hart-Parr Official Sees End of Tractor Troubles

PEORIA, Ill., July 6.—"The tractor industry has successfully passed through a most drastic liquidation with a handful of manufacturers still swimming," declared Melvin W. Ellis, general manager of the Hart-Parr Tractor Company at a meeting of 150 state distributors held in this city.

"The dealers of those who kept going during the hard times, are the ones who will reap the harvest of tractor orders which are certain to come during the coming year," he asserted. He predicted that sales for 1925 would be the largest of any since 1920.

In connection with the meeting, a dinner was served at the Creve Coeur club. Fifty bankers were presented and heard talks by factory representatives and leading distributors of Illinois.

REGISTRATIONS INCREASE

QUEBEC, July 6.—Compared to the same period of the year in 1924 the number of motor vehicles registered in the province this season has considerably increased. Last year's figures totaled 35,000 cars registered as against 45,000 this year.

Marmon Earnings $1,178,198 In First Six Months of 1925

INDIANAPOLIS, July 3.—A Nordyke & Marmon announcement released yesterday by President G. M. Williams shows that for the first six months the company made net earnings of $1,178,198, after all deductions for depreciations and contingency allowances. Mr. Williams reports that the progress of the company for the six months has been very satisfactory with sales steadily increasing. The retail selling organization expanded about 20 per cent in the last six months.

Shipments of Marmon cars for the six months have been almost 100 per cent ahead of the similar period last year and by reason of inventory reductions during the latter part of 1924 it has been possible to revolve the inventory at the rate of 10.28 times per year.

For the future Mr. Williams sees encouraging prospects with distributors and dealers finding that the high rate of selling will continue with late summer and fall business equaling the increase shown in the first six months.

Mooring Mast Completed At Ford's Detroit Airport

Flying Club Is Given 120 Acre Aviation Field on Lake Front by Realtor

DETROIT, July 6.—Two important events in aviation circles, the completion of the 210-foot dirigible mooring mast at the Ford Airport and the presenting to the local aviation club of a flying field, have just occured in this city.

Located in the center of 200 acres at Dearborn, the $250,000 mooring tower represents a decided advance in both engineering and mechanical principles and is the latest achievement of Henry Ford to make Detroit the world center of aviation. The mast, which is 45 feet taller than the one at Lakehurst, N. J., was completed in 30 per cent less time. Most of the steel employed in its construction was fabricated in the Ford mills.

Mooring is accomplished by means of lateral couplings extending out from the landing platform on the top of the tower and in the event of a gale of greater velocity than 60 m.p.h. threatening the safety of the airship while moored to the mast, the attachments will automatically let the dirigible loose.

Within a few days the "Shenandoah" is expected to arrive for trials at the mast, while it is rumored that a rigid airship of the latest and most modern type will be built within the coming year for the private use of the Ford family.

Lewis G. Pilgrim, noted realtor, has given to the Detroit Flying Club an aviation field of 120 acres on the lake front, 15 miles south of Cheboygan. It is planned to erect hangers to accommodate both land and water planes and to make the field a vacation camp and meeting place for Michigan aviators.

Connell & McKone Selected Boston Gardner Distributor

BOSTON, July 3.—The Connell and McKone Company has been appointed new and exclusive distributor of Gardner cars in New England. The company is one of the best known in this section of the country. For a number of years it handled the Willys-Overland line until the company made it a factory branch. When Flint came on the market, the company handled that line.

A few months ago, this was released and W. C. Durant established a factory branch in Boston. The Gardner formerly has been handled here by the Leghorn Motors Co. George M. Leghorn, its president, has announced that he will continue as retail dealer for the Boston territory under the Connell-McKone company. This will allow the Gardner Motor Co. a big representation throughout New England.

The Connell & McKone Company will operate from the salesrooms of the Leghorn Motors Co., one of the finest on Commonwealth Avenue.

Sale of New Cars Continues Satisfactorily in Salt Lake

Registrations for May Ahead of Those for April But Below Last Year

SALT LAKE CITY, July 3.—The sale of new cars continues satisfactory. Business might be described as about normal this time of year. Weather conditions during the early part of June were not satisfactory but are ideal now. New car registration in May included 1,659 passenger cars and 195 trucks compared with 1,249 passenger and 95 trucks for April. This compares favorably with May of last year when the registration showed 1,683 new cars and 133 trucks.

The used car market is improving though conditions are not yet entirely satisfactory and may not be for some time to come. Dealers in most cases are still allowing more for the used cars than they can afford.

The tire market is brisk, due in part at least to the increase in prices, and also to the increase in popularity of balloons. The general accessories business is satisfactory.

Collections are satisfactory, taking the territory as a whole. This is not only true of the automobile and accessory business but business in general.

The automobile business and allied industries would seem to have an excellent future as far as the next few months at least are concerned.

President Hardy Resigns From Olds Motor Works

LANSING, July 3.—Announcement is made that A. B. C. Hardy, president of the Olds Motor Works, had sent his resignation to the New York office of the General Motors asking to be relieved of his duties at once.

Mr. Hardy has no present plans for the future. He will stay in Lansing and will rest for some months, something that he has desired for some time.

In 1892, Mr. Hardy started in the carriage business and between that time and 1900 he was with the Wolverine Carriage Company of Davison, Mich., Diamond Buggy Company of Flint and the Durant-Dort Buggy Company also of Flint. In 1901 he made an exhaustive study of the automotive industry and in the following year organized the Flint Automobile Company, the first started in that city. Two years later he returned to the carriage business remaining in that field until 1909 when General Motors called him to Detroit and placed him in charge of the Welch-Detroit Motor Company.

In 1912 he organized the Little Motor Car Company of Flint which was later merged with Mason Motor Company and the Chevrolet Motor Company, Mr. Hardy becoming vice-president of the General Motors and in 1921 was made head of the Olds Motor Works.

"Wild Driving" Test Convinces

WASHINGTON, July 3.—A test designed to convince the motoring public that "wild driving" does not pay was conducted here this week by Traffic Director M. O. Eldridge in cooperation with a local newspaper.

Two automobiles were used in the test which started in the northwest residential section and ended in the heart of the business district, a distance of three and three-fourth miles.

Only two and three-fourths minutes were saved by the car which violated 50 traffic regulations on the brief trip over the other which started at the same time and came down through the morning traffic observing every regulation.

NEW GARDNER DEALERS

ST. LOUIS, July 6.—Following are new dealers added to the organization of the Gardner Motor Co., Inc., of St. Louis: Damrow & McIlhattan, Spencer, Wis.; N. F. String, Lemoyne, Pa.; J. E. Sides Motor Co., Corpus Christi, Tex.; Ralph B. Munson, Burlington, Vt.; Joseph LaBreck, Auburn, N. Y.; F. M. Bauer Motor Co., Elyria, O.; Irving A. Halpern, New York City.

E. R. Isaacson, Sister Bay, Wis.; Peterson, Nev.; W. S. Guy Motor Sales, Everett, Wash.; A. I. Hibbard, Jr., Buffalo, N. Y.; Phillips Garage, Minneapolis, Minn.; Mr. Chas. L. Smith, Olean, N. Y.

Preliminary Estimates Place June Output at 400,000

Best Former Mark Was 386,539 in Same Month of 1923

DETROIT, July 3.—Preliminary estimates for the automobile production for June gathered from shipments made from the various factories place it at slightly less than 400,000, although it will set a new all time record for June output. The best past production mark was made in June 1923 when 386,539 cars and trucks were manufactured in the United States and Canada. Of this number approximately 12,000 were produced in Canada.

In local automotive circles, it is expected that the July production will be below that of June but that in August the sales and production will show a distinct increase.

Lessening in the June production has been caused by the slackening of the output by factories given to yearly models. With new models scheduled to come out within the next 45 days, these factories are not expected to resume full manufacturing schedules until after their models have been presented to the public.

Some of the factories are experiencing an exceedingly brisk demand and are still at capacity production. Closed cars continue to rule heavy favorites.

25 Years Ago In the Automobile Industry
As Recorded In Motor Age

(*From* Motor Age, *July* 12, 1900)

American De Dion Company

NEW YORK, July 9.—With the return of C. J. Field from abroad comes the announcement that an American company with large capital and ample facilities will have the complete United States business of the De Dion-Bouton Co. of France for their motors and "motorettes," as the new company designates their light vehicles, corresponding to the French "voiturettes."

The new company will be known as the De Dion-Bouton Motorette Co., and will have its offices and factory in New York. They will immediately put on the market motors, motorcycles and motorettes of the type of the French De Dion-Bouton, with some modifications in details to suit American demands.

Anent the Foreign Makers

NEW YORK, July 9.—Whitney Lyon, who with President Chamberlain founded the Automobile Club of America, has returned from Europe.

He says that while the French turn out the fastest racing machines, they pay little attention to the aesthetics in their motor vehicles and they are far behind us in beauty of finish and design. He thinks the British are making the greatest practical progress of all the foreign makers.

Open Air Automobile Show

NEW YORK, July 9.—E. E. Schwarzkopf, manager of the automobile show and races at the Greater Inter State Fair at Trenton, September 24-29, says that fully two-thirds of the 30,000 sq. feet set apart in building No. 3 for the motor vehicle exhibit has been already engaged. No charge is made for spaces for exhibition of automobiles and accessories, but all applications must be filed with M. R. Margerum, secretary Greater Inter State Fair Association, Trenton, N. J., before July 15.

Madison Square Show

NEW YORK, July 9.—Official allotment has been made on the main floor of all the spaces save two for the show of the Automobile Club of America, at Madison Square Garden, November 3-10. These two will probably be allotted to the Waltham Manufacturing Co. and the American Electric Vehicle Co. A track for moving exhibition purposes encircles the floor and within this are the vehicle exhibits.

Along Automobile Row

COLUMBUS, O.—P. W. Frye and H. W. Curtin have formed the Curtin-Frye Motor Co., to handle Hudson and Essex cars as dealers.

ROCKFORD, Ill.—The commercial Credit Trust, financing automobile purchases and with a capital stock of $18,250,000, has appointed Ira L. Bell, pioneer automobile dealer as its branch manager in the office just opened here.

JEFFERSON CITY, Mo.—The Heisinger Motor Company has been appointed agents for the Hudson and Essex Motor cars.

DALLAS, TEXAS.—The Ferguson Motors Company, new distributors for the Hudson-Essex lines in the Dallas territory have taken a ten-year lease on a two-story building at 2210 Pacific Avenue.

AKRON, O.—The Mueller Steam Bus Co., has been incorporated with a $50,000 capital to manufacture and deal in automotive busses.

ST. LOUIS, Mo.—A new used car showroom has been opened at 3026-28 Locust Street by the St. Louis County Automobile Company to handle Willys-Knight, Overland and the Studebaker in Clayton.

INDEPENDENCE, Mo.—The Curran Motor Co., distributors for Velie Motor Cars, has moved to its headquarters from this city to 2425 McGee Trafficway, Kansas City.

DALLAS, Texas.—F. E. McLarty, president of the Nash-McLarty Motor Company, distributors for Nash and Ajax cars in the Dallas territory has established a branch house in Oak Cliff, a suburb of Dallas containing a population of more than 50,000.

BOSTON.—The Y. D. Service Garages, Inc., of Boston has just completed arrangements to have erected in Worcester a 500-car garage, to be known as the Y. D. Worcester Garage.

NEW ORLEANS.—The New Orleans Flint Company, factory branch of the Flint Motor Company has removed from its temporary quarters on St. Charles Street to a building with better display facilities at 845-847 Carondelet Street.

PHILADELPHIA.—The Pioneer Storage Battery Company, manufacturers of the Pioneer automobile and radio batteries, will move from 244 North 15th Street to a larger plant at 1341-43-45-47 Brandywine Street, Philadelphia on July 15th.

ST. LOUIS.—A new building erected at a cost of approximately $250,000 has been opened by the Franklin Motor Car Co. of Missouri, Franklin distributors in the St. Louis district.

CHICAGO.—George E. Sherman & Co., Inc. authorized Ford dealers formerly located at 2246 West Chicago Avenue, has moved to larger quarters at 1725 West Division Street.

DAYTON, O.—The Auburn Auto Sales Co., has been chartered with an authorized capital of $10,000 to manufacture and deal in auto parts, accessories and motor vehicles.

LOUISVILLE.—The Broadway Motor Sales Company, Chevrolet dealers, have moved from 849 South Third Street to Brook and Broadway. The new location was formerly occupied by the wholesale branch of the Chevrolet Motor Company which has been moved to the Inter Southern Building.

LOS ANGELES.—E. E. Booth, wholesale sales manager for the Paige Company of Southern California, announces the appointment of the following three new city dealers: H. A. Hogue, at 4021 South Western Avenue; Camp Motor Company, 116 North Western Avenue; Mutual Motors Company, 1047 South Grand Avenue.

DETROIT.—Joseph J. Riley formerly connected with Riley and Worden, Inc., has relinquished that connection to join the D. E. Meyer Co., Hupmobile and Flint dealers in the Detroit district, as sales manager.

MILWAUKEE.—The McGadzen-Doering Motor Co. has been organized at West Allis, Wis., to conduct a general sales business in autos and parts.

PORTLAND, Ore.—Charles H. Mead, well known to the automobile trade of Portland, for the last twenty years, has joined the executive force of the Braley Auto Company, Franklin distributors in Oregon.

FREEPORT, Ill.—Edgar C. Eels of Freeport has purchased the Freeport Paige-Jewett agency from Dexter Stocking of Rochelle and possession was given on July 1. The Palace garage will continue as the headquarters of the agency.

CINCINNATI.—The Mitchell Avenue Buick Co. is a new company which has been formed in St. Bernard, Ohio, a suburb of Cincinnati, to open a sales and service station to handle Buick cars.

DETROIT.—One of the best known dealer firms in Detroit, Lewis Brothers, Inc., is announced as a new member of the Hudson-Essex selling organization by Aaron DeRoy Motor Car Company.

LOS ANGELES.—McKemmy Smith has sold out his interests in his Moon dealership in Long Beach and has accepted the appointment of wholesale manager of Don P. Smith, Los Angeles, Southern California Moon distributors.

DES MOINES, Ia.—Harry E. Hitzel, Cleveland, Ohio, for three years with the service department of the Chandler factory, has become service superintendent for the Gibson Motor Company, local distributors for the Chandler and Cleveland cars.

NEW ORLEANS.—Paul H. Maloney, candidate for mayor of New Orleans in the last primary, and until recently commissioner of public utilities of the city of New Orleans is now Hudson-Essex distributor in this territory.

CHICAGO—Earl B. Bough, mechanical transportation engineer of Chicago, has been appointed special district sales manager of the middle west and western states by the Standard Motor Truck Company. His headquarters will be in Chicago.

MOLINE, ILL.—L. J. Brady, for 13 years connected with the Velie Motors Corporation and for the last two years a member of the Dean Motor company organization, has purchased the Five Points Garage in Moline, and will take active charge of the business.

SPRINGFIELD, MASS.—H. A. Hannum has been appointed general manager of the Moon Company of Springfield, Moon distributors and retailers. He formerly conducted the Sanford Street Garage in that city.

MEMPHIS, TENN.—Plans and specifications are being prepared for a building to be occupied by the Mack International Motor Truck Corporation, 672 Madison avenue.

LOUISVILLE.—Leo W. Kummert, well known to the Louisville automotive trade has joined with Douglas M. David in forming the David-Kummert Motor Company, direct factory dealers for the Overland and Willys-Knight in Louisville.

BOSTON.—Russell Burnett, for the past 10 years a member of the firm of Burnett & Sherman, Boston distributors for the Ford and later the Lincoln, has sold out his interest in that company and bought the Pilgrim Motor Company of Somerville.

MILWAUKEE.—Appointment of the Entringer Motor Co., Fond du Lac, Wis., as retail representatives for Gardner Motor Co. has just been announced. The company already handles the Chrysler and Maxwell cars.

MARION, Ill.—The Bracy-Kingsland Motor Company has been organized here with capital stock of $40,000. A garage has been opened at 512 West Main Street, and motor cars, trucks and tractor will be distributed.

WASHINGTON, C. H., Ohio.—The H. & E. Motor is the name of a new automobile concern recently chartered with a $15,000 capital to buy and sell autos, parts and accessories.

LOS ANGELES.—Walter E. Elbe, distributor for the Cunningham car for the state of California, announces the appointment of J. W. Culver as sales manager. Culver was formerly sales manager for the Lafayette Motors at Chicago and more recently was connected with the Lincoln agency in San Francisco.

CINCINNATI.—Wilbur H. Rechtin, former sales manager for the Herschede Motor Car Co., Cincinnati, has been named general manager of the Hodde Motor Co., Cincinnati, which is opening a new downtown agency to handle Star and Durant cars.

DETROIT.—The Weisman Motor Sales Company, 3639 Woodward Avenue has just opened up a new model accessory salesroom and service station in connection with its Woodward Avenue sales store.

ST. LOUIS.—The Yellow Drive-It-Yourself System, Inc., has opened its new building at 3524 Washington Boulevard. E. L. Hudson, vice president and general manager of the company has arrived from Chicago to take charge.

DETROIT.—Distribution of the Franklin cars in the Detroit territory has been placed in the hands of the Franklin-Michigan Co., headed by Charles Koerber and George Zuver as sales manager.

CLEVELAND, Ohio.—Papers have been filed with the secretary of state, chartering the Meinert Magneto Co., with a $25,000 capital to do a retail auto equipment business.

DAYTON, Ohio.—Papers have been filed with the secretary of state, chartering the Daytonia Garage Co., with an authorized capital of $5,000. The company was formed for the purpose of dealing in autos, parts and accessories as well as operating a general automobile garage.

LOS ANGELES.—The latest expansion along Los Angeles' Automobile Row was the formal opening recently of the new showrooms and service quarters of Mutual Motors, Inc., Southern California distributors of the Roamer and Gray cars and retail Paige and Jewett dealers.

MILWAUKEE.—Andrew H. Dahl, for the past fifteen years operator of the A. H. Dahl Co. of Kenosha, Wis., Ford dealers, has turned over active management of the business to Aad J. Dahl and Victor H. Dahl, his sons.

LOS ANGELES.—The new home of the factory branch of the Mack Motor Truck Company, is now nearing completion and will be one of the largest buildings in the truck distributing field in the United States.

NEWARK, O.—The Phalen & Cunningham Co., has been chartered with an authorized capital of $50,000 to deal in automobiles and accessories as an agency.

MILWAUKEE.—Formation of the R. H. Churchill Co. to deal in automobiles, machinery and accessories has been announced at Marinette, Wis.

With the Associations

Boston Dealers Elect

BOSTON, July 6.—The annual meeting and election of officers of the Boston Automobile Dealers' Association was held this week at which President John H. MacAlman presided. A report of the show committee stated that the annual exhibition held last March was very successful financially and the attendance was very successful financially and the attendance was very good. Also that the plan tried out of not having dealer tickets and reducing the admission from 75 cents, that called for payment of a war tax to 50 cents thereby eliminating such a tax, was worth continuing.

The election of officers followed. President John H. MacAlman was re-elected. John W. Bowman was moved up from treasurer to vice president, while F. A. Hinchcliffe, formerly treasurer, was requested to fill that position again. Chester I. Campbell was re-elected secretary and manager of the shows.

President MacAlman is Stearns distributor for New England. Mr. Bowman handles Marmon, while Mr. Hinchliffe is Jordan dealer.

The directors chosen in addition to the above were Charles E. Fay (Chrysler); Joseph S. Donovan (Studebaker); Albion L. Danforth (Cadillac); Otto A. Lawton (Franklin); John H. Johnson (Buick); C. P. Rockwell (Nash); George B. Kimball (Hudson-Essex) and W. C. Sills (Chevrolet). All except Mr. Lawton were re-elections.

Speaks on Service

LOS ANGELES.—T. A. La Belle, of the Pan American Oil Company, and Ethelbert Favary, of the Moreland Truck Company, were the featured speakers at the monthly meeting of the Service Managers Association of Los Angeles. J. H. Frost of the Don Lee Company, Cadillac contributors, was the chairman of the evening. La Belle spoke on "Service," and Favary on "Brakes and Fiction."

Dealers' Association Formed

SPRINGFIELD, Mass., July 6.—The Hudson and Essex Associated Metropolitan Dealers' Association is being formed here, having its first regular meeting today. Bi-weekly meetings will be conducted in conjunction with the retail department of J. S. Harrington, Inc., Hudson and Essex distributors here.

A membership fee of $100 a year is imposed, with a rebate of $2.50 for each meeting the member attends during the year. Harry W. Stacy, secretary of the Automotive Dealers' Association, has been chosen secretary of the new organization.

The members will take part in the annual clambaker of J. S. Harrington, Inc., and the Harrington-Hudson Co. of Hartford, Aug. 5. This will be attended by approximately 1,200 persons, or twice as many as last year.

Plan National Organization

SPRINGFIELD, Ill., July 3.—Initial steps in the organization of a national association of "Drivurself" agency owners, have been taken here. Officers were elected as follows: President, B. H. Smith, Springfield; vice-president, E. J. Slevin, Moline; secretary-treasurer, R. C. Harding, East St. Louis; directors, Hugh Robb, Bloomington; John F. O'Byrne, Champaign; Edward E. Van Huffel, Galesburg; and R. C. Daugherty, Danville.

A manager-secretary was chosen in the person of H. C. Bradfield, Chicago, who will devote his time to expanding the organization.

The object of the association is to secure greater protection to rent-a-car concerns, and also to exchange experiences and ideas in order to promote the welfare of the membership. Rental companies in every state will be urged to affiliate.

Ohio Plans Shaped

COLUMBUS, O.—July 3.—Plans are already being shaped up by the officers and directors of the Ohio State Automobile Association, following the recent annual convention, for a year of militancy in taxation, highway improvement, and safety activities, with special emphasis on preparations for entering the legislative arena in a more aggressive and effective way than ever before.

This statement came from Secretary Chas. C. Janes, with the announcement that the first meeting of the association officials would be called soon to organize for the year's work.

Retiring as president of the Ohio State Automobile Association after three years spent as leader in organizing Ohio motorists as the most powerful body of its kind in the world, Fred H. Caley sounded this keynote for the future.

At the annual convention, delegates representing 150,000 organized motorists re-affirmed the association's opposition to the gasoline tax in addition to other motor vehicle taxation, and voted unanimously to consolidate their resources politically in the interest of motor vehicle owners.

Secretary Janes announced that during the year the only five counties of the state not now represented in the Ohio State Automobile Association would be made the scene of special organization activities.

Texas Body Elects

CORPUS CHRISTI, Texas, July 3.—George F. Holden, president of the Crockett Automobile Company, was elected president of the Corpus Christi Auto Trades Association at the recent annual meeting of the organization. R. M. Yantis was named vice-president and C. V. Twyman secretary and treasurer.

St. Louis Wins Honors

ST. LOUIS, July 6.—The St. Louis district office of the White Truck Co. received the bronze plaque awarded it in a recent nation-wide sales contest, at a banquet at Hotel Chase last week. Vice-president George F. Russell in charge of the western region made the presentation

Stanley P. Seward, advertising manager of the White Co., and his assistant, Charles E. Oswald, came to St. Louis for the dinner as did Vice-president Saunders Jones from Atlanta, Ga.

Reward Is Offered

PORTLAND, Ore., July 6.—At the regular monthly meeting of the Oregon State Motor Association a resolution was adopted offering a reward of $100 for information leading to the arrest and conviction of any driver of a motor vehicle who causes the death of one or more persons on any street or highway of Oregon through an automobile accident, and fails to report such accident to the proper authorities.

Tire Dealers Meet

ST. LOUIS, July 6.—The Cupples Co., acted as host to the members of the Associated Tire Dealers of St. Louis at a special meeting held last week at the Cupples Co. plant, Seventh and Spruce streets.

Bailey F. Kahl, tire sales manager, of the firm entertained the members before the meeting with a concert by the Rhino Cord Orchestra.

Kahl, who has just returned from a tour of the east, spoke on the prospects of the tire business in the immediate future. He discussed the great advance in the price of crude rubber and said it seemed Great Britain was largely responsible because of the export measure she imposed on her colonies which produced the preponderance of the supply of crude rubber.

Consider Rubber Problem

LOS ANGELES, July 6.—C. R. McCoslin, sales manager of the Los Angeles factory branch of the Firestone Tire & Rubber Company, was the principal speaker at the monthly meeting of the Automobile Sales Managers Association held at the Los Angeles Athletic Club. Thomas Duggan, Los Angeles, sales manager of Chamber & Lyon, automotive jobber, spoke on "The Spark Plug."

The general subject for discussion at the meeting was on "Market Analysis," and was led by H. C. McVey, passenger car sales manager of William E. Bush, Inc., Pierce Arrow distributor; D. W. Ferguson, sales manager, Reo Motor Car Company of California, and J. L. Dixon, of the J. V. Baldwin Company, Chevrolet dealer.

Rim and Wheel Distributors Organize to Protect Dealer

Standardization of Service Methods and Catalogs Is Association's Plan

NEW YORK, July 3.—Organization of the Rim and Wheel Distributors Association, recently accomplished at a convention in the Morrison Hotel, Chicago, brings together, for purposes of cooperation and standardization, seven of the largest rim and wheel distributing concerns in the country, doing an annual business representing several millions of dollars.

Standardization of service methods and catalogs, and protection against the sale of surplus stocks thrown on the market when manufacturers change rim and wheel types and sizes, are the chief purposes of the association, as described by John F. Creamer, manager of Wheels, Inc., New York City. Mr. Creamer is a director of the association and the officers are:

President, Charles Fields, Motor Industries Corp., Kansas City; vice president, Robert Nierman, Motor Rim Manufacturing Co., Cleveland; secretary-treasurer, Charles A. Sartain, Motor Rim and Wheel Co., Chicago.

Mr. Creamer said that the Association is composed of distributor representatives of these seven wheel and rim manufacturers:

Motor Wheel Corp., Lansing; Firestone Steel Products Co., Akron, O.; Kelsey Wheel Co., Detroit; Jackson Steel Products Co., Jackson, Mich.; Hays Wheel Co., Jackson; Motor Wheel Corp. of America, Buffalo, and Budd Wheel Co., Philadelphia.

OFFERS PREFERRED STOCK

MONTREAL, July 6.—The Yellow Cab Company of Montreal, Ltd., operating a taxicab transportation business in this city, is offering for public subscription $100,000 of its 7 per cent cumulative preferred stock at par, carrying a bonus of 25 per cent in common stock. The authorized capitalization of the company consists of $750,000 preferred stock divided into 7,500 shares of the par valve of $100 each, and $250,000 of common stock divided into 50,000 shares of the par valve of $5 each. The entire amount of common stock and $368,300 of preferred has so far been issued.

Night Air Mail Between Chicago and N. Y. Started

WASHINGTON, July 2.—The Post Office Department last midnight began the operation of an overnight air mail service between New York and Chicago, further reducing the mailing time between those centers.

The rate for the service has been fixed at ten cents for each ounce or fraction of a ounce. The charge includes not only transportation by air, transportation to and from the air mail route, but beyond as far as two-cent postage will carry the ordinary letter.

The Post Office Department reminds that every envelope should be prominently endorsed "Via Night Air Mail." Any mailable matter may be sent by air, including parcels up to 50 pounds in weight and not exceeding 84 inches in length and girth combined.

Air mail may be insured, registered and sent special delivery. Air mail letters, mailed in New York or Chicago at the close of the business day will be delivered in Chicago or New York on the first carrier run the following morning.

Coming Motor Events

Automobile Shows

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition.

Dallas, Tex. ..... Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis. ..... Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal. ..... Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich. ..... Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla. ..... Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal. ..... Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La. ..... Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va. ..... Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt. ..... Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn. ..... Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago ..... Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City ..... Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina ..... Oct. 3-13
Pan-American Road Congress.

London, England ..... Oct. 8-17
Olympia Passenger Car Show.

London, England ..... Oct. 29-Nov. 7
Annual Truck Show.

Races

Altoona, Pa. ..... Sept. 7

Charlotte, N. C. ..... Oct. 24

Fresno, CaCl. ..... Sept. 30

Laurel, Md. ..... Oct. 10
A. A. A. Race, Baltimore-Washington Speedway.

Los Angeles, Cal. ..... Nov. 26

Monza, Italy ..... Sept. 6
Italian Grand Prix Race.

Paris Montlhery track ..... July 26
French Grand Prix.

Conventions

Buenos Aires, Argentine ..... Oct. 3-13
Pan-American Road Congress.

Cleveland ..... Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland ..... Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia. ..... Nov. 12-13
Automotive Merchants' Association Convention.

Everett, Wash. ..... Aug. 3-4
Annual state convention Washington Automotive Trades Association.

Montreal, Que. ..... Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia ..... September
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa. ..... Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis ..... Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Tuscaloosa, Ala. ..... July 20-21
Midsummer meeting of the Alabama Automotive Trades Association.

Automobile Tires and Tubes Increase in Price 10-15 Pct.

Goodyear, Miller and General Lead Advance Caused by Rise of Crude

AKRON, O., July 3.—Most of the leading rubber manufacturers put into effect his week increases of about 10 to 15 per cent in prices of automobile tires and nner tubes. Ford size balloon tires are boosted slightly less than other casings.

Official announcements of price revisions are made by the Goodyear Tire nd Rubber Co., Miller Rubber Co., and General Tire and Rubber Co. Other ompanies are preparing revised lists to ecome effective at once.

Tube prices are boosted 33 1/3 marking one of the largest single revisions in he history of the industry by General, ut this company's schedules have been ut of line with its competitors. This is he third General tire advance to be made within the past three months, due to the 00 per cent rise in the crude rubber narket since the first of the year.

The British restriction act has been argely blamed for forcing up the cost f the raw material, but the unexpected eavy production of tires this year also elped to deplete stocks and create a emporary shortage of rubber. Spot rubber sold early this week at 90 cents a ound, compared with 17 cents last year. The market eased off below 85 cents later n the week.

Goodyear officials express the opinion n a statement tonight that the abnormal igh rubber prices will not continue ndefinitely. They indicate also that he manufacturers are absorbing part of he higher cost of crude rubber, rather han pass it all on to the consumer.

Huntington Dealers Start "Buy-New-Car" Campaign

HUNTINGTON, W. Va., July 6.—Twenty automobile dealers in the city of Huntington launched a "Buy a New Car This Year" campaign on July 1 and will continue it throughout the month of July. The campaign was decided upon at a meeting of dealers held recently. It will not be strictly under the auspices of the Huntington Automobile Dealers Association, but will be sponsored by at least 20 dealers. The plan is to make the slogan of the campaign a by-word on the lips of all Huntington citizens throughout the remainder of the year.

At noon on Saturday, July 11, the dealers co-operating in the plan will hold an automobile parade throughout the city and adjoining towns to help put the idea over. All cars will carry banners and all of the dealers' places of business will be decorated to fit the occasion. The idea is to bring home to prospective automobile buyers that this is the opportune time to buy a new car.

The dealers joining in the plan are the Huntington Motor Co., Max Biederman, Motor Car & Truck Corp., Huntington Buick Co., Ike Hanley, Hopkins Motor Co., Reo Cavendish Co., Nash Motor Sales Co., Magann Motors, Haan Sales & Service Co., Overland Knight Co., Curtis Motor Co., Connolly Motor Co., Lexington Sales & Service Co., Acme Motor Co., Jones Motor Co., Tri-State Motor Co., Motor Sales Co., Motor Transport Co., and Bruce Perry Motor Co.

SQUEEKS and RATTLES

THE WAY IT GOES



Sam: "Where were yu las' night?"
Doc: "May and I went coupeying."
Sam: "Big time, I suppose?"
Doc: "Fair. May did the cooing and I did the paying!"

—Tennessee Mugwump.

Certainly Not

Said the bank teller to the new girl who was making a deposit: "You didn't foot it up."

"No," she replied innocently, "I took a taxi."

The Philomath, Framingham, Mass.

Conscientious

During a recent rainy Sunday a devout member of the Motor Club who was attending church over his radio, inadvertently leaned forward and dropped a coin in his hat when the minister broadcasted, "Let Your Light So Shine."

—The Road.

Still, if you slow down to enjoy the scenery, passing cars will make you eat it.

—Quincy Whig-Journal.

TRY THIS

Cop: "Why didn't you stop when I yelled back there?"

Driver (great presence of mind): "I thought you said, 'Hello, Senator?' "

Cop: "Well, you see, Senator, I was going to warn you about going too fast in the next town."

—Middlebury Blue Baboon.

TAKING NO CHANCES

Sheriff: "What do you mean by driving through this village at over sixty miles an hour?"

Fair Motorist: "Well, you see, my brakes have gone wrong, and I was hurrying home before I had an accident!"

—Exchange.

ALL DEPENDS

What kind of car do you drive?

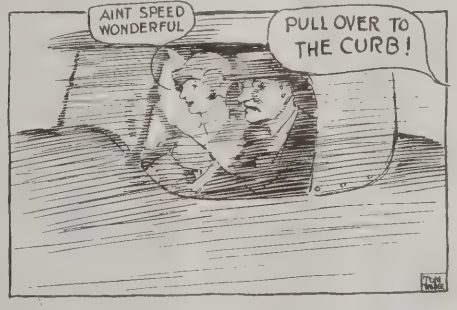
Any of several.

Any of several?

Yes. You see, I have several friends.

—Johns Hopkins Black & Blue Jay.

TICKET, PLEASE



The saddest words of tongue or pen,
Are NOT, by heck, "It might have been."
Much sadder is the cop's rude blurb—
"Hi there, pull over to the curb!"

—Fordowner.

OREGON SEES DIANA

PORTLAND, Ore., July 3.—The premier showing of the Diana eight-in-line in the northwest was held in the Condit & Conser Company's showrooms. This company as distributors have appointed the following Oregon dealers for their line: Salem Auto Company; Salem, Oregon; Freewater Auto Co., Freewater, Ore.; Bowman Auto Co., Marshfield, Ore.; Terminal Auto Co., Eugene, Ore. and Robin Reed, Corvallis, Ore.

APPERSON SALES SET RECORD

KOKOMO, Ind., July 6.—Sales and deliveries of Apperson cars for the month of June exceeded those of the previous month by a considerable margin, according to an announcement made by Don C. McCord, president. This brings the total for the first half of 1925 to the highest figure in the firm's 33 years of manufacturing experience. The president stated that he believes the fact that the company's June business was bigger than that of May sets a precedent in the industry. His announcement also said that the company has on hand "the largest total of unfilled orders since March 1."

McCord states that the concern is in the strongest position in years and that it plans to produce 100 per cent more cars during the last half of the year than it did during the first six months.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
.....	5-p	Phaeton	$1,575
3100	5-p	Sp. Phaeton	1,650
3145	5-p	Coupe	2,050
3470	5-p	Sp. Sedan	2,100
.....	5-p	Brougham	2,050
		"ST 8"	
.....	5-p	Sp. Phaeton	1,995
.....	3-p	Coupe	2,450
.....	4-p	Brougham	2,450
.....	5-p	Sedan	2,595
AUBURN "4"			
.....	5-p	Touring	$795
		"6-66"	
.....	6-p	Roadster	1,495
.....	5-p	Brougham	1,595
.....	5-p	Sedan	1,795
		"8-88"	
.....	6-p	Roadster	1,975
.....	4-p	Sport Roadster	1,975
.....	4-p	Club Roadster	2,075
.....	4-p	Sport Brougham	2,250
.....	5-p	Sedan	2,350
BARLEY "6" 6-50			
2750	5-p	Touring	$1,395
2800	5-p	Sp. Touring	1,495
3100	5-p	Sedan	1,850
3150	5-p	Sp. Sedan	2,250
BUICK "Standard"			
2750	2-p	Roadster	$1,150
2920	5-p	Touring	1,175
2960	2-p	Coupe	1,375
3075	4-p	Coupe	1,565
3185	5-p	Dbl. Srv. Sedan	1,475
3245	5-p	Sedan	1,665
3050	5-p	Coach	1,295
		"Master"	
		(120 in. W. B.)	
3285	2-p	Roadster	1,365
3465	5-p	Touring	1,395
3850	5-p	Sedan	2,225
3560	5-p	Coach	1,495
		(128 in. W. B.)	
3485	3-p	Sp. Roadster	1,750
3550	5-p	Sp. Touring	1,800
3610	7-p	Touring	1,625
3745	3-p	Country Club	2,075
3770	4-p	Coupe	2,125
3905	5-p	Brougham Sedan	2,350
4030	7-p	Limousine	2,525
3995	7-p	Sedan	2,425
3850	7-p	Town Car	2,925
CADILLAC "V-63 Standard Line"			
4190	2-p	Roadster	$3,185
4280	7-p	Touring	3,185
4200	4-p	Phaeton	3,185
4240	5-p	Coach	3,185
4610	7-p	Sedan	3,885
4525	5-p	Landau	3,885
4655	7-p	Std. Imperial	4,010
		"Custom Built"	
		(132 in.)	
4260	2-p	Coupe	3,975
		(138 in.)	
4400	5-p	Coupe	4,350
4490	5-p	Sedan	4,550
4590	7-p	Suburban	4,650
4655	7-p	Imp. Suburban	4,950
CASE J. I. C.			
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4820	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3034	5-p	Touring	1,595
3923	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3309	5-p	Coach	$1,595
CHANDLER (Cont'd)			
3309	5-p	Chummy Sedan	2,045
3469	5-p	Met. Sedan	2,195
3428	5-p	Sedan 4 d.	1,995
3521	7-p	Sedan	2,195
3598	7-p	Limousine	3,095
CHEVROLET			
		"Superior" (Series K)	
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	715
2110	5-p	Coach	735
2220	5-p	Sedan	825
CHRYSLER "Four"			
		(109 in. W. B.)	
.....	5-p	Touring	$895
.....	2-p	Club Coupe	995
.....	5-p	Coach	1,045
.....	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2730	5-p	Touring	1,395
2785	5-p	Phaeton	1,495
.....	5-p	Coach	1,545
2935	4-p	Coupe	1,895
2935	4-p	Brougham	1,895
3060	5-p	Sedan	1,825
3085	5-p	Imperial Sedan	2,065
3090	5-p	Crown Sedan	2,195
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3040	5-p	Sedan	1,495
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport	1,725
2990	5-p	Brougham	1,545
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$6,300
4500	4-p	Sp. Touring	5,800
4700	4-p	Coupe	7,150
5000	6-p	Limousine	7,650
DAGMAR "6-70"			
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	2-p	Roadster	1,785
3200	4-p	Sp. Touring	1,785
3150	5-p	Touring	1,985
3400	2-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS "90"			
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,995
2700	5-p	Brougham	1,595
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
3050	5-p	Brougham	1,895
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,205
DIANA "St. 8"			
.....	5-p	Roadster	$1,895
.....	5-p	Phaeton	1,895
.....	5-p	Std. Sedan	1,995
.....	5-p	De Luxe Sedan	2,195
.....	5-p	Cabriolet	2,095
.....	5-p	Brougham	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	885
2695	5-p	Spec. Touring	985
2708	2-p	Coupe "B"	995
2823	2-p	Spec. Coupe "B"	1,095
2995	5-p	"B" Sedan	1,095
3077	5-p	Spec. "B" Sedan	1,195
3020	5-p	Sedan A	1,245
3107	5-p	Spec. "A" Sedan	1,330
2723	5-p	Coach	1,095
2823	5-p	Spec. Coach	1,195
DORRIS "6-80"			
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800
DUESENBERG			
		Straight "8"	
3920	3-p	Roadster	**
3700	5-p	Phaeton	$6,650
3920	7-p	Phaeton	**
3980	4-p	Sp. Phaeton	**
.....	4-p	Coupe	**
.....	5-p	Sedan	**
4350	7-p	Sedan	**
DU PONT "D"			
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT A-22			
2300	2-p	Roadster	$1,080
.....	2-p	Sp. Roadster	900
3225	5-p	Touring	830
.....	5-p	Spec. Touring	950
2395	4-p	Coupe	1,160
.....	4-p	Spec. Coupe	1,235
2505	5-p	Sedan	1,190
.....	5-p	Spec. Sedan	1,310
2430	5-p	Coach	1,050
.....	5-p	Spec. Coach	1,100
ELCAR "4-55"			
.....	5-p	Touring	$1,095
.....	5-p	Coach	1,195
.....	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
.....	5-p	Coach	1,395
.....	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Sp. Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2130	5-p	Touring	$850
2395	5-p	Coach	850
FLINT "55"			
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-6	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN "11-A"			
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	7-p	Cabriolet	4,400
GARDNER "Series 5"			
2680	5-p	Coupe	$1,275
2895	5-p	Sedan	1,475
3070	5-p	Sp. Sedan	1,595
		"6"	
3010	5-p	Touring	1,395
3240	5-p	Brougham	1,595
3310	5-p	Sedan	1,795
.....	5-p	Sport Sedan	1,895
		"8"	
3350	5-p	Touring	1,995
.....	4-p	Cabriolet	2,245
3510	5-p	Brougham	1,995
3600	5-p	Sedan	2,495
GRAY "O"			
1750	5-p	Touring	$630
1880	3-p	Coupe	845
2020	5-p	Sedan	895
2130	5-p	Royal Sedan	975
HAYNES "60"			
3295	5-p	Touring	$1,600
3650	5-p	Brougham	2,200
3765	5-p	Sedan	2,300
HERTZ D-1			
3360	5-p	Sedan	$1,695
HUDSON "Super Six"			
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,250
3425	4-p	Brougham 4 d.	1,595
3675	7-p	Sedan	1,795
HUPMOBILE "R" 4			
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT "23-25"			
3025	4-p	Roadster	$1,630
2835	5-p	Touring	1,205
3015	5-p	De Luxe Touring	1,320
2835	2-p	Bus. Coupe	1,340
3025	5-p	Sedan	1,580
3305	5-p	De Luxe Sedan	1,780
3000	5-p	Coach	1,260
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,575
3340	5-p	Touring	2,575
3450	3-p	Friendly "8"	2,875
3625	5-p	Brougham	2,875
3520	4-p	Victoria	2,775
3525	5-p	Sedan	2,975
3470	7-p	Sedan	3,325
3800	7-p	Suburban Sedan	3,375
KISSEL "55"			
3130	2-p	Speedster	$1,895
.....	2-p	Sp'dster De Luxe	2,185
.....	4-p	Speedster	1,995
.....	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
.....	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
.....	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
.....	7-p	Touring	1,785
.....	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
.....	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	2,250
.....	5-p	Broug. Sed. DeL.	2,685
.....	5-p	Brougham 2 d	1,895
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
.....	5-p	Victoria De Luxe	2,685
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster De L.	2,585
.....	2-p	Speedster De L.	2,585
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Tourster De L.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Luxe	2,885
.....	5-p	Brougham Sedan	2,550
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,195
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,985
LEXINGTON			
		"Concord"	
.....	5-p	Touring	$1,595
.....	5-p	Touring (Enc.)	1,695
.....	5-p	Spec. Touring	1,795
.....	5-p	Sedan	2,185
.....	5-p	Spec. Sedan	2,445
		"Minute Man"	
.....	2-p	Roadster	2,145
.....	5-p	Touring	2,095
.....	7-p	Touring	2,195
.....	5-p	Lark Touring	2,345
.....	5-p	Cal. Touring	2,495
.....	7-p	Cal. Touring	2,495
.....	5-p	Royal Coach	2,495
.....	5-p	Brougham	2,595
.....	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000

** Manufacturers do not quote listprices.

MOTOR AGE

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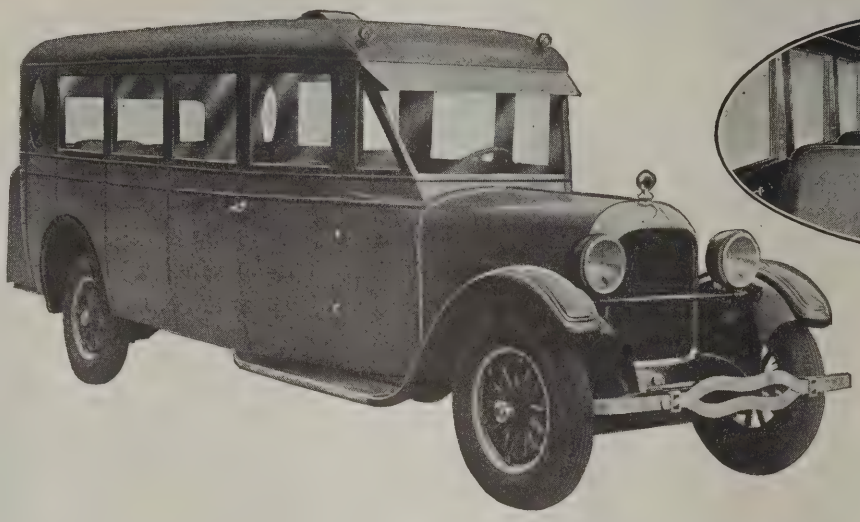
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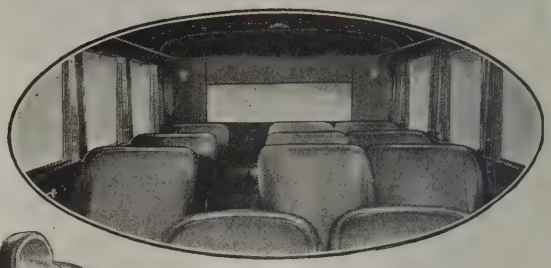
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Model 50-B
Chair Coach

TWO NEW MILLER-BUILT MODELS

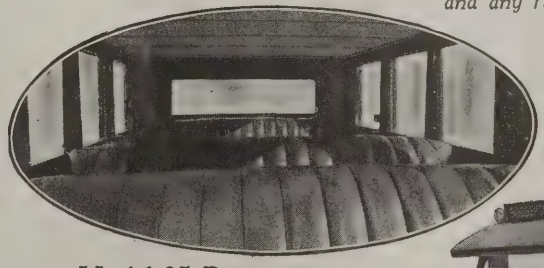
Mounted on Studebaker Big Six Chassis

THESE two new Miller-Built Models mounted on the Big Six Studebaker Chassis have set a new standard for comfort, ease of riding, dependable service and value.

The individual parlor car type seats, the wide aisle and the spacious windows, ideal for sight-seeing, make the 50-B job a popular coach. The 25-B job, shown with crosswise seats, may be also had with the individual chair seats, without extra charge. Both of these new designs are made in 12, 15 and 19-passenger models.

They are truly "the Parlor Cars of the Highways." Smooth, quiet, no jolts, no jars, no vibration, no noisy, rattling doors or windows. More pleasure and profit for the operator.

Write today for specifications, prices, and any further information desired



Model 25-B
Sedan

The A. J. MILLER CO.

BELLEFONTAINE, OHIO



MOTOR AGE

Vol. XLVIII July 16, 1925 No. 3

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

REGISTRATIONS of automobiles in United States gain 13.7 per cent in first six months of 1925, survey shows Page 32.

Peter de Paolo, winner of Indianapolis speedway event May 30, wins Baltimore-Washington 250-mile inaugural. Page 32.

Ford sales in June show increase of about 6,000 cars over record month a year ago. Page 33.

President Henry announces that the American Automobile Association will continue its bus division despite upheaval at recent convention. Page 43.

Hare & Chase, automobile finance company, issues statement condemning unsound finance methods allowing small down payment on purchase of new car. Page 37.

Sales of windshield wings point to revival of interest in open automobile models. Page 37.

Sales of Mack buses for first half of 1925 increase 433 per cent as compared to same period of 1924. Page 33.

Dealers in Atlanta sponsor a joint advertising contest with prizes for identification of pictures in newspaper page. Page 35.

Duesenberg sales are reported on upward trend with many dealerships being requested as result of De Paolo's victory at Indianapolis race. Page 35.

Marmon sales in June are double those of the same month last year, records show. Page 43.

Ralph De Palma wins opening race at Rockingham Park Speedway in New Hampshire against field of eleven. Event marks revival of New England race interest. Page 3.

Scientists pronounce crude oil airplane engine without spark plugs is practicable in principle. Page 36.

Toledo reports June business better than 1924 sales although volume is not up to record set in May. Page 38.

Hattiesburg, Miss. is the first town in the state to discard its street car lines in favor of motor buses. Others expected to follow. Page 42.

Indianapolis Real Estate Board gets behind project to establish airport in their city with result that favorable action seems assured. Page 38.

Meeting of Ohio council of N. A. D. A. will stick to discussions of retail sales, operating expenses, service and management. Page 39.

Deed of sale of Maxwell properties to Chrysler Corporation is recorded at Detroit. Page 39.

Alabama Automotive Trades Association getting stage set for its annual convention July 20-21. Page 42.

Volume storage business is developed for Seattle garage by use of "Tag boy" service. Page 38.

Hudson-Essex plans expansion of dealerships in Spokane, Wash., distributing territory. Page 36.

In Next Week's Issue—Common Sense in the Saddle

Write It While Sitting on the Running Board

Tell 'Em and Sell 'Em

An Article on Used Car Advertising

By CLARENCE PHILLIPS

HOW to write a used car advertisement that will "pull" is always an interesting subject. In fact, there are a great many dealers in this country who would give a lot to obtain such a formula.

Many of them feel that too much of their used car advertising effort is thrown away and there are few who seem able to analyze the problem in a manner that will enable them to put their used car insertions on a more profitable basis. It *is* a hard job to check up on results realized through this sort of promotion.

Let it be said right here, though, that it is not the intention of this article to lay down a set of magic rules to be followed in successful used car advertisement writing. Far be it. There are two fundamental elements necessary to proper procedure, however, that will be submitted.

The first is: Make a first hand, careful study of the car to be described.

The second is: Don't be too niggardly with space for the description. Help the shopper visualize.



Edward C. O'Donnell, who writes used car ads for the New York Branch of Studebaker, believes in an on-the-spot study of the car to be described and he deals with each car as an "individual proposition"

A better way yet to express the idea would be to put the two thoughts in the words of Edward C. O'Donnell, of the Lord & Thomas advertising organization, who writes used car copy for the New York Branch of Studebaker.

"When I write a used car ad," said Mr. O'Donnell, "I do the work, figuratively speaking, while sitting on the running board. I deal with each car as an individual proposition."

"Tell 'em and sell 'em"—he said further, is the guiding slogan of his work.

This last terse phrase constituted the advice given him by the sales promotion manager of one of the country's largest newspapers when Mr. O'Donnell was about to enter the advertising field.

Mr. O'Donnell is easily competent to testify in the matter of used car advertising. His success in turning out this sort of copy for the New York branch of Studebaker has been exceptional. He writes the kind of copy which moves cars and the organization whose automobiles he describes is one of the country's larger used car movers.

And another thing. Half of the budget allowed by the New York Studebaker branch for Mr. O'Donnell's work—goes into display advertising.

This information might cause some dealers to snort, for there are numbers of them who simply can't see display advertising for used car promotion. The great majority even of the large volume merchants—and that means nearly all of them—concentrate nearly all effort in the classified section. Now and then some are prone to wander out of the classified page for a smash in some other part of the paper with display but after the smash they return to classified advertising exclusively. That is the popular way of using the newspapers for used car leads. Consistent use of display space for used car promotion is a thing which we rarely behold. Studebaker's New York Branch is one of the exceptions to the rule. It has been using display right along in conjunction with insertions in classified sections and these display ads have attracted much favorable notice.

But whether applied in the preparation of copy for a display ad or an insertion in the classified page the two O'Donnell thoughts will hold as excellent fundamentals. In either case the copywriter will make no mistake by "sitting on the running board" to write the ad and then "telling 'em".

By "sitting on the running board," Mr. O'Donnell means, of course, that he never attempts to write a used car description without a particular on-the-spot study of the car he wants to advertise. This painstaking plan is not the one which is always followed. But it is the only way to develop the selling points that count and at the same time run no risk of developing some that can not be backed up when the prospect sees the car.

Not only does it enable the copywriter to pick out and stress effectively the car's more tempting features but

it also enables him to avoid features which had better be honestly forgotten.

Accessories That Disappoint

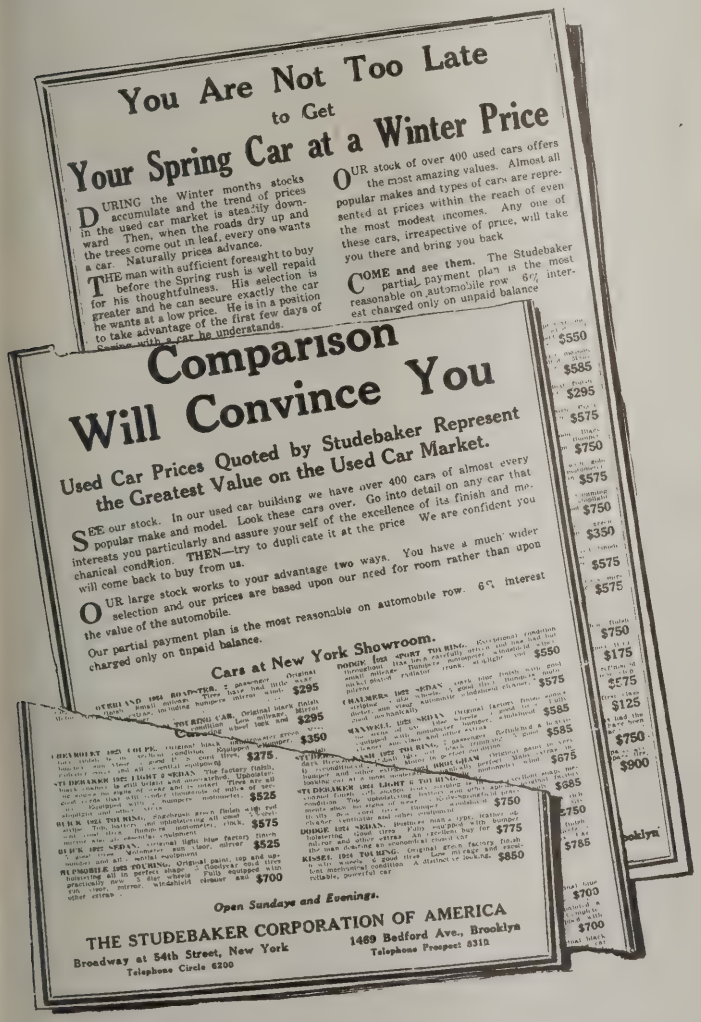
It is always well to look closely at an accessory before proudly telling the world it is on the car, for the accessory in question might be so unfit it will only disappoint the prospective buyer and arouse his suspicions generally. The result is worse than a muffed sale as this offended person is likely to stalk away from the store and talk about it as a gyp institution.

At the same time there is no doubt but that "jewelry" helps sell the used car if the quality is there. One dealer who seems to get most gratifying results with his used car ads says: "I hang on the accessories wherever I can." And so does Mr. O'Donnell, but he looks at them before he hangs them on. That is an all-important thing.

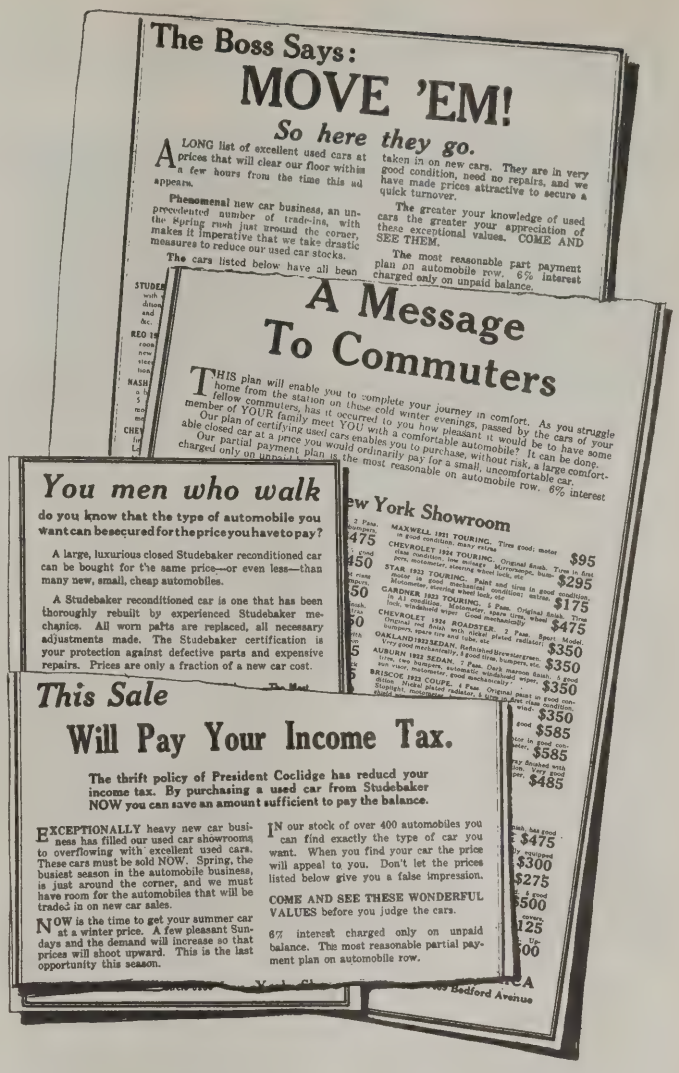
Long-distance and cursory methods in gathering material for used car ads are responsible for much advertising copy that falls short of what it could be made to do and such practices frequently bring troubles and losses for the house that it would be more desirable to avoid.

Not infrequently the man in charge of the used car publicity will flatter himself with assurances that he knows his company's stock like a book and he is much inclined to regard the task of preparing used car copy as an incidental chore.

While he may not always take the long chance of writing the copy "from memory" in his private sanctum he is



A group of Mr. O'Donnell's used car display ads. He always "tells 'em" something about each car and he likes to print the price in type that stands out prominently



Here are some typical specimens of Mr. O'Donnell's display ads that proved very effective. When a certain accessory is on a car he knows it is there and he knows it is in good order

consistently guilty of going through this performance without checking up carefully and methodically on his facts.

His fundamental trouble is that he does not take this work seriously enough, for in reality it is something that deserves much more than haphazard and perfunctory treatment. The lick-and-a-promise is not enough, notwithstanding that in many quarters of the trade there persists a feeling that a lick-and-a-promise is all the used car is worth. There is a feeling that the used car is only a necessary evil wished upon the trade by the gods of ill fate and the inclination is to treat it as an unwelcome guest.

More Love for the Used Car

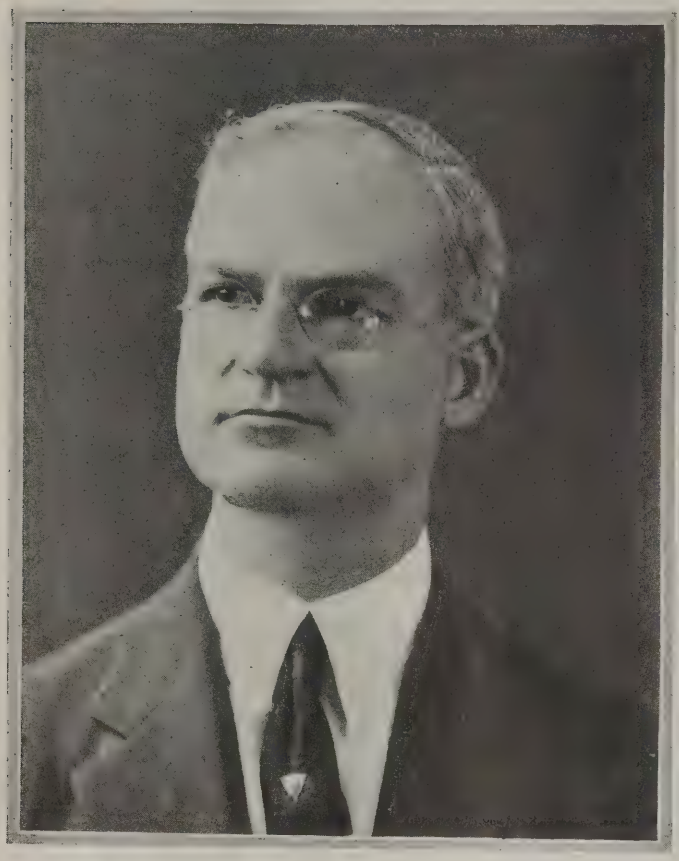
Welcome, or unwelcome, though, the used car is here and its numbers are growing constantly larger. In many establishments of very successful automobile merchants even—the unit volume of used cars moved already far outnumbers the new cars sold. Holding the used car in contempt gets us nothing. Unhappily married to it though we may be it must be given due marital consideration. A little more love for the used car by the trade wouldn't hurt a bit.

Difficult as it might be to work up much affection for the used car the copywriter who wishes to help it move

(*Continued on page 20*)

EIGHT YEARS IN BUSINESS

From 75 Cars a Year to More Than 100 Cars a Month in 1925 Is Record of Bacon Motors Co., of Jacksonville, Fla., Which Recently Occupied New $75,000 Home



E. H. Bacon, president Bacon Motors Co., who in eight years has built his business from 75 cars a year to more than 100 cars a month.

THE prevailing style of architecture found in the best homes of the community has been adopted by Bacon Motors Co., of Jacksonville, Fla., for its new home. The result is a business building, in Spanish style, that has charm and distinction but at the same time provides a very practical home for a thriving commercial institution.

The Bacon Motors Co. distributes Hudson and Essex cars in 26 counties of Florida. The company was established in 1917 and the first year sold 75 cars. Sales in 1924 were 670 cars and for the first few months of 1925 average monthly sales were 105 cars.

The company's new building was completed recently at a cost of $75,000.

The sales and display rooms hold true to the architecture of Old Spain and the exterior is of stucco with window trimmings of mosaic tile and red tile roof.

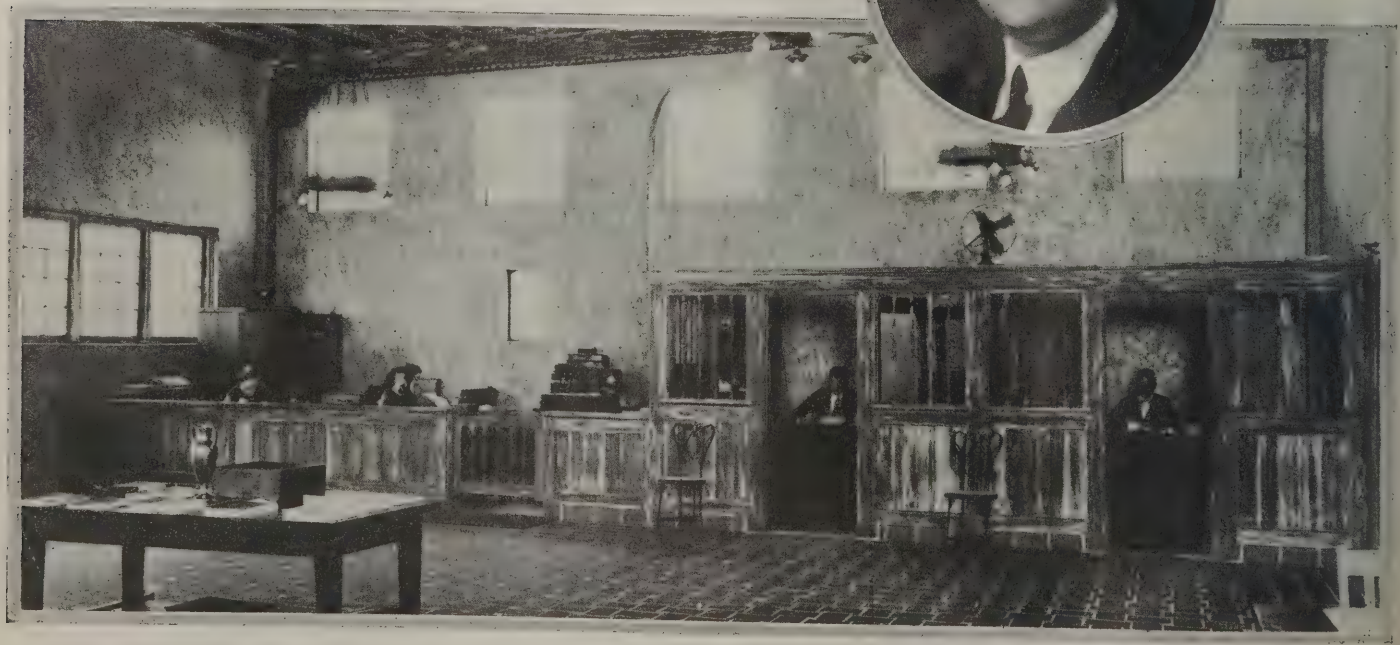
Decorations are in real Spanish polychrome effect.

A sharp change from this old world atmosphere is experienced when the visitor steps from the display rooms to the repair shop to the rear. Here the American spirit of utility predominates and nothing is used that will retard the skilled mechanics in doing expert work and giving speedy service to Hudson and Essex owners.

A feature of the building is that every department is



Below: Show room and offices of Bacon Motors Co., in new building of Spanish architecture. The seasoned timbers which attract the attention of travelers to the districts of old Spain and bring visions of other days are reproduced in the interior of the building. Even the red tile floors are patterned after the hard stone flooring in general use in the old castles of the nobility. At right is Ralph W. Hoyt, secretary and treasurer of the company, who joined the organization a little over a year ago, and who has been an important factor in its growth.



And Now This New Building





Mosaic tiles in red, blue and bright yellow give a distinct Spanish touch to this unique business building recently erected at Jacksonville, Fla., by the Bacon Motors Co. Below at right is the gateway to the open-air used car department.

located on the ground floor, so arranged as to be easily accessible from two streets. A spacious corner of the building, fronting on Park street, with an entrance also on Dora street, is reserved for sales and show-rooms with offices in the rear.

Adjoining the show-rooms and also fronting on Park street is the parts department, where a stock of approximately $25,000 will be carried at all times.

Also fronting and opening on Park street is the used car department, with an open court in true Spanish style, and capacity of about 30 cars.

To the rear of the used car department and connected with Dora street by a concrete driveway, is space for washing cars, with equipment for compressed air cleaning.

The service garage, a massive fire-proof building of steel construction, directly behind the show-rooms, is easily accessible from Park, Dora or Oak street. It is equipped with the most modern facilities for automobile repair work. The building has a capacity of approximately 50 cars. Lockers, showers, instantaneous hot water, electric lights, and other conveniences are furnished for the workmen and every detail for their welfare has been given attention.

An overhead carriage connected directly with the parts department, eliminates unnecessary steps and consequent loss of time by the workmen. A tube system, connecting with the offices, eliminates the handling of cash in the service garage, and the necessity for daily reports.

E. H. Bacon, president of the company is one of the best known automobile men in the state. Service to Hudson and Essex car owners and a willingness to share the troubles of his dealers and tide them over business adversities has given strength and loyalty to the company in every Florida city in which it does business.

Ralph W. Hoyt is secretary and treasurer.



Service department of Bacon Motors Co.

Applying a Pyroxylin Finish to a Car

Spraying on the Enamel—Number of Coats Varies—Two Tone Effects

By B. M. IKERT

As a rule two or three coats of enamel are sprayed on in the final application of a pyroxylin finish. In the majority of cases three coats are used and even more where necessary, depending on the covering power or hiding qualities of the particular color used.

When it comes to a choice of color some discretion must be used as some colors are more stable than others and it is better to tell the customer these facts before the colors are applied. Some of the manufacturers of pyroxylin finishes advise against certain colors such as the maroons and blues which they claim have a tendency to "chalk." Some of the shades have this characteristic more than others.

There is also some difference of opinion as to the undercoats to be used with a lacquer finish. There are those manufacturers who prefer a complete nitro-cellulose finish and again there are those who strongly advocate oil under coats. Some paint manufacturers claim that the oil under coats are superior particularly when applied over steel.

One maker states it has been his experience that when pyroxylin lacquer is applied directly to steel it has a tendency to cause rust and that the pyroxylin lacquer may actually be classed as a rust accelerator. Such a condition however needs no serious attention in connection with aluminum bodies.

It is well to bear in mind that there is still much experimental work going on with pyroxylin finishes for motor cars and new discoveries are made almost daily which result in a better understanding of the materials and their application to motor cars. The majority of manufacturers are turning out good finishing materials, but it is necessary to abide by the specific directions accompanying any particular make of materials.

Application of Lacquer Coats Important

Some of the instructions which were given for the application of the priming and under coats apply equally well to the enamel or lacquer coats. It is during the application of the lacquer coats that the operator exerts the greatest influence as to the final appearance of the car. For that reason there must be every assurance that the spray gun is clean and that the air pressure is correct. The same things which were mentioned in last week's article on applying the under coats, applies to the lacquer coats so far as the equipment is concerned.

As a rule the spray gun should be held a little closer for the lacquer than for the paint materials in order that the enamel may be applied properly and the operator should use long swinging strokes over the entire width or length of a panel rather than spraying with a circular motion. The gun also should be held the same distance from the surface at all times in order to get the lacquer uniformly applied.

A good plan for one who has never used a spray gun or lacquer materials is to practice on a large metal panel that is off a car before any attempt is made to spray a body as lacquer is quite different in its application than paint or varnish. The operator may read volumes on how to spray a body but very often an hour or two with the gun will teach him exactly the things to watch out for in doing the work.

The stream from a spray gun is usually thinner o the edges than in the center and for this reason it i customary to overlap the spray about one-half th width of the stream. Some operators cross-spray th coats, that is, they apply one coat horizontally and th next coat vertically, a procedure which is said to giv very excellent results when done by a competent operato

All lacquers must be thinned before they can be sprayed and it is customary to use one part of lacquer to one o solvent. This is especially the case with the first coat o lacquer. With some of the pyroxylin materials the secon and third coat are reduced by using two parts of th enamel to three of the thinner or reducer.

After the first coat of enamel has been applied it shoul be left to dry for one hour after which the second an third coat can be applied. The first coat is dried at temperature of 60 degrees Fahrenheit and the third coa should not be applied until the second coat has air drie for at least 15 minutes at 60 degrees Fahrenheit.

May Be Safely Varnished

One of the makers of pyroxylin materials furnishe three types of clear nitro-cellulose lacquer consisting o (1) a clear lacquer for mixing with the last one or tw coats of color enamel, when it is to be left as sprayed or coated with finishing varnish to obtain an especiall deep luster, (2) clear lacquer for mixing with the las one or two colors of color enamel when it is desired t have an especially hard final coat which may be rapidl polished to a high gloss, (3) clear lacquer for use o natural wood wheels, mouldings, steering wheels, instru ment boards, etc.

The particular lacquers above mentioned both clear an colored are unique amongst nitro-cellulose materials fro the fact that they may safely be varnished. Because o their ingredients most pyroxylin lacquers will not hol varnish. This is also true because of their low degre of elasticity. Since nitro-cellulose under coats lack th so-called "suction" of the old type undercoats, they mak

WITH the advent of pyroxylin finishes there is a feeling among some of the smaller establishments that they are going to be forced out of business sooner or later because motor car factories rapidly are adopting lacquer finishes, said to last practically as long as the car itself.

There is no cause for alarm so far as this publication can ascertain because cars will have to be refinished sooner or later regardless of the fact that the factory may have put on lacquer coats. When the owner of a lacquer-finished car turns in such a car after several years use there is just as much chance that the buyer of the car will want a refinished job as was the former case with varnish finishes.

The new purchaser also may want a change of color, and one of the distinct advantages of the lacquer system is that the new coats can be applied directly over the old lacquer. That is, the car will not have to be stripped to the bare metal.

an ideal surface for finishing varnishes, materially increasing the life of these materials. Many car owners demand a high lustre procurable only with finishing varnish and it is advantageous therefore to be able to apply varnish over pyroxylin enamels in such cases.

Where the final finish is to be polished lacquer a special lacquer for polishing is mixed with the final coat. The finished body should be allowed to dry over night at room temperature so that the final coat is sufficiently hard to attain a high lustre when polished. The harder the final coat is allowed to get the simpler it will be to attain a good polish. Also if the gunglaze and surface coats are as smooth as possible the more perfect will be the enamel surface and the better the final polish.

It is considered good practice to rub with pumice stone and water or with water proof sandpaper before the last coat is applied to even up the surface. Where the highest type of finish is desired, this should be done.

It is generally the best plan to apply lacquer to such parts as the cowl and rear deck, gasoline tank, etc., after the sides have been done. This is to avoid spray dust. Whenever the sides and top are being coated it is quite difficult to prevent some of the spray from settling over the cowl in the form of dust, consequently if these parts are left until last the final lacquer usually will dissolve the spray dust into the film. As previously mentioned should the job when finished have any traces of spray dust a coat of the reducer or thinner will generally dissolve it. It is customary to apply this last coat using about five parts of the thinner to one of the color.

Cover Windows and Doors

In order to get a two tone effect on closed cars the windows and doors must be covered with paper to prevent the finishing material from settling on the glass. All the coats after the surfacing coats should be applied on the lower panels first being particularly careful to get as little as possible of the over-spray above or on the moulding. When the last coat has dried at least an hour or longer a strip of paper should be pasted against the lower edge of the moulding, using tape or ordinary library paste. This will prevent the over-spray from settling on the lower panel. Then when the ground colors and enamel have been applied to the lower panels the paper is removed by soaking with water and a sponge. If adhesive tape is used gasoline can be used to remove all traces of it.

One company is now experimenting with a liquid to be used for masking or screening various parts of the body which are to be protected from the spraying. It is the intention that this liquid be non-soluble in nitrocellulose solvent but soluble in water. The liquid will be brushed over surface to be protected so that none of the lacquer deposited on it will go through to the body panel and when the spraying process is finished the masking liquid can readily be washed off with water, taking what lacquer has adhered to it with it.

Every now and then it happens that one or more of the body panels becomes damaged after a car has been finished with lacquer and the job is then one of touching up these spots. It is difficult to give specific directions for this because each job is a case unto itself and very often it will be found more advantageous to refinish a complete panel rather than attempt to remedy a particular spot in such a panel. In repairing bad scratches and where the machine has been scraped off to the bare metal the spot has to be built up in practically the same manner as though the entire panel were being finished.

One of the makers of pyroxylin materials states that in repairing a damaged portion of a panel it is wise to block off the damaged panels from the rest of the body by pasting at least 6-inch strips of heavy wrapping paper around the entire panel. This prevents the dried spray dust from settling on the undamaged portion. Also when the finish is not off all the way to the metal it may be possible to repair the damaged spot without using all the coats needed for the entire finish. Thus if the primer is still in place and the damaged portion is not too large it may be possible to repair by puttying up the scratch, sanding this down after drying and then following by a coat of ground color and two or three of the proper enamel. Sometimes it is necessary to use a surfacer first followed by the other coats.

When it becomes necessary to repair small scratches through the enamel only some operators make a mask by cutting a hole in a piece of heavy paper so that the hole will be just a little larger than the scratch to be repaired. This mask is held tightly against the damaged spot and one or more coats of enamel applied as necessary to bring up the finish flush with the surrounding surfaces. When spraying the material during such repairs it is often found advantageous to adjust the spray gun for a round spray. With such a spray it is easier to do the repairing as it is possible to blend the material better.

Next week's article will take up a discussion of polishing operations, striping and so forth.

PAASCHE AIR BRUSH CO.
1909-1923 Diversey Parkway
Chicago, U. S. A., July 3, 1925.

Mr. B. M. Ikert,
Technical Editor,
Motor Age,
Mallers Bldg.,
Chicago, Ill.

Dear Sir:

I have just had brought to my attention your article on nitro-cellulose finishing which appears in the July 2nd issue of Motor Age.

I wish to compliment you on the clear and concise manner in which you entered into the discussion of this comprehensive subject. I enjoyed reading it very much. It seemed to me that it would prove rather difficult to you to find the line of demarcation between the necessary and unnecessary facts which enter into an intelligent treatise on automobile painting. However, this is not evidenced in your opening number.

I feel that you have entered upon this discussion from the most advantageous point, namely; the beginning. This is a thing that most writers on this subject fail to see or take into consideration.

The fact that all material must be in such a form as to be readily grasped by the mind of a layman, makes your task doubly difficult. You deserve commendation for the manner in which you have handled the subject without becoming technical.

I would greatly appreciate it if you will see that a copy of each article is addressed to me personally as I am interested in reading and filing your whole series for reference.

Assuring you of our desire to cooperate with you at all times, we remain

Yours very truly,

PAASCHE AIR BRUSH COMPANY

(Signed) C. E. Valentine, Jr.

Yellow Cab Joins General Motors in $36,000,000 Merger

New Corporation Will Have Full Line of Buses, Trucks, Taxicabs and "Drivurself" Passenger Cars. No Public Financing Involved and Policies of Y. C. Line Will Remain Unchanged

ONE of the largest consolidations in the history of the automotive industry and probably the greatest in recent years was effected in Chicago last week when the General Motors acquired a $16,000,000 interest in the Yellow Cab Manufacturing Company. This provides General Motors with a full line in the revenue-producing vehicle division.

The truck division of General Motors is to merge wtih the Yellow Manufacturing Company, the new concern to be called the Yellow Truck & Coach Manufacturing Company. To this corporation, General Motors will transfer all real estate, buildings, plants machinery, materials, products, assets and trade marks belonging to its truck division, including licenses for patents and the good will. The aggregate value of the property to be transferred, exclusive of good will is $10,811,310. General Motors also will pay $5,188,690 in cash, making a total of $16,000,000.

The authorized capitalization of Yellow Truck will be $36,000,000 consisting of 200,000 shares of 7 per cent cumulative preferred stock of $100 par value, callable at $120; 600,000 shares of class B stock of $10 par; and 1,000,000 shares of common stock at $10 par. The B stock is to be distributed to present holders of B stock on a share for share basis. Present stockholders also will receive a 25 per cent stock dividend in the new cumulative preferred. All the $675,000 of class A preferred of the Yellow Manufacturing Company, held by the Chicago Yellow Cab Company, an operating concern, will be retired at par.

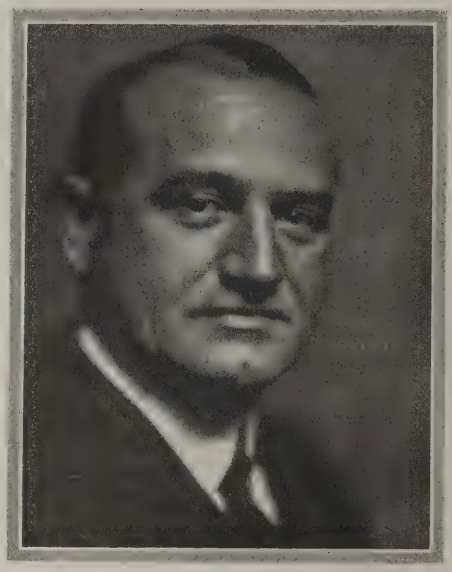
G. M. Gets 800,000

General Motors will obtain 800,000 shares of the common stock in payment for its $16,000,000. The common stock and the class B stock will have the same voting power a share. After cumulative dividends have been paid on the preferred stock, class B and common stock will share alike in remaining dividends to be distributed. However, for a period of three years, should dividends declared and paid be less than 75 cents a share on the aggregate of 1,400,000 shares of class B and common outstanding, then the class B shall have preferential cumulative rights on dividends up to 75 cents a share.

Following the three years, should the class B stock have had these preferential rights, the common stock will then be given the same right for the next three years. These provisions guarantee present holders of the class B stock receipt of the current annual dividend for the next three years, and at the same time give promise of the possibility of larger distributions.

There is no public financing involved in the entire transaction.

Heads Consolidation



John A. Ritchie, formerly president of the Yellow Coach Manufacturing Company, who is made president of newly formed Yellow Truck & Coach Manufacturing Company

Active management of the new concern will be for the most part in the hands of the present officials of the Yellow Cab Manufacturing Company. Yellow Manufacturing will be represented by thirteen seats on the board of the new corporation, with General Motors getting the remaining eight seats.

The board of the new company will consist of the following:

John D. Hertz, chairman; Irving B. Babcock, Donaldson Brown, Edward N. D'Ancona, P. L. Emmerson, Harold E. Foreman, John L. Pratt, Leonard S. Florsheim, F. J. Fisher, Paul H. Geyser, George A. Green, Pierre du Pont, Robert Lehmann, Charles A. McCulloch, Otto W. Lehmann, John J. Raskob, John A. Ritchie, A. P. Sloan, Jr., Otto E. Stoll, A. H. Swayne, John R. Thompson and William Wrigley, Jr.

The officers of the new corporation will be:

John A. Ritchie, president; John D. Hertz, chairman of the board; Paul H. Geyser, vice president in charge of production; George A. Green, vice presiden in charge of engineering; Irving B. Bab cock, vice president in charge of account ing and finance; P. L. Emmerson, vic president in charge of sales; Otto E Stoll, vice president and manager of th truck division.

In announcing the merger, Mr. Hert said:

"This will enable us to carry out a rather extensive plan we have had i mind for some time, to become the larg est manufacturer of commercially oper ated revenue-producing vehicles in th world.

"We have established a reputatio through many years of manufacturing a the producers of the highest class an biggest revenue-producing taxicabs coaches, and light delivery wagons in th world. We have never built to a price but always to an ideal, with the resul that we build the most efficient, reliabl and dependable product in the industry This, at present comprehends a line o seven types of motor coaches, two type of taxicabs and two types of 'drivurself cars and several types of one-ton wagons Through this purchase, we will now ad to our present list a complete line o trucks varying from one to seven tons

"This does not mean any radical de partures or drastic revisions in our busi ness as would seem at first glance, a our motor coaches are really six-to carrying vehicles.

Logical Combination

"Many advantages will naturally accru to the company by becoming affiliate with the General Motors Corporation. I many respects this is the most logica combination of interests, and under th new order of things will not only give u the manufacture of a line of commercia vehicles more comprehensive than an other manufacturer, but will enable u to incorporate in the design and con struction of our trucks many of th operating and manufacturing refinement to be found in the construction and de sign of our motor coaches and taxicabs

"Incidentally, I might say that the Gen eral Motors Corporation truck divisio is a profitable organization. It has a experience in the manufacture of heav duty vehicles extending over many years and has in service today many of th heavy duty trucks doing satisfactor duty all over the world.

"The well known policies of the Yellow Cab Manufacturing Company will remai unchanged.

"The personnel and management of th company will remain the same, exceptin

for some minor changes in positions which will naturally result from a merger such as this. The operation and manufacturing organization of the General Motors Corporation truck division will remain practically in its entirety. This will be headed by Otto E. Stoll, who will become vice president and a director of the new company. He will be manager of the Pontiac truck plant and the Detroit engine plant.

"John A. Ritchie becomes president of the new company. His experience as a bus operator and manufacturer began in 1918 with the Fifth Avenue Coach Company. His experience has been further widened since his connection as president of the Yellow Coach Manufacturing Company. He will have under him all the men that have made our company a success. This will not be a one or two man organization. Everybody on the staff is an individualist and a builder. We believe we have the best producing and service organization in America.

Cab Company Unchanged

"Mr. Ritchie will also remain as head of the coach operating company. Neither this company nor the Yellow Cab Company of Chicago (which is an operating company) is to be affected by the merger.

"We feel that our industry is on the brink of a tremendous evolution. Throughout the nation, all thinking transportation men appreciate that the motor coach and motor truck are destined to fill an increasingly important niche in the general scheme of things. For some time we have been preparing for this eventuality.

For instance, I believe that the time is near at hand when a passenger will buy a railroad ticket calling for transportation for himself and baggage from his home to the place at which he intends to stop in some distant city. In other words, the purchase of his original railroad ticket will include such transportation as taxicabs and coaches.

"This is equally true in the transportation of freight. In the near future, I believe we will see the railroad shippers' bill of lading include pickup service and delivery as well as transportation from one place to another. In other words, railroad companies must necessarily avail themselves of the use of such vehicles as ours in order to carry out a complete plan of transportation.

"As far as the financial end of the purchase is concerned, the figures speak for themselves. Our contact with the organization of the General Motors Corporation has convinced all of us that the Yellow Truck & Coach Manufacturing Company, as the new company will be known, is going to derive untold benefits in many ways. This holds particularly true of the assistance we will receive through the tremendous world-wide selling organizations, research departments, and the general advice and assistance received from a strong organization of officers, manufacturers and financiers.

"This deal brings to Chicago not only the coach, taxicabs and 'drivurself' industries, but now adds to it the heavy-duty truck business."

Sloan Makes Statement

Alfred P. Sloan, Jr., president of the General Motors Corporation said:

"The Yellow Cab Manufacturing Company, apart from its position in the taxicab business, occupies a strong position in the bus field. A merger of the General Motors truck business with the business of that company is calculated to result in material economies in the manufacturing and distribution ends of both of these important lines of business.

"General Motors Corporation has recognized the importance of the bus, and believes that the proposed merger with the Yellow Cab Manufacturing Company will immediately place it in a strong position in the bus business, with the opportunity of enjoying a really unique position in the future development in that field. It also believes that its position in the heavy-duty truck business will be greatly strengthened as a consequence of the combined management and the benefit derived from more economical manufacture and distribution."

G. M. President



Alfred P. Sloan, Jr., president of General Motors Corporation

Business Structure of Yellow Cab

THE business structure of the Yellow interests as it is about to pass into the control of the new organization is built upon the following lines:

The Yellow Cab Manufacturing Company is the parent organization. Subsidiaries have been organized to control the sales, finance and manufacturing divisions of its operations. Officers of the parent company and of many of its subsidiaries are interlocking. Of the manufacturing companies the largest is the Yellow Coach Manufacturing Company, of Chicago, whose officers are:

President, John A. Ritchie; vice-president, C. A. Green; secretary and treasurer, Irving B. Babcock.

Officers of the Yellow Cab Manufacturing Company are:

President, John Hertz; vice-president, Irving B. Babcock; general manager,

(Continued on Page 35)

Began as Newsboy



Born in Chicago 45 years ago, John Hertz, president of the Yellow Cab Manufacturing Company and executive head of the majority of its many subsidiaries, started his business career as a newsboy. A few years later he drove a delivery wagon and later still became a newspaper reporter. He rose in the newspaper profession until in 1907 he was assistant sporting editor of one of the Chicago dailies.

It was at this time that he met Walden W. Shaw and became interested in automobile selling.

One day he noticed a number of idle used automobiles in the showroom and conceived the idea that it would be profitable to rent the cars for livery purposes. He found, however, that the cars were too large and expensive to operate; that the wear and tear ate up all his profit.

He then delved through a number of catalogs listing prices of automobile parts' and figuring up the aggregate cost of a completed automobile from these catalogs, decided it would be cheaper to build his own automobiles to specification than to purchase the product of some other manufacturer for use in his livery trade.

He planned his cars to be small and easily operated as well as strong and economical. He began painting the cabs yellow to attract attention and the business immediately began to grow.

The Yellow Cab Company was organized in Chicago in 1915. From this grew the huge business which was headed by the Yellow Cab Manufacturing Company before the merger with General Motors.

Expect Exchange to Down Deadbeat

ELIMINATION of bad credits caused by the practice of the habitual "deadbeat" in buying from one source, without paying, as long as possible, and then doing the same thing somewhere else, is expected to be accomplished by the credit exchange organized by the Tire and Accessory Dealers Association of Louisville, Ky.

Members of the Association found that they were losing thousands of dollars annually through such bad credits, according to William Mohlenkamp, president.

"For a long time," he said, "credit has been allowed persons who proved to be bad risks, but until recently we have had no means of ascertaining the credit rating of the many who buy in the neighborhood of $100 worth of tires and accessories at a time.

"Consequently, the regular deadbeat has made a practice of buying from one seller as long as credit was extended, and then buying from another for the same length of time, until he had accounts all over the city.

"We have been to blame, to some extent, for this situation. Keen competition sometimes encourages charge sales that ordinarily would not stand close scrutiny.

"While our association is just beginning to function, beneficial results have already been obtained and we expect to pare needless credit losses to a bare minimum by not permitting the professional deadbeat to deceive more than one association member.

"To our credit bureau at association headquarters each member will report promptly any and all names to be added to the credit list. A phone call will enable any member to ascertain the credit standing of each prospective customer."

COMPRESSED AIR WASHING DEVICE

A compressed air car washing device installed by the Kendall filling station in Hartford, Conn., on a very busy corner has been favored with liberal custom since the opening recently. A steel building in harmony with the filling station was erected and made large enough to accommodate two cars. The washing device is a stock affair purchased from a local wholesale house and is reported to be working very satisfactorily. This station is the forerunner of many more that will be opened in this city. The business man who does not use his car during the day finds the service offered by Kendall of much benefit.

CUSTOMERS LIKE SERVICE

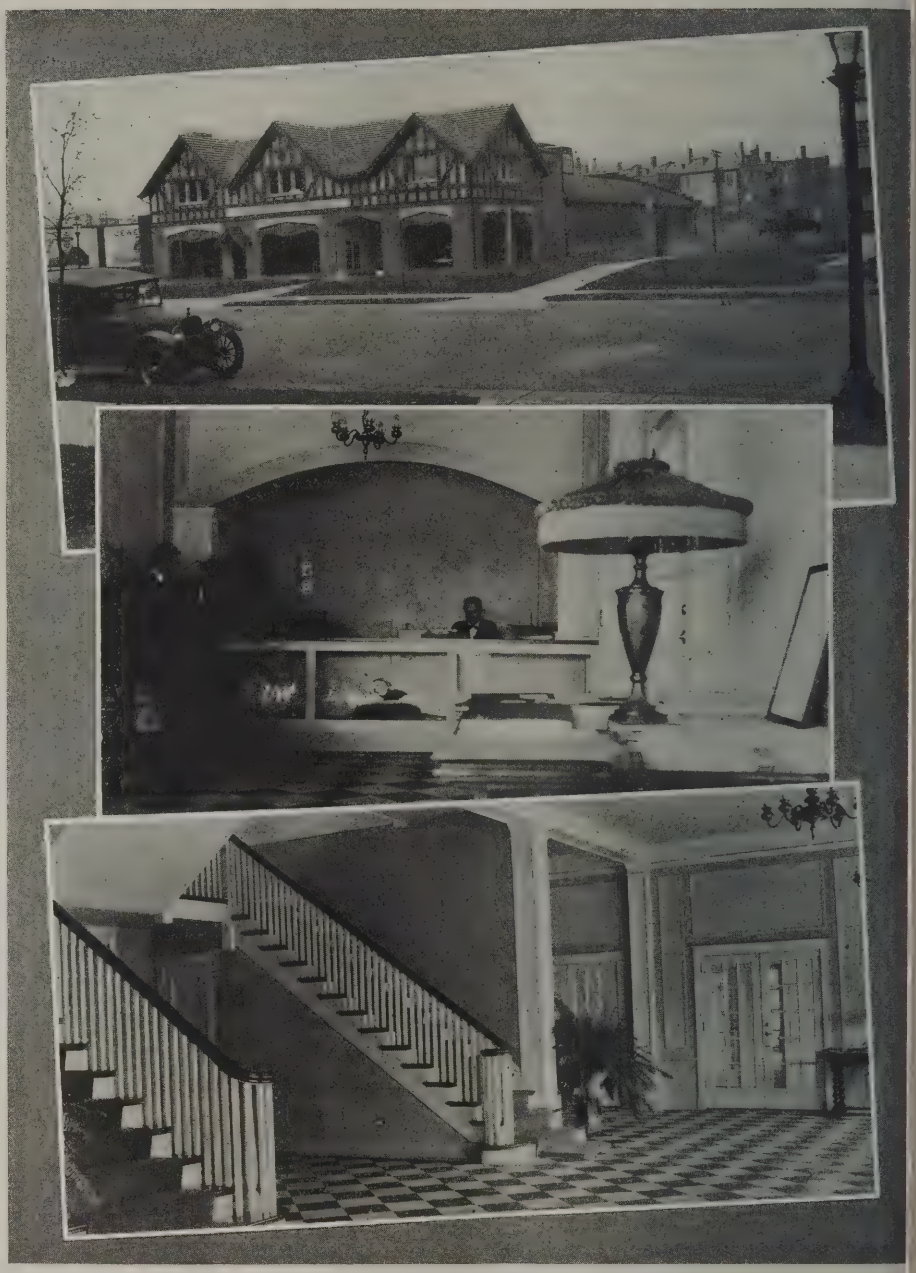
Regular greasing and a free inspection for every thousand miles the car is run make a strong appeal to Cadillac owners in New Orleans and are largely responsible for the growing patronage of the Gus D. Revol Cadillac workshops, according to the management of this company.

"Automobile troubles are diagnosed before the owner leaves the shop," the manager of the Revol company said. "The prices on labor and material are also made to insure the customer's satisfaction. We have a full equipment of men, tools and machinery for special work so that the time taken in handling the automobile may be considerabl shortened. This is a feature that appea to our public.

"Engine and chassis are steam cleane without charge when work is approx mated at $15 and $20. The garage floo is scrubbed with live steam weekly. Ou customers appreciate these services.

"We are an authorized Dupont Duc refinishing station where beautiful Duc two-tone jobs are turned out in shor order."

Old English Tavern



Here are views of the new building of the Lambert-Graves Motor Company, of St. Louis, which recently was erected at 4035 Lindell boulevard at a cost in excess of $100,000.

(Top) An outside view. (Center) Corner of showroom, with information desk which incorporates accessory display cases. (Bottom) Stairway to second floor.

Idea in Dealer Home



(Top) The workshop. It is as attractive as any part of the building. It is truly a "sunlit" room as may be seen by the amount of glass in the side walls. (Center) Second floor above show room used by salesmen and for conferences. Picture does not show full charm of room. (Bottom) Section of show room revealing fireplace and homelike appointments.

DISTINCTIVE PUBLICITY

How is this for good used car publicity?

The Drennen Motor Car Company, Birmingham, Ala., ran an advertisement in which all of the salesmen in their used car department appeared, that is their photographs appeared. By mistake three of the men were left out of the copy.

The next Sunday the pictures of the three salesmen appeared in the automotive section with the statement.

"Last Sunday Drennen Motor Car Company ran pictures of the men who sell used cars for them, but these three were omitted because they were too busy selling used cars to pose for the photographer. They were responsible in large part for 126 people in and around Birmingham buying used cars the 'Drennen Way,' during April."

There was more used car copy but the above was the distinctive part.

He Sells Them on Way to School

DRIVING a Fordson tractor 700 miles in seven days and calling on 32 dealers while on the trip is a mild week's work according to E. F. Case of Wagoner, Okla., who attended the national school for Fordson salesmen at Houston, Wis. Mr. Case was one of the students at the school and he decided since he was going to a Fordson school he might as well go in approved style. So he crawled on the seat of his Fordson at the station in Wagoner, Oklahoma, and "hit the trail" for Houston.

Mr. Case is also representative of the manufacturers of Kingham trailers for Fordsons. He decided to "kill two birds with one stone" in calling on the "trade" between Wagoner and Houston. He called on 32 dealers during the seven days and sold a good many of them. On the seventh day out he piloted his Fordson into Houston and entered the school. He was graduated with "honors" at the end of the two weeks term.

When he finished the course at Houston he straddled the seat of his Fordson and left for Wagoner, Okla., his home town. He said he expected to run into the Wagoner service station in six or seven days, depending upon the number of dealers he called on enroute.

"Traveling on a Fordson is great sport," he said, "and you are in a better position to talk tractors and trailers to a dealer when you drive up to his place on both of them."

FEATURE RACE TIRE IN SHOW WINDOW

H. C. Graham Co. of Milwaukee, dealers in Firestone and Oldfield tires attracted many spectators to the company show windows at 138 Oneida Street, with an exhibition of one of the balloon tires that "got in the money" in the 500-mile race at Indianapolis on Memorial Day. Promotional matter liberally sprinkled about the window made the assertion that this race finally established the balloon tire as practical for all purposes, and free from the many objections hitherto made against it.

NEW FORD REPAIR BOOK

The 1925 revised and enlarged edition of "The Model T Ford Car," by Victor W. Page, has been published by the Norman W. Henley Publishing Co., 2 West 45th street, New York City, at $2 a copy. This is a book of 455 pages devoted entirely to the operating principles of all parts of the Ford automobile, with instructions for driving, maintenance and repairing; also complete instructions on the Fordson tractor.

Write It While Sitting on the Running Board

(*Continued from page 11*)

must, before all others, bring himself into the ecstacies of sheer adoration. He must have honest enthusiasm over the used car, tempered with and controlled by a well cultivated sense of discrimination and good judgment.

Enthusiasm is necessary because enthusiasm is necessary to the business of selling any product, while it requires good judgment to keep enthusiasm from overdoing matters.

The copywriter must sell himself on the conviction that the used car is *good* merchandise. That should not be difficult. He offers more miles of transportation on the basis of price asked than is offered in a new car. There should be no hard work stirring up enthusiasm over such merchandise as that.

Illustrating the liability of running into undesirable consequences through the practice of long-distance copywriting is an experience related by a dealer who since has made the "running board" idea an iron rule of his house.

Where a Sale Was Lost

In a list of cars advertised for sale a Buick model was mentioned which, according to the copy, had "four practically new tires," a spare tire and certain accessories. A prospect came into the used car department apparently much interested in the Buick. He gave it one good look, his face took on a grim aspect and he turned to leave without explanation. Plainly he was mad.

The salesman was puzzled, for the car was in good condition, the price was fair and he really thought that it offered an unusual value for the money asked.

"Would you mind giving me your objections to that car?" the salesman questioned as the prospect was about to go out the door.

"No, I don't mind a bit, as you insist," the man replied. "That car simply does not have a thing on it that you say it has in your ad."

Out he went.

Investigation by the proprietor developed that the man was absolutely correct with respect to the accessories and the condition of the tires as described in the advertisement.

To his chagrin he discovered that there was no spare tire at all on the Buick advertised and that the four on the car were not in the best condition. The young man charged with the responsibility of writing used car ads was called into conference and he offered this awkward, limping apology.

"Well, I got that dope from one of the boys in the shop who had been working on the car."

And the mechanic to whom he referred admitted later that he had the Buick in question mixed up with another car.

Each Car an Individual Case

Long-distance methods are positively hazardous in the work of used car advertising. It requires more trouble to deal with each car as an individual proposition, on the O'Donnell plan, but for immediate purposes and in the long run this additional trouble pays.

A speaker who remarked during the Chicago show that "some people buy the used car for the car and others buy it for the accessories" offered an excellent advertising thought, but he should have added:

"Be sure that you hang on the right accessories and be sure the accessories are in good condition and as described."

Be sure, to put it another way, that the veracity of the advertisement in all particulars cannot be challenged. Truth in advertising not only is a fine virtue but it is *business*. It is much better, quoting a prominent advertising expert "to understate than overstate."

Let the used car shopper have the real picture. The chief objective of the man who writes the copy is to help the shopper visualize. Tell 'em and sell 'em.

The shopper is much more likely to covet the thing which he can picture in his mind than that which is but vaguely conceived.

Cars of all kinds are listed in the daily newspapers and without descriptive assistance even though the make, year and price are given the car advertised for sale in this fashion means no more to the prospect than any other car in the paper in his price class.

Often it will mean less to him than numbers of other cars advertised in the same page because the other ads more readily help him "see" those cars.

"Sit on the running board," get the facts, get them straight—then tell 'em, and tell 'em enough.

New Radiator Shell on Studebaker Standard Six Models

ALL Studebaker models on the Standard Six chassis are now being equipped with a radiator shell of changed appearance. Earlier models of the Standard Six carried a shell whose upper part while of convex shape had a somewhat flat appearance. The new shell which is interchangeable with those of the former style, has a perfectly rounded contour and is very similar to the Big Six design except that it is smaller and the fluting or scroll work eliminated. A slight change has also been made in the shape of the side rear quarter windows on the duplex-phaetons.



Front end of the Studebaker Six, showing the new design of radiator shell

N. A. C. C. FIGURES DELAYED

DETROIT, July 11.—The usual monthly estimate of domestic car and truck production by the National Automobile Chamber of Commerce is delayed because of the fact that the board of directors meeting, for which the figures are prepared, will not be held until late in the month. Unofficial estimates, however, bear out the prediction made a week ago that the June figure will not be far below the 400,000 mark. It will probably be between 366,000 and 399,000. as compared with 404,300 in May and 421,878 in April of this year, and 249,868 in June, 1924.

PEERLESS ORGANIZATION

CLEVELAND, July 11.—The Peerless Motor Car Company has appointed the Oldsmobile Motor Company of Seattle, Wash., Peerless dealers to succeed the Peerless Pacific Company, it was announced here today. J. F. & M. M. Stein have been appointed Peerless distributor as Asbury Park, N. J. Contracts of Mattern Motors, Inc., of Flushing, L. I., N. Y., and of the Jefferson Motors, Inc., of Perth Amboy, N. Y., have been cancelled.

Some *Letters* to the *Editor*

A Mechanic's Side of the Story

Dalton, Mo.

To the Editor of MOTOR AGE:

What I want to tell you people is that I'm a reader of several magazines, but I get more good from reading your paper. I'm a careful reader of your editorials and of such items as Packer and Tom put out. One piece of A. B. C. Hardy, of Olds Motor Works, in your December 25 issue of MOTOR AGE impressed me a great deal. He says that after so many makes have fallen out, that there will be probably 60 to sell in the year of 1925. And with all he says who knows the automotive business better than these men that have put their all into it.

Then I say who knows the clearance dimensions of pistons, shape and construction of motors in these 60 makes of cars better than the alert mechanic. Of course we all know a mechanic is looked upon as a greaser. People won't shake hands with him because they would have to wash immediately after the operation. Most of them know nothing else but to use the hammer and cold chisel. But you find one now and then who is trying to get ahead. Trying to learn more about motors, construction of springs, frames, brakes and controls. There are some who are better read on 20 makes of cars than some salesman is on the car he sells. Why? Because he has never gotten his hands or clothes dirty finding out.

A mechanic knows how a piston of a certain car looks after running 45,000 miles, and he finds pistons in other cars that have only run one-half that distance which are worn worse than the 45,000 mile car, and we say why? No one knows better than the good mechanic. I mean the mechanic who watches and learns.

We see cars come in with a broken axle shaft. The owner says, why don't they put a larger axle in these cars and then I would have a real car. I tell him, no, Mr. Owner if they would put a stronger axle in this particular car of yours they would have to put a better gear into the differential, and if they did that, Oh, My, that clutch, and so on until you reached the front springs.

He says then how can they build a real car? I tell him we have them, good ones made by real manufacturers, which are built so near perfect that they remind me of the old story of the One Horse Shay which ran 100 years to the day and then what happened—the same thing that happens to our buggies today, go to pieces.

My point is this to you dealers, there is coming a time not far distant that before a man is going to purchase a car he is going to know the mechanic that is to do the (manicuring) for him, or the giving her "the once over" that the car needs now and then. I believe the greatest salesman of the future will be the A-1 mechanic. And what are the dealers doing to better the mechanic? Why can't we have conventions for mechanics where we can learn, get acquainted.

But Mr. Dealer, a specification sheet on a car, or a shop note, a blue print of a new carbureter, or a description, of some new device used on cars, will sure help the mechanic. If a mechanic knows he can push the sale of accessories for cars while they are being worked on. I know I do for my firm, the Triangle Motor & Supply Co. of Dalton, Mo., and they appreciate it,—I can tell that by the check at the end of pay day.

You may ask me what a good mechanic means. It means a man of a good education, lots of horse sense, not afraid of work and who knows a car from one end to the other, who can repair it from one end to the other, who can operate any kind of shop equipment, who can do a job in a minimum length of time, and a man who can weld, run a lathe, build batteries, paint, take care of tools, resharpen, dress and temper. He can also keep up on manufactures, new appliances and improvements in cars. And people, this is not too strong for a mechanic, I wouldn't put so much on them if I didn't know I could fill the place of a good mechanic. And you mechanics can all be what your employer terms a good A-1 mechanic if you will keep your eyes open, read a good motor journal at night instead of going to a movie, pick up a book and read it at noon hour instead of sitting around the stove telling yarns.

A mechanic's side of the story.

"BERT."
Albert M. Alexander.

More About Superchargers

To the Editor of MOTOR AGE: Chicago

I have read Mr. Ikert's article in a recent issue of MOTOR AGE entitled "All About Superchargers" and would like to call your attention to an error that occurs in the first paragraph of this article. You state—

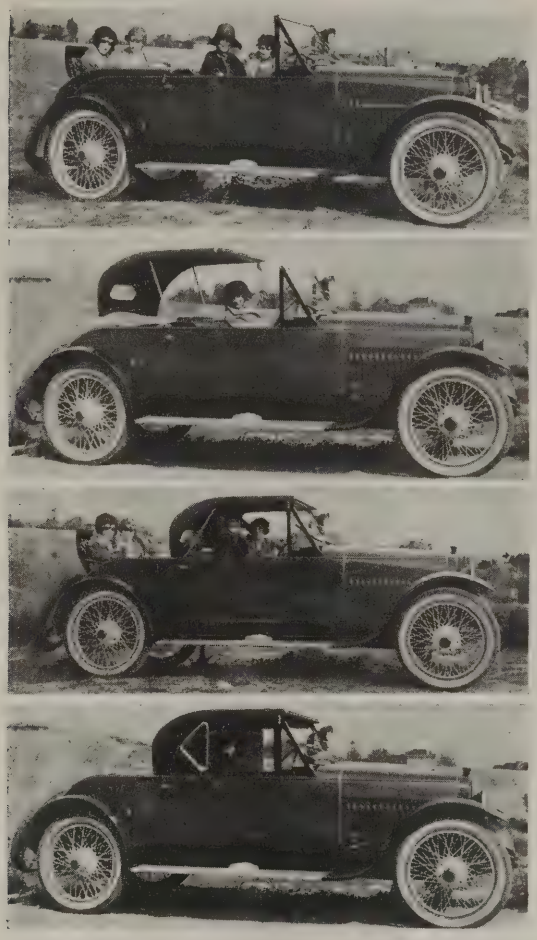
> "but the first practical application of it, according to available records, goes back only to 1923 at the running of the French Grand Prix at Tours."

My recollection is that the first use of supercharging in automobile racing occurred in 1908 when the Chadwick Engineering Company of Pottstown, Pa., ran out a six-cylinder engine of the same bore and stroke as the four-cylinder they had previously used with considerable success. Contrary to their expectations the car with the six-cylinder engine was not appreciably faster than the one with the four-cylinder engine with the result that they set out to discover why this was true. Analysis showed that the inlet valves and ports were the determining elements and as there seemed no easy way to get around this condition the thought occurred to them that they might put the charge in under pressure and in that way compensate for the shortcomings of the induction system. Their first effort was a single-stage centrifugal blower, mounted between the carburetor and the manifold and driven at a speed of 6 to 1 by a 3 in. wide belt running from the outside diameter of the flwheel to a pulley on the rotar shaft of the blower. This application worked so well that they continued their experiments and developed three-stage blowers mounted and driven in the same manner as the single stage. Cars so equipped won quite a few races and it was one of these cars which Willie Haupt drove approximately 100 miles per hour more than fifteen years ago. These cars qualified as stock cars inasmuch as a number of them were built and sold to the public.

Several years ago, when I was located in Philadelphia, certain English motoring papers carried the story of the Mercedes cars used in the Targa Floria race in Sicily, and they gave the Mercedes or, as they stated, "our late enemy," credit for having been the first to use supercharging in automobile engines. I questioned this statement and, as a result, was asked to support my contradiction with same evidence of the Chadwick's prior use and was able to get in touch with both Mr. Chadwick and Mr. Nichols, the former Chief Engineer of the Chadwick Engineering Works, also with Mr. Willie Haupt, who assisted in the developing of these cars and drove them, and the information herein given can be supported, if you wish, by dated drawings of the parts used although I think you will find support in the files of MOTOR AGE.

L. W. OLDFIELD.

MOTOR AGE'S PICTURE PAGES





SHIFTABLE TOP FOR ROADSTERS. B. B. Ellerbeck of Salt Lake City has designed a hand operated roadster top to provide for maximum range of vision in heavy traffic. It is carried on a set of arms which swing it down over the rear deck. The weight is counterbalanced by springs fastened to the body sills and connected to offsets on the shaft which joins the top supporting arms. These springs are under tension when the top is down. To allow use of the deck seat when the top is down, a panel in the roof is removable.

WAITING FOR THE NEWCOMER. An air of mystery surrounded the advent of the new Diana in New York. Private showings were first held to which admission was gained only by invitation. This so whetted the curiosity of the public that when the show rooms were finally thrown open for inspection there was a steady stream of visitors to view the new vehicle. The suspense element proved to be a potent sales stimulus.



WHAT'S WHAT IN DISPLAYS. Broadway salesroom of the New York branch of Stutz Motor Car Co. of America exhibiting a special roadster body. The background is a red brick wall with a picket fence coping in white. A white picket gate hinged on one end of the wall allows access to the automobile for inspection. The flooring gives a reproduction of flagstones with real moss growing between the stones. Around the garden wall growing out of real earth and grass are various colored hollyhocks.

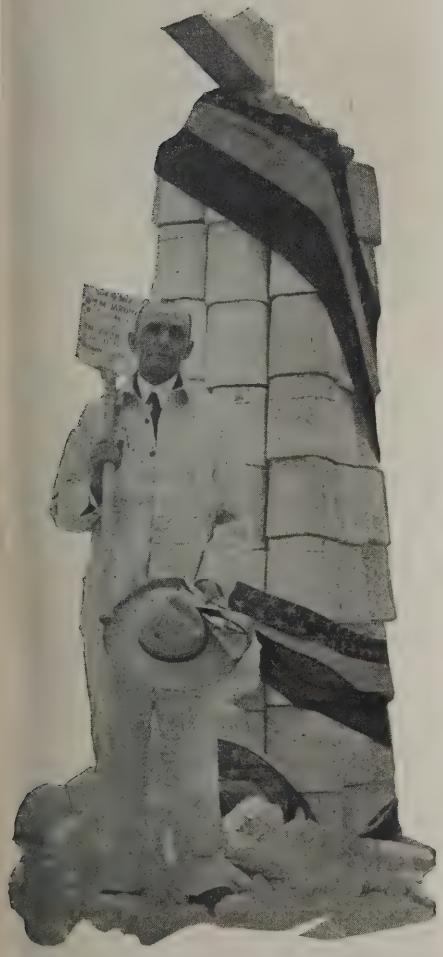
OF AUTOMOTIVE INTEREST



MAKE 'EM INVESTIGATE—THEN SELL 'EM. The Chrysler Four was introduced in New Orleans by covering the windows of the showroom by a coat of orange paint, leaving six portholes in each window. Curiosity got the better of the people in the picture, and, it might be remarked, the men seem to predominate.



SIMPLIFYING UNLOADING. Mack Motor Truck engineers have devised this ramp-track method of unloading special containers which are deposited by simply driving in and backing out.



OPENS HIGHWAY AT SALT LAKE CITY. Secretary of Agriculture Jardine with inscribed silver shovel presented to him to dig away salt barrier blocking way through an arch built of solid salt.



A CLIMBER. Marmon 4-passenger speedster owned by distributor at Berlin, which finished fifth in the Hainberg Hill Climb. It is a stock car and competed mainly with special racing cars and others especially prepared for the hill climb.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Horse Power, Carbureters and Wiring

Q.—I have a Lexington car, motor number 7W-66675, model R. R., 3¼-inch bore and 4½-inch stroke. I want to know the horsepower and revolutions per minute of this motor. Give the maximum r.p.m. and what speed I can expect from a good running motor in this car.

The power and torque characteristic of this engine are shown at the illustration at bottom of page. With everything in good shape you can expect as much as 200 R. P. M. more than the maximum indicated on the diagram. In good shape this car should make a little over 55 miles per hour.

Q.—I have an L4 Zenith carburetor and would appreciate it very much if you would send me the right numbers of the jets and compensator and all the sizes necessary so that I can use it on the Continental motor used in the Lexington model I just mentioned.

Horizontal Carbureter Required

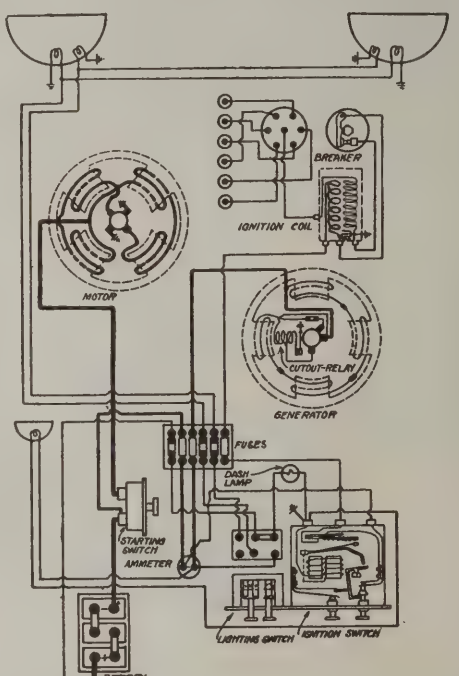
You do not give us the serial number of the car but, according to the Zenith service manual, this engine requires a horizontal type Model HP44 carburetor with the following internal specifications: No. 19 choke, No. 90 main jet, No. 95 compensator, No. 50 idling well and No. 30 needle valve seat. The HP series carburetor takes the same internal specifications as the 14, so that if you do not wish to go to the expense of securing a new carburetor it probably will be all right to secure a special elbow in order to adapt your vertical type carburetor to the horizontal installation. In other words, you will want a short manifold in order to allow you to hook up the vertical type carburetor. This manifold can be secured from the local representative of the Zenith Carburetor Company or from the factory direct.

Q.—Send me directions for adjusting the Rayfield in this car. I believe it is a model M carbureter.

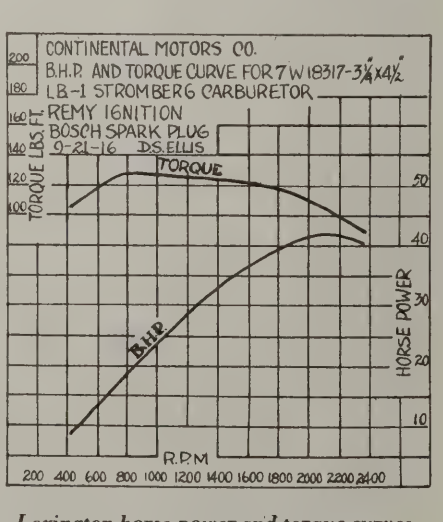
Before adjusting be sure that there are no obstructions in the gas line and that all conections are tight and free from air leaks. The valve and ignition should be properly timed, and be sure that there is a hot spot and good compression on all cylinders. The Model M Rayfield carburetor has two adjustments, one for low speed and one for intermediate and high speed. The low speed adjustment, which is the one located nearest the flange where the carburetor attaches to the cylinder, should be turned to the right or left as required until engine runs properly at low speed.

The high and intermediate speed adjustment is located out toward the hood from the low speed adjustment. To get at it it is usually necessary to remove the hot air elbow from the main air valve. Do not move this high speed adjusting screw more than one-eighth turn at a time. Turn it to the right for a richer and to the left for a leaner mixture. The low speed adjustment has the same characteristics in that it is turned to the right for more gas and to the left for less gas.

Q.—What is the gear ratio for this car?



Wiring of Model RR Lexington



Lexington horse power and torque curves

Unfortunately, this information is unavailable for this car.

Q.—Give a wiring diagram.—Jerry Cervenka, 2321 Sawyer avenue, S. Chicago, Ill.

Wiring diagram of the Model R. R. Lexington is illustrated on this page.

The Cause of Vibration in Engines

Q—What causes an engine that is balanced in every way to vibrate at certain speed. I have a 1924 Oakland that vibrates at a speed of about 48 miles per hour. Below and above that point the operation is all right. What is engine vibration and why is it loud enough so it can be heard. I was told by a dealer that it is the torque of the engine but what torque was he didn't know.—John Strieff, Milton Junction, Wis.

The chief cause of vibration is the motion of the reciprocating parts such as pistons and connecting rods which go up and down in the cylinders. At the end of the stroke these have to come to a sudden stop and then must start in the other direction. The rapidity with which the pistons move up and down of course varies with the car speed. The faster the car goes the faster the pistons jerk up and down. The noise is caused by the fact that certain parts of the car happen to be constructed so that they will naturally vibrate at a certain frequency very much as a pendulum has a certain speed at which it swings back and forth.

Synchronous Vibration

When the reciprocating parts such as pistons are moving up and down at a certain speed they will synchronize with the parts of the car that can be vibrated. This causes them to keep vibrating and make a noise. Comparing this action to that of a pendulum again we find that if a very heavy weight is suspended by a rope, we can give the weight a push and make it swing. It will then swing back and then swing in the original direction. If we again give it a push as it starts to go in the original direction, we will increase the amount of the swing and if we time each push properly, we can get the pendulum to swing violently. On the other hand, if we push or knock a weight without regard to the natural swing or period we will not produce any appreciable action, for we are just as likely to give it a push when it is coming back as when it is going.

In the engine this accounts for the fact that at only a certain speed is vibration likely to be very pronounced, and nearly all cars have some critical speed at which the vibration is noticed, while above and below this speed the operation is very much better.

Planning Your New Building

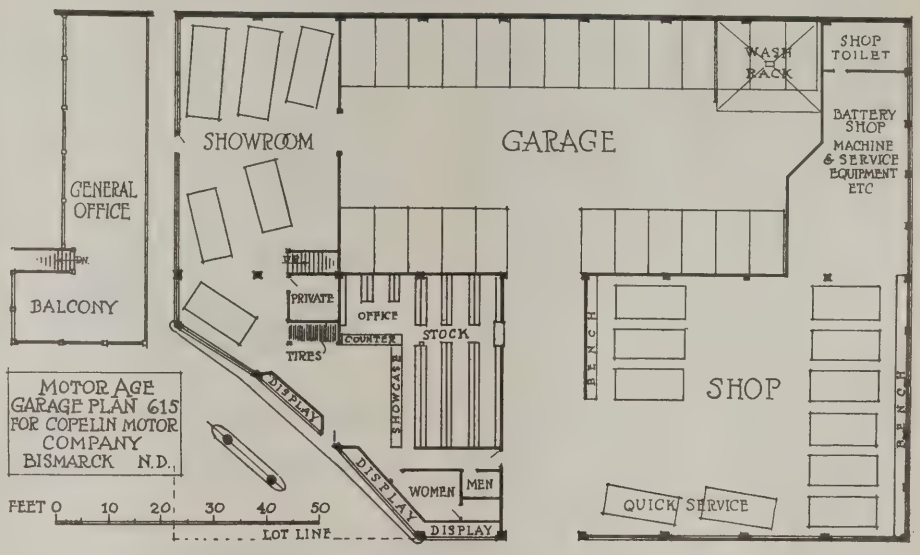
By TOM WILDER

The READERS CLEARING HOUSE

Filling Station to Boost Accessory, Parts and Service Sales

Q—We are planning on building a new garage, starting at a very early date. Our property is a corner lot on a main highway, one hundred foot front by one hundred forty foot deep, facing south. We plan on a filling station on the southeast corner. We have the Ford contract here, selling about two hundred fifty cars yearly and a parts business of about $35,000 yearly—Copelin Motor Co., Bismarck, N. D.

Your lot is especially well located and well sized for the building you wish to put up. Dividing it with a row of posts through the center, you have a good garage on one side and plenty of space for a well equipped repair shop on the other. A corner filling station always cuts into a building rather awkwardly but here it seems to give less trouble than usual. The accessory and parts departments fit in very nicely, so that there is not so much waste in the angular section as in most cases. The rest rooms are so placed that customers will have to pass the accessory show cases to reach them, which is always a feature which makes selling opportunities.



The stockroom is handy to both shop and sales counter and the garage is roomy

While you did not suggest it in your letter, we think it would be a good plan to make the first three bays of this building higher than the rear section, thus giving opportunity to install a balcony office. You will note that in our plan, this balcony extends over the front section of the garage and also over the parts office and counter, small private office and tire rack. If you do not approve of this balcony plan you can take a strip of the front part of the garage moving the showroom sufficiently back, so as to give you the necessary space.

While you probably have very good opportunities for window lighting, especially if there is an alley back of the building, we would suggest a few skylights in order to get light to the interior of the shop, the garage and the stockroom. The wash rack also should be well lighted. The roof of this building is planned to be supported on trusses which are carried on piers in the side walls and on the row of columns through the center of the building. These trusses should have their lower side about 12 feet from the floor, except the three front ones, which, if the balcony is used, would need to be 18 to 20 feet above the floor.

Legal Questions Answered—

By WELLINGTON GUSTIN of the Chicago Bar

SATISFYING CLAIM THROUGH SALE

Q—Will you please advise me what legal steps should be taken in regard to a car left for storage and uncalled for?—Park Garage, Storm King Highway, Cornwall-on-Hudson, New York.

You may sell the automobile at public auction and apply the proceeds first to the costs of selling, then to the satisfaction of your claim.

But before such a sale, you are required to serve a notice upon the owner, if he can be found within the county, but if not so found, then the notice may be served by mailing it to him at his last known place of residence or to his last known post office address. A like notice must also be served upon any person who shall have given you notice of an interest in the property subject to the lien. This notice shall contain a statement of the following facts:

(1) Nature of the debt and an itemized statement of the claim and the time when due.

(2) A brief description of the personal property.

(3) Its estimated value.

(4) The amount of the lien at date of the notice. This notice shall also call upon the owner to pay the amount of such lien, on or before a day named, not less than 10 days from the service thereof; and the notice shall state the time, when and place where the sale is to be made, if such amount is not paid.

You are entitled to collect on storage until date sale is made or claim is paid, but to do so your notice must contain a statement that such additional sum is demanded.

Then you are required to make oath to the statement that the lien is valid, that the debt upon which the lien is founded is due and has not been paid and that the facts stated in the notice are true to your knowledge and belief.

Each sale of personal property to satisfy a lien thereon shall be at public auction to the highest bidder, and must be held in the town or city where the lien was acquired. Now after the 10 day period given in the notice, another notice of the sale must be published once a week for two consecutive weeks, in a newspaper published in the town or city where the sale is to be held, and such sale shall be held not less than 15 days from the first publication. If there is no newspaper in the town, then the notice must be posted at least 10 days before such sale in not less than six conspicuous places in the town. This notice of sale must describe the property to be sold and give the name of the owner or person for whose account the same is held and the time and place of the sale.

The owner is permitted to redeem his property before a sale by paying the garagekeeper the amount due on the lien and whatever legitimate expenses have been incurred in serving the notice and advertising the sale.

The statute also contains provisions regarding disposition of the proceeds of the sale.

Clearing Up Electrical

The Readers' Clearing House

EDITED BY A. H. PACKER

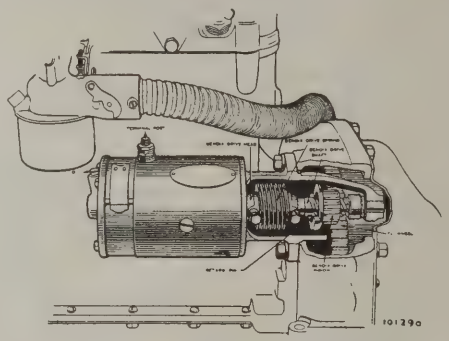
A Flat Spot on the Commutator—Who Can Explain?

Q.—I have been a constant reader of the Clearing House for several years and find that your answers are usually correct and that the readers will always come to your assistance, if need be. I have noticed on two different occasions that your answer to the question in regard to flat spots burning on the commutator of the Remy starter of the Chevrolet car was not correct. Your suggestion that the trouble was due to loose wires on the commutator would be correct for troubles of this nature in general, but it is not the case in this instance. You will notice when the starter is cranking the Chevrolet engine that there is a thump or jar each time the motor goes over compression which is due to strong compression.

This jar is transmitted through the starter gearing and armature to the commutator and brushes, causing them to throw sparks thus burning the commutator. There may be some definite relation of the starter gear to the flywheel and the compression of the engine which causes the commutator to burn on one side. Of course, if it starts burning it will continue to burn in that place. The remedy is to turn the commutator down in a lathe which however, is only temporary. To make a permanent repair it would probably be necessary to install another pair of brushes and brush holders in the places provided for them, connecting them in parallel with the other brushes, thus cutting the current to each brush in half and distributing the current more evenly on the commutator as was suggested by Wolf's Garage in the May 14th, issue of MOTOR AGE. G. E. Fretz, Electrician, 614 W. Fifth St., Pratt, Kan.

It is interesting to consider the operation of the starter and the effect of compression. We doubt however, if this completely tells the story. On the starter pinion there are 12 teeth. On the flywheel there are 120 teeth for model 490 and 122 teeth for the Superior model. In each case the starter pinion makes approximately 10 revolutions for each revolution of the flywheel. When one of the pistons is coming up on compression the engine and consequently the starting motor will run slower and when the piston goes over compression it will speed up again. If the period of comparatively slow speed running should take one tenth of a revolution or only 36 degrees on the flywheel it would mean that the commutator makes a complete revolution so it would be hard to figure how any one place on the commutator would be burned due to slowing up.

There is another possible explanation which the illustration of the starting motor may make clear. When the flywheel kicks the Bendix pinion out of mesh the pinion runs forward as shown in the illustration and the teeth no longer mesh. When the driver takes his foot from the starter button the starting motor is then allowed to stop. It then occurs to us that the weight on one side of the Bendix pinion may have the effect of causing the armature to stop in the same position nearly every time. If this happens it means that every time the starter is operated the brushes are in approximately the same position on the commutator. As the initial current is in the vicinity of 500 amperes and the running current only about 100 to 150 amperes it would indicate a reason for the burning occuring in one place.



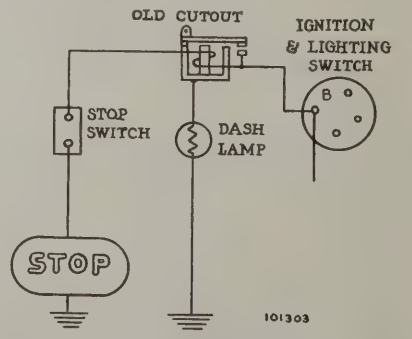
The starter pinion is out of mesh when engine stops

WANTED—A ½ VOLT, 2 AMPERE BULB FOR PILOT LIGHT

Q—Give wiring diagram for stop light with a check light on the dash, to show when the stop light is working. Also give the proper bulbs to use. The battery is a 6-volt battery.—L. B. Draper, 7220 Nagle avenue, Detroit, Mich.

This matter has been taken up with two of the largest lamp manufacturers and they state that no bulb which is suitable for this purpose is made at present. When dash lamp and tail lamp are in series, two bulbs, each rated at 3-4 volts may be used for they are both of the same size, that is, 2 candlepower. However, when you try to use anything larger than the 2 candlepower in the stop light, you will find that there is no suitable lamp to go with it for use in the pilot lamp. We understand that one stop light has been made with a special low voltage high current small bulb for use as a pilot light, but these do not seem to be available on a replacement basis.

We are showing a wiring diagram which gives a method used in another stop light. This is to use a magnetic relay or electrically operated switch. The current from the battery terminal on the ignition and lighting switch goes through the heavy winding of the relay to the stop switch which is operated by the brake pedal. When the circuit is completed through the stop light the magnetic effect of this current closes the contacts of the cutout and completes the circuit through the pilot light on the dash.



Circuits for pilot light used with a Stop Signal

If the current does not go to the stop light, then the dash lamp will not light up. The circuit using the pilot light in series with the stop light would be from the switch to the pilot light, then through the stop switch and finally through the stop light, but as previously stated, bulbs are not made which are suitable for this purpose. You might try a 3-volt, 2-candle power lamp in the dash and a 6-volt 4-candlepower lamp in the stop light, but we do not believe the results would be perfectly satisfactory. If an old cutout is used, the fine winding could be discarded and the heavy winding only used.

To Make A. C. for Growler

Q.—Give the name and address of some electrical company that carries new and second hand motors and generators.

This information will be given by letter.

Q.—We have a growler which operates on 110 volts, 60 cycle single phase current and we do not have any power of this sort. We need a ¼ horse power alternating current generator, 110-volt, 60 cycle. Could a ¼ horse power—110-volt, 60 cycle single phase motor be changed over to a generator without much trouble.—George G. Thomas, Rural Valley, Pa.

We do not believe the motor can be changed over as motors of this sort are usually inductor type which are not suitable as generators. A growler is sometimes operated by means of battery and a vibrator. It is necessary, however, to have a vibrator, the coil of which has a very low resistance. One type which at times has been used successfully, is the Old Delco ignition relay used in 1910 or 1911 Hudson cars, these being located at times in automobile wrecking establishments.

The vibrator of a Ford coil might serve this purpose if the secondary winding were removed. We faintly recall at one time a subscriber mentioning some experiments made in using the magneto current from a Ford car for operating a growler. It would appear as if the voltage of the Ford magneto would be too low and might require rewinding the growler, so we cannot recommend this procedure. The alternating current generator giving the correct voltage would be the best device to use.

Trouble With Bill Fixit

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Does a Ford Generator Lose Residual?

Q—Supply wiring diagram of the new 1925 Chevrolet.

This diagram is shown in accordance with your request, it being correct for both 1924 and 1925 cars.

Q—I have a Ford generator here which continually loses its residual magnetism. If the car is left for two or three days the generator will not build up, but by putting battery current into the field it will build up and charge all right. The generator and cutout seem O. K.—Reginald H. Trevor, Blubber Bay, B. C., Canada.

The usual trouble when a Ford generator will not build up is caused by oil from the rear end getting on to the commutator and being soaked up by brushes. This condition can be remedied by installing a new set of brushes and then omitted the oiling or else oiling very carefully, putting in not more than one or two drops at a time. It is of course, possible that there is some other trouble such as a poor connection between field coils.

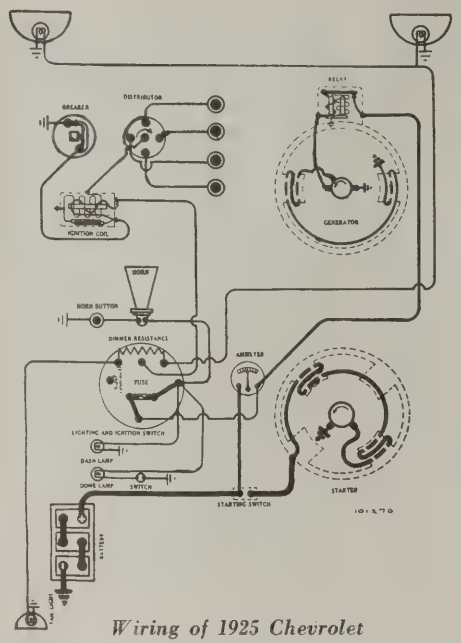
Energizing the magnetic field with battery current makes the machine generate enough voltage to cut through any insulating film on the surface of the brush or through any poor connection of the field coils and after the current once starts to flow the resistance is not sufficient to stop it and the generator keeps on working. While the engine is warm and the generator is also warm the oil in the brushes is thin and does not act as an insulator. When the car is allowed to stand for two or three days, however, the oil congeals and forms an insulating film between the brush and the commutator.

BATTERY REVERSAL TEST

Q—Why are some of the cars arranged to have the positive post of the battery grounded and others the negative? If a car has its battery removed before you start working on the car, how can you tell without trying the battery and damaging the electrical system whether you have the connections right or wrong?—C. Neiheiser, 1130 Lovers Lane, Akron, O.

In most cars it does not make any difference whether you have the battery one way or the other if the cutout points are once closed by hand, so as to magnetize the generator in the proper direction. Of course, if the wiring is laid out to have the positive grounded and you ground the negative instead it will cause the ammeter to read the wrong way showing charge when the lamps are turned on and showing discharge when the generator is sending current to the battery. Aside from this no harm results.

One exception is the Dodge Brothers car where the horn is connected to the live side of the battery. With the negative grounded and the horn positive, it has been found that corrosion takes place in the horn much as it does at the positive battery terminal. For this reason when the horn circuit was changed a change was also made in the battery, so as to ground the positive and have the negative end connected to the horn. The simplest test to make when installing a battery is to turn on the lights and see that the ammeter shows discharge. If it shows charge when the lights are turned on, it indicates that you have the battery reversed.



Wiring of 1925 Chevrolet

ZENITH CARBURETER SPECIFICATION

Q—Please send me by return mail proper model number and jet sizes of Zenith carbureter to fit the Maxwell 1920 model.—John Lettellier, R. F. D. No. 2, David City, Nebr.

Zenith specifications for this car call for a carbureter model 04 with a No. 19 choke, No. 90 main jet, a No. 95 Compensator and a No. 45 idling well. Other fittings necessary are as follows:

Throttle lever.
Hot air sleeve.
Hot air sleeve lever.
Hot air stove.
Manifold adapter.
No. C-1518 right.
No. C-2477 with bracket No. E-1459.
No. D-1460.
1½ inches by 7 inches long.
No. 4.
No. B-753 union body.

Taking a Chance on Fordson Magneto Charging

Q—I read your article on charging Ford magnetos in the March 12, 1925, issue of MOTOR AGE on page 26. I would like to have similar instructions on charging the Fordson tractor magneto.

The difficulty with the Fordson magneto is in properly setting it for the compass cannot be located in such a position that it will give definite results. One method suggested is to use a 6 volt battery and connect from the magneto terminal to the frame of the engine. When this is done there will be a magnetic attraction between the flywheel and the framework which holds the magneto coil. When the magnets are in the proper position this attraction and the accompanying thud or knock will be most pronounced, while the attraction will be slight when the magnets are in the wrong position.

If the crankshaft is pushed backwards after each test with the battery and if the engine is turned over by hand with the spark plugs removed, it is possible that a place will be located where the thud is most pronounced. If this position can be accurately determined it is the right place to leave the flywheel and magnets while the charging work is being done. The battery can be connected either with negative or positive to the magneto terminal in making this test, but whichever way it is connected, the same connection should be used when using 24 volts instead of 6, for the recharging process. You can readily see that this method would be quite experimental and should only be done as a last resort in case the magneto is inoperative.

Leaving Switch On Burns It Out

Q—Is there a relay cutout in the generating circuit of the 1923 Oldsmobile Six. We have been unable to find one on this car and when the switch is accidently left on it burns out the switch or wires?—Kelly Johnson, Johnson's Garage, Mazon, Ill.

There is no cutout and the operation of the ignition switch supplies battery current to the ignition coil and to the generator, while stopping the engine shuts off the ignition current, also disconnects the generator from the battery. The current that the generator will take when the engine is not rotating should be in between 15 and 20 amperes and the ignition current would be about five amperes more if the interrupter points happen to be in contact. The answer of course, is that the driver of the car should become accustomed to watching the ammeter and when he sees a very heavy discharge should turn off his switch, if he has not done so previously. Twenty-five amperes is a fairly heavy current and in time might cause some overheating especially if at any point the connections are not very good.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Importance of Major Operations

MOST of the present day flat rate systems are made up of several major operations together with various minor operations to go with them. The major operations play a very important part in the selling of flat rate. For instance when several jobs have to be done on a car there may be but one or two major operations, the execution of which allows the other operations to be performed at the same time.

To make this clear suppose a car comes into the shop and the owner says there is a knock in the engine, that the engine does not pull well and fires irregularly. Assuming that the car is turned over to an inspector or trouble shooter the latter may report that the bearings need taking up, valves must be reground with a possibility that a few need replacing and the carbon must be cleaned out and the oil pressure relief valve setting must be changed.

The above operations can be performed under two major operations these being, first, the removal and installation of oil pan and the removal and installation of the cylinder head.

The first thing to do when there are several operations like this to be done is to find the major operations which must be performed to take care of the others. If additional operations are desired they can then be done also. Thus, while the crankcase oil pan is off and the cylinder head has been removed, it might be found that there are several loose pistons. These can be removed and replacements effected while the job is down. In this way the customer pays for the major operations but once, whereas if he came back the following week for example, to have the pistons replaced he would have to pay for the major operations as before.

Conditions Govern Prices

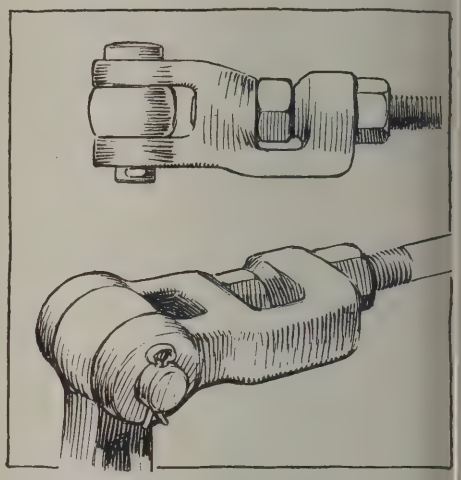
Lansing, Mich.

To the Editor of MOTOR AGE:

I have been thinking of installing a flat rate system in my garage but do not know just how to arrive at the prices to charge for the various operations. How is this done in other shops and does the same price hold good on a job all over the country. That is, does the price for grinding valves on the Buick, for instance, in the case of one dealer's shop apply in another Buick dealer's shop 1,000 miles away? I would appreciate being set straight on this.—T. W. H.

Prices for flat rate operations vary in different localities, because conditions are different. The price of labor varies and usually you will find that the prices for flat rate operations are slightly lower in the smaller communities as compared with those in large cities. Labor is higher in the larger cities and it naturally makes a difference in the price of the job to the customer. Flat rates are based on $1, $1.25, $1.50, $1.75 and $2 an hour depending upon local conditions. The price you charge must be based on the price of labor in your community. You can get these prices by referring to MOTOR AGE's Flat Rate Manual. These prices easily can be adjusted to suit your operating conditions.

Many of the motor car companies are establishing a flat rate price for various operations to be the same all over the country, so every one of their dealers will have the same fixed price for the operations to quote customers. This naturally has advantages in that an owner of such a car if on a long trip will be assured paying the same prices for maintenance work he is used to in his own locality.



THINGS WHICH HELP FLAT RATE

This shows a form of yoke end used on brake connections in which adjustments can very quickly be made without having to remove the clevis pin. It is done by merely loosening the lock nut and turning the nut in the center, after which the locknut is set up tight

MOTOR AGE'S FLAT RATE FORUM

No. 22

CHRYSLER FLAT RATES FOR PISTONS, PISTON RINGS AND PISTON PINS

Manufacturer's Official Designation		Time
7040	Remove and install new pistons and rings, new pins if necessary, including removal and installation of cylinder head and oil pan, check connecting rod bearings, and align rods	9½ hrs.
	(a) Install new connecting rod in conjunction with above	No extra charge
7041	Remove and install one new piston, new rings and pin if necessary, including removal and installation of cylinder head and oil pan, align connecting rods and check bearings	3½ hrs.
	(a) Each additional cylinder, add	1¼ hrs.
7042	Remove and install piston rings, full set, including removal and installation of cylinder head and oil pan	8 hrs.
	(a) New pistons or pins in conjunction with above, etc.	½ hr.
7043	Remove and install piston rings in one cylinder, including removal and installation of cylinder head and oil pan	3 hrs.
	(a) Each additional cylinder	1 hr.
	(b) New pistons or pins in conjunction with above, each	½ hr.
7044	Remove and install piston pins, full set, including removal and installation of cylinder head and oil pan, align connecting rods and check bearings	6 hrs.
	(a) Install new pistons or rings in conjunction with above, add, each cylinder	½ hr.
7045	Remove and install one new piston pin, including removal and installation of cylinder head and oil pan, align connecting rod and check bearings	3½ hrs.
	(a) Each additional cylinder, add	½ hr.
7046	Remove and install piston pins, customer brings parts in, each	½ hr.
	In the first five of the above operations the company advocates recommending to the customer operation No. 6906 which reads —Grind valves, adjust tappets, and turn engine when cylinder head has been removed for some other operation	5½ hrs.

THE MARKET'S NEW OFFERINGS

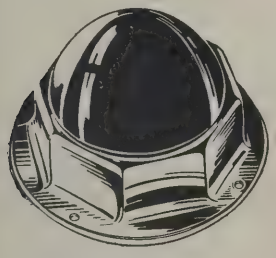
Accessories—Equipment—Supplies

Clark Motor Stabilizer

ELIMINATION of the vibration common to four-cylinder, three-point suspension engines is said to be accomplished with the Clark Motor Stabilizer, invented by E. E. Clark, of Junction City, Kansas, and manufactured by Weldon and Company, Thirteenth and Oak Streets, Kansas City, Mo. This device is said to be so designed that it holds the top of the engine when the piston exerts a side thrust against the cylinder wall, thus preventing its oscillation and tendency to rotate with the crankshaft. Installation is accomplished simply without special tools and the attachment does not interfere with any other special equipment on the car. It is not necessary to remove the stabilizer in order to remove the cylinder head for shop jobs. Prices range from $5 to $6.25 according to the car for which the stabilizer is designed.



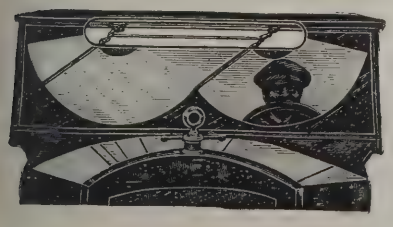
Clark Motor Stabilizer



Running Board Light

Tiffany Courtesy Lamps

TIFFANY Manufacturing Company, 42 Spring Street, Newark, N. J., is producing courtesy or running board lights that are both artistic in appearance and hard to damage. The lights are known as Model CL 2. They have heavy ribbed beehive lens. The shell is of brass, heavily nickeled and highly polished. All parts are rustproof and heavy gaskets make the lamps waterproof. They come in pairs, a red one to be installed on the left side and the green on the right. List price $3 a pair. Dealers prices in lots of one to nine pairs come at $2 a pair while lots of ten or more pairs are priced to dealers at $1.80 a pair.



Fulvishun Windshield Cleaner with double wiper feature

A Tip From the Umbrella Seller

Rainy spells and other temporary weather conditions are profitably capitalized by merchants in various lines. A rainy day is sure to suggest an umbrella display to one, raincoats to another and perhaps rubbers to another.

The sale of an umbrella not only brings a profit on that item but the fact that it is raining causes the customer frequently to linger in the store, with the chance that he might buy something else and be cultivated for future business.

With the automotive merchant such articles as tire chains and windshield cleaners can be applied to the same purpose as umbrellas at these other stores. The state of weather will emphasize the value of the items displayed and help prolong possible selling contact with the customer.

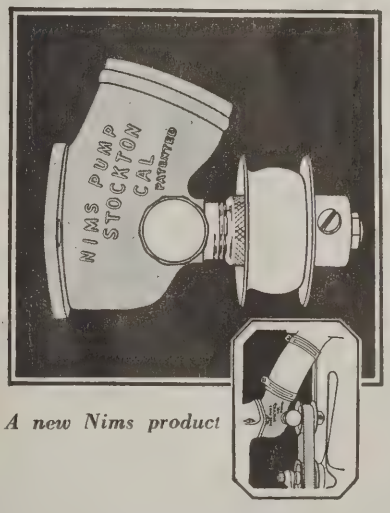
Fulvishun Windshield Cleaner

A SMALL, easily folded bracket which when attached to the ordinary windshield cleaner will keep the entire windshield free from moisture is what is offered in the Fulvishun Cleaner by the Metal Stamping Company, Long Island, N. Y. The Fulvishun Cleaner is said to accomplish a complete job of clearing up the windshield through operation of its double wiper. Five minutes or less is all required for its adjustment and the Fulvishun Cleaner costs $1.25.

Co-Pa-Lite Windshield Glass

A SPECIALLY designed windshield glass for the upper section of the windshield which is said to afford the driver a clear vision that will show the exact location and position of any passing automobile having bright lights is being produced by the Co-Pa-Lite Windshield Glass Company, 242 Fourth Avenue, Pittsburgh, Pa. It is known as the Co-Pa-Lite Windshield Glass. The special grinding and polishing of this glass diverts the rays of an approaching light to a given point on the windshield and is recommended by the producers as an essential to safety in night driving.

The Co-Pa-Lite glass is simply substituted for the old glass in the upper windshield section. It is made of plate glass and cut to full sizes and to measurements when given, with instructions as to installation accompanying each unit. The Co-Pa-Lite company will furnish dealers with full information.



A new Nims product

Nims Pump for Fords

WHAT the manufacturers offer as a practical and highly efficient water pump for Fords is being produced by the Nims Pump Company, Stockton, Cal. These pumps are installed on the front of the engine in place of the regular water outlet manifold. By making the installation at this point no change is necessary in the fan, fan belt or the fan belt drive. Nor does the pump interfere with the Thermo-Syphon system. The pump housing and bearings are made of bronze, the bearing being constructed with a special end—thrust shoulder—which is said to eliminate leakage. The Nims pump's fuel consumption is 1/20 H.P. Price $5. A larger pump similar in design sells at $15.

GETTING MORE OUT of the SHOP

Manley Combination Brake Relining Machine

The Manley combination brake relining machine is a countersinking and riveting machine built in one unit.

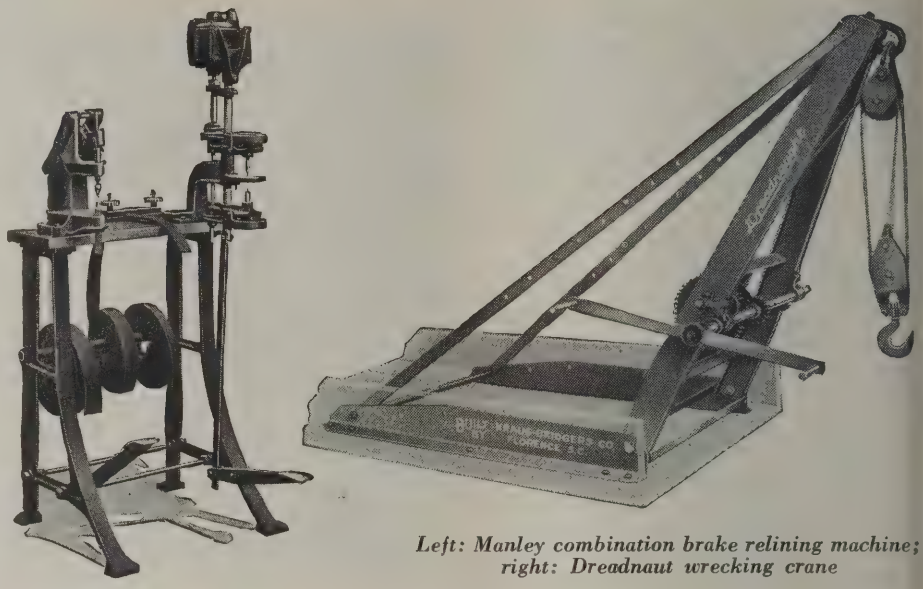
It consists of a Manley drilling and countersinking machine and a Manley heavy duty riveting machine, mounted on a bench, supported by heavy duty iron legs, with natural wood top; and provided with a clamp for holding the brake lining while cutting.

A rod for holding the rolls of brake lining is also provided. The price complete without motor is $76. If adaptors for electric drills are desired the size and make of drill used for motive power must be specified. It is built by the Manley Manufacturing Company, York, Pa.

Dreadnaught Wrecking Crane

A universal wrecking crane having 80 lbs. of lift to every pound pressure applied to the crank has been brought out by Kraus-Bridgers Company, Florence, South Carolina. A unique link construction at the top of the boom permits pulling or lifting from any angle without binding on the cable. The boom is made from one piece of heavy channel steel and is easily adjustable to any elevation by lengthening or shortening the braces, which have a series of holes for this purpose. The crank can be applied to the shaft on either side and two cranks can be furnished when required.

By removing a pin and pulling the crankshaft outward the gears are unmeshed which frees the cable drum and allows the hook and bottom tackle block to be carried to the work. 36 ft. of high grade plow steel cable having a tensile strength of four tons is furnished. When a disabled car is too far from the crane or is down an embankment and a long pull is necessary, the drum can be used as a winch by taking out two pins and removing the cable from the blocks. The distance from the base to the top of the boom is 60 in. The length of the base is either 40 or 46 in. while the width with the flanges turned in is 32½ in. and with flanges turned out 37½ in. The distance from the shaft to the floor is 20⅝ in. and the length of the crank from end to end is 30 in. The price of this crane is $75.00. If desired 72 feet of cable on the drum can be furnished for $7.50 extra.



Left: Manley combination brake relining machine; right: Dreadnaut wrecking crane

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Gas Fired Automobile Cleaner

A gas fired cleaner for washing cars and removing paint and grease has been brought out by the Eclipse Fuel Engineering Co., 814 S. Main street, Rockford, Ill. The device consists of a small steam boiler, container for the cleaning chemical and a sprayer with two lengths of hose. One of the hose carries a high pressure supply of steam while the other delivers the cleaning composition which is mixed with the steam in the nozzle just before being sprayed over the parts to be cleaned.

When it is desired to merely clean the car a weak solution is used. But when paint or grease is to burned off a few applications of full strength solution are said to remove all foreign matter almost immediately. Advantages of the device are said to be speed of operation and economy in upkeep. The cleaner is particularly helpful in removing the grease from engine parts as well as the chassis and a few sprays of the nozzle are said to leave the metal as clean as new. The regular model for cleaning cars sells for $320, while the same outfit with attachment for paint removing sells for $375.



Gas fired steam cleaning apparatus of the Eclipse Fuel Engineering Co. which is said to quickly and efficiently clean cars. A flue, not shown in the illustration connects to the boiler for carrying off the heat and gases

EDITORIAL

Inspiration in Selling

THE motor car salesman is engaged in a worthy business. He is in an exhilarating and inspiring enterprise, if he will only let it be so. What could be finer than providing the people with the miracle of modern individual transportation? And what could give more joy to sell than the vehicle of today, fleet of wheel, sturdy, dependable, comfortable, useful in the highest degree?

The motor vehicle is a comparatively new article of commerce, and one that is in universal demand. Yet it must be sold. It cannot be left lying on the shelf for the customer to come in and carry away. This year's car soon becomes a last year's model. The car must get on the street while it is young.

The missionaries of this great business are the salesmen who go into the homes and offices of the people to sell them automobiles. The salesman's job is one of responsibility and opportunity. He assumes the responsibility of representing not merely a particular make of automobile but an industry that in 25 years has grown to immense magnitude. This industry is worthy of the highest type of representative.

The automobile salesman has opportunity almost unlimited. He sells that which all men want. An article of the highest quality. Pleasure, comfort, recreation, profit, travel, sociability—all are delivered in constant supply with the article of merchandise that he sells.

The salesman of vision sees farther than the dotted line of the order blank. He sees the family on Sunday enjoying an outing that will give inspiration for the whole week; he sees them taking the children to the park for a picnic supper; from their own door to the theater and home again in the evening; bags, suitcases and all belongings whisked to the railroad station for a long journey; the children to school and back on a rainy day; to market and all provisions taken home and put away without the uncertain delay of store delivery; fresh vegetables from the country; the sense of freedom that a dependable motor car brings—these are some of the things that automobile salesmen of vision see and sell.

We need more automobile salesmen of vision and inspiration. Those who have these two qualities in full measure will make their own reward and it will be ample.

Clean Show Windows

IT is not the good fortune of every accessory dealer to have a good show window—one which would be considered ideal for the purpose of display.

The dealer who has any sort of a show window, however, is never handicapped with inability to keep it clean and to see that the displays, small though they be, are maintained in neat, orderly arrangement.

One window, noticed a few days ago, contained a dusty and fly-specked display which obviously had not been given attention for months. The only saving feature was that the panes of glass were so beclouded with ancient accumulations of dirt the passerby would not often be tempted to strain his eyes in order to see what lay in the partitioned section beyond.

Perhaps this merchant would say he "hasn't had time" to look after the windows. If not, it would be better to have no display in them at all. Even the window which is not ideal for show purposes can be used to some advantage, but the first rule should be cleanliness. To make the display inviting it must be kept spick and span and fresh looking.

Say We "Buy" Them

NOW and then a bad word creeps into the lexicon of automobile merchandising. The Chicago Automobile Trade Association does not like the word "appraisal" and some time ago this body urged in substitution for "appraisal" the word "value."

This recommendation has been well received in many quarters as has the one originating in St. Louis which proposed adoption of "maintenance department" in the place of "service department."

There is something in a name and there also is much of something occasionally in the coloring of words and terms used to describe human activities. Maybe our trade dictionary is in need of revision.

If so, one of the words which should be stricken from its pages most enthusiastically is that unhappy, ill-conceived, misleading pet and profit wrecker—ALLOWANCE.

Why not throw out this word bodily and substitute for it the good business man's term—BUY.

Let's quit telling the prospect that we will make such-and-such an "allowance" on the old car and, like real merchants, tell him we will BUY it from him if in turn he buys a new car from us.

And then let's really BUY his old car at a price that will enable us to dispose of it in resale at a fair profit.

The word "allowance" is fundamentally unsuited to the dealer's purposes in its psychological influence. It often causes the merchant to forget that he really is a "buyer" who buys to sell at a profit. It is not to the point and it is not of sufficient directness to let the prospect know that he, himself, is offering something FOR SALE.

Automobile owners have been trained to regard an "allowance" as an indefinite something made largely of rubber. There is need for a reschooling. To offer to "buy" a car means—just that.

Registrations in U. S. Gain 13.7 Per Cent

Total for First Half Almost Equals Entire 1924 Figure

New York Leads With 1,332,168 With California Second and Ohio Third

NEW YORK, July 13.—Motor vehicle registrations in the United States totalled 17,548,377 on July 1, 1925, a gain of 2,108,407 or 13.7 per cent over July 1, 1924, according to a survey just completed by the Chilton Class Journal Company. Registrations for the first six months of this year are nearly as high as the 17,605,501 recorded on December 31, 1924, as the total for the whole of last year. Total registrations by the end of this year are certain to surpass those of 1924 by a good margin, indications now being that the December 31, 1925, figure will be very close to 19,000,000.

New York, as in previous years, holds first place, 1,332,168 cars and trucks having been registered in that state since the beginning of the year. California holds second position with 1,283,203 and Ohio is third with 1,232,943.

The real estate boom in Florida evidently has had a highly favorable influence on automobile sales in that state, the number of registration today being 51.2 per cent greater than on July 1st last year. This is the largest percentage gain recorded by any state. Texas has the largest numerical gain over last July with an increase of 191,710.

There are 6.47 persons per motor vehicle in the country today, population estimates of the Bureau of Census for July 1, 1925, being used as a basis for the calculation. Fees paid into the various state treasuries by automobile owners totalled $218,333,826 for the first six months.

Motorcycle registration dropped again, registrations in the first six months of 1925 being more than 10,000 less than in the first half of 1924. The present total is 115,400.

Yellow Engine Works Sees Added Strength by Merger

MOLINE, July 11.—Louis Ruthenberg, general manager of the Yellow Sleeve-Engine Works of East Moline, today declared that merger of the truck division, General Motors Corporation, with the Yellow Cab Manufacturing Company would materially strengthen the engine works. He predicted that by the first of the year production would be doubled.

The East Moline plant's principal business is the manufacture of engines for busses and taxicabs produced by the Yellow Cab Manufacturing company. Three hundred engines are being produced each month at the present time and 350 workers are employed in the plant, Mr. Ruthenberg states.

While the engine works is a distinct corporation in itself, its stock is owned by the Yellow Cab Manufacturing company.

Quake Fails to Hurt California Sales

NEW YORK, July 11.—No seriously adverse effect on automotive sales in the Far West is expected to result from the Santa Barbara earthquake. Late advices to the Chamber of Commerce of the United States, through its Pacific Coast representatives, show that Santa Barbara was the only community affected and that the major damage was confined to about one per cent of the city's business district. A tentative estimate by engineers of the cost of rebuilding the destroyed buildings and making them of modern construction was $10,000,000 and California financial institutions have agreed to loan needed funds for rebuilding.

Chrysler Corp. Assets Gain $6,000,000 in Six Months

NEW YORK, July 11.—The consolidated balance sheet of the Chrysler Corp and subsidiaries, as of June 25, 1925, shows total assets of $71,423,179 against $65,442,814 for the old Maxwell Motor Corp. and subsidiaries on December 31, 1924.

Major items on the asset side are plant and equipment, $15,715,338, a reduction of $200,000; good will, $25,000,000 unchanged; cash $8,163,186, against $5,680,611; acceptance and deposit certificates, $7,311,007, against $481,191; inventories, less reserves, $10,055,842, against $11,398,161. On the liability side, profit and loss surplus showed a big gain, standing at $6,070,667, while accounts payable declined to $3,262,264 from $5,244,642.

Total current assets as of June 25 were $25,654,324 and total current liabilities $4,375,775, leaving net working capital of $25,278,549. As of December 31, current essets were $23,029,398, and current liabilities $6,763,494, leaving net working capital of $16265,904.

VICTOR ADVANCES PRICES

SPRINGFIELD, O., July 11.—Sales are steadily increasing at the plant of The Victor Rubber Co., President H. H. Durr announces. Indications are that the company will have one of the best years in its history, he said. Business during May and June was far ahead of the same period in 1924. Victor has a new schedule of prices, effective at once. An advance of 10 per cent was made on tires and 15 per cent on tubes.

De Paolo Wins Inaugural At Baltimore-Washington

Italian Racer Announced Winner After Recheck—McDonough Is Second

WASHINGTON, July 11.—Peter de Paolo, winner of the Indianapolis speedway race on Memorial Day, today was declared the winner of the Baltimore-Washington 250-mile inaugural following a recheck.

It was first announced that Bob McDonough, protege and understudy of Tommy Milton, and the youngest driver on the track, had won the race, but it was later discovered that the timing devices had failed to register a lap for De Paolo and McDonough was found to have finished second, almost a full lap behind De Paolo.

Race officials under the supervision of Fred J. Wagner of the A. A. A. conducted the rechecfl. They said an official announcement from the A. A. A. would be forthcoming later.

De Paolo's time was 2:01:37 and McDonough's 22.28 seconds slower. The winner received a purse of $9,000, McDonough, $5,000, Harry Hartz, $3,000, Fred Comer, $2,000, Frank Elliott, $1,500, Jimmy Hill, $1,000, Tommy Milton, $900, Ralph Hepburn, $800, and Phil Shafer, $700.

Milton's proceeds, however, were considerably more than the $900 as he added McDonough's $5,000 to his own as McDonough's employer. He announced that the youthful star would receive 38 per cent of the $5,000.

General Motors Executives Plan European Inspection

DETROIT, July 11.—General Motors Corporation executives, including Fred J. Fisher, Charles Fisher, John J. Raskob, John L. Pratt, Charles S. Mott, Alfred H. Swayne and James D. Mooney, will shortly visit the various European countries to get more closely in contact with the export activities of the General Motors Corporation.

While abroad the party will inspect the corporation's subsidiary companies and assembly plants in London, Copenhagen and Antwerp in addition to making a survey of the motor car situation in England and the various continental countries.

The proposed trip according to President Alfred P. Sloan, Jr., is in keeping with the company's policy to send to Europe at various times different groups of its officers and engineers in order that they may be able to study at first hand the business and economic conditions of foreign countries with special reference to the importation of American-made automobiles.

Mack Bus Sales Advance 433 Per Cent Over 1924

Business for First Six Months 34 Per Cent Better Than All of Last Year

NEW YORK, July 11.—Sales of Mack buses for the first half of 1925 increased 433 per cent as compared with sales during the first six months of 1924, and were 34 per cent more than the total sales for the entire year of 1924, according to the semi-annual sales report of Roy A. Hauer, manager of the bus department, Mack Trucks, Inc.

Bus sales for the month just passed were 39.9 per cent ahead of May business and to date July promises to show further substantial gains over previous months. More buses were sold during the first half of June than during the entire month of May.

When January figures were published early in February, says the report, officials of the International Motor Co. pointed out that business for that month had established a bus sales record for any one month in the history of the company. Since January every month has shown substantial gains.

Mr. Hauer calls attention to the fact that business for the first half of 1925, as compared with 1924, is undisputed evidence of the increasing popularity of the bus as a public conveyance and that there is every indication that demand will continue throughout the remainder of the present year. It further indicates, says Mr. Hauer, that bus operators are rapidly discarding old equipment for new and standard buses of high quality.

Columbus Garages to Test Lights Before Police Drive

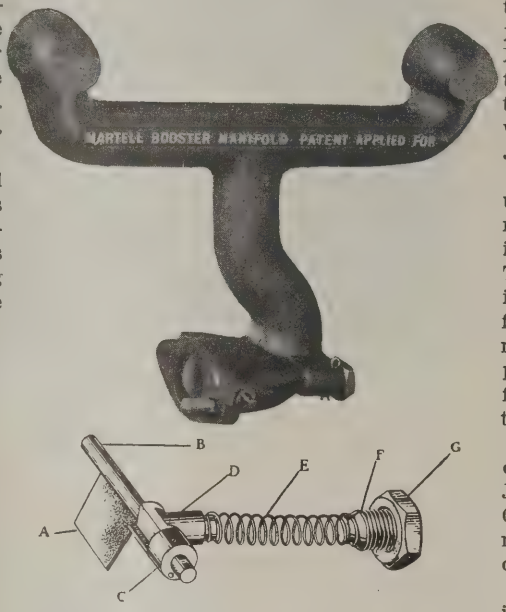
COLUMBUS, O., July 11.—Testing screens, now being made by the Yeager Tilt-O-Lite Co., will be placed in 10 different garages throughout the city to test defective automobile lights when the police campaign against them starts July 15. The campaign against defective auto lights will continue for 30 days, during which time no arrests will be made. It is intended to reduce automobile accidents in Columbus.

Tags now being printed will be handed to motorists whose auto lights are faulty. The tags will bear the names of the garages where the testing facilities are located, and will order the motorists, to whom they are given to report to one of the stations within 36 hours. A small fee will be charged for the testing.

On the tag will be indicated which of the nine classes of violation the motorist is committing. Officials of the test stations will advise motorists as to how to remedy their lights. After the 30 day campaign those still having faulty lights will be arrested.

Booster Manifold for Fords

In order to overcome the fluctuating suction through the intake manifold with varying piston speeds a manifold called the Martell Booster Manifold for Fords has been brought out by Albert A. Martell, inventor of the Martell reamer, and is distributed by the Russell Automotive Products, 2019 S. Michigan Avenue, Chicago.



Top—Martell Booster Manifold for Fords. Bottom view shows the valve mechanism which keeps the gas velocity more nearly constant

This manifold is about 40 per cent larger than the stock manifold at the carbureter opening and the valve mechanism as shown in the detail illustration provides means for keeping the gas velocity more nearly constant. The valve A is fastened to the spindle B which is mounted in the manifold, supported at its opening end by bushing C.

A cam surface formed on the enlarged portion of spindle B engages a follower D that resists the action of the valve, as influenced by the passage of the gas, by means of the pressure spring E. This spring E is adjusted to the correct tension by screw F locked by nut G and finally cotterpinned, after setting to gage.

An air port in bushing C admits additional air after the valve A is partly opened.

On account of the formation of the cam surface on spindle B the pressure or resistance to the action of the valve A decreases as the valve opens. When the throttle is wide open the valve "floats" on the gas stream and maintains the velocity without in any way restricting the amount of gas. When the car is traveling at slow speed the valve is nearly closed, automatically reducing the manifold opening, maintaining gas velocity at any speed or throttle opening.

Ford Sets New Sales Mark Of 195,300 Cars in June

Retail Business 6,000 Automobiles and Trucks Ahead of Record Month Year Ago

DETROIT, July 18.—A new June sales record was established by the Ford Motor Company during the month just passed, when approximately 6,000 more Fords cars and trucks were delivered to retail customers in the United States than during the same month a year ago, which held the previous high mark for June.

Reports indicate a continued large volume of business through the summer months with a higher buying level than is usual during this season of the year. The outlook is for another record breaking month for July. Urgent requests for additional shipments have made necessary increasing the company's July production schedule, which now calls for several thousand more cars and trucks than were produced in June.

Sales figures just given out by the company show that the total sales for June were 195,300 Ford cars and trucks. Of this number, 176,256 represent domestic sales, as compared with 170,547 cars and trucks sold in June a year ago.

Buying conditions also continue good in the high priced car market. Evidence of this appears in the sales of Lincoln cars during June, with deliveries to domestic customers totaling 892, an increase of 95 over June a year ago.

Illinois Registrations Drop 19 Per Cent During June

CHICAGO, July 11.—Registration statistics covering new passenger cars in Illinois during June reveal that there was a drop of 19 per cent in the total as compared with May. This, however, is not unusual for June, as many undoubtedly defer registration of new motor vehicles until July in order to take advantage of the semi-annual rate.

The sharpest decline was in the case of Fords with a loss of 26 per cent. Medium priced cars were off 20 per cent. The following table indicates the percentages of loss during June as against May:

	Loss
Fords	26 per cent
Low, excl. Fords	6 " "
Medium	20 " "
High	7 " "
Total	19 per cent

Following are the detailed figures for the first six months of 1925:

Month	Fords	Low, excl. Fords	Medium	High*	Total
Jan.	4,060	2,275	5,748	808	12,891
Feb.	3,424	1,718	4,977	612	10,731
March	5,714	2,729	6,416	784	15,643
April	9,010	3,755	8,801	861	22,427
May	8,751	3,644	8,014	899	21,308
June	6,473	3,400	6,383	828	17,084
Total	37,432	17,521	40,339	4,792	100,084

*Includes miscellaneous cars not named.

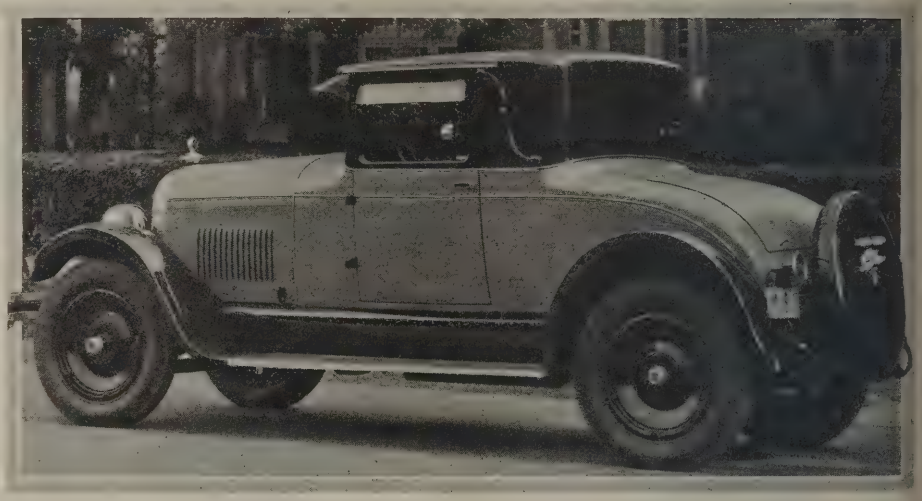
These statistics were compiled from figures furnished to MOTOR AGE by Robinson's Advertising Service, Springfield, Ill.

Glove Finish Fabric Body on New Apperson Coupes

THE use of glove finish fabric over an expanded metal frame, said to possess many advantages over the conventional steel body style, is announced as the outstanding feature of two new coupe models now in production by the Apperson Automobile Company, Kokomo, Ind. The fabric bodies are being introduced in two series of sport coupes, one on the Straight-Away-Eight chassis and the other on the Super-Value Six. It is planned to extend their use to other models in the Apperson line. All bodies in the coupes will be gray and black, with a choice of bright stripes.

The new models are said to be impervious to weather conditions. Company officials declare that a damp cloth removes dust and grime and that the use of a good dressing at specified intervals maintains the original attractiveness and freshness.

The entire cab on the new coupes is of expanded metal, reinforced and cross-membered, with all joints heavily padded to protect the fabric. Top and quarters are of ash, covered with top material of contrasting color. The hood, made of sheet metal, is lacquered, fenders are enameled and radiator shell and lamps are nickeled. Moulding of a contrasting color runs in a stream line from the radiator shell along the sides of the body to the rear, a strip of fabric being inserted in an aluminum-bound channel running parallel to the moulding.



New Apperson six-cylinder coupe with glove finish fabric body. The hood is of metal finished in lacquer

Advantages claimed for the new body type are: Freedom from paint problems, longer wear and greater beauty under adverse conditions, very marked economy, simple and inexpensive replacement of any section of the fabric; ease of cleaning; greater strength of body frame, with considerable reduction in weight; and complete elimination of body squeaks and rattles. Individual panels of the fabric can be replaced in event of accidents, it not being necessary to refinish the entire body.

Pay Dime a Name for Prospects

"What's in a name?" Shakespeare once asked. If he had addressed his question to the authorized Ford dealers of Houston, Texas, the reply would have been:

"Ten cents each."

That is the price that the Houston Ford dealers offered to pay for the names of prospects. And had Shakespeare appeared on the scene to inquire: "Where are you going to buy the names?"—the Houston Ford dealers would have answered: "Through the newspapers?" For after deciding to pay ten cents each for certain names they launched a newspaper advertising campaign in which their wants were alluringly set forth. The publicity campaign covered one week—with the result of a long list of names at ten cents each that made an excellent prospect reference.

In offering to buy names the Ford dealers made certain specifications. One condition was that the name should be accompanied with the person's address. another was that the person must not be an automobile owner and another was that his salary—or hers—should be at least $125 a month. The dealers got the names and their salesmen did the rest.



Following the introduction of the Fisher Fast Freight chassis eight months ago, the Standard Motor Truck Company, Detroit, now announces a Fisher Bus having a 21 passenger pay-as-you-enter type body. Except for the mounting of 30 in. by 5 in. dual tires in place of 32 in. by 6 in. tires at the rear, the chassis is identical with the "Fast Freight" chassis and sells at the same price, namely, $1295.

EISEMANN HEAD IN WEST

NEW YORK, July 11.—President Shaw of the Eisemann Magneto Corporation, is now on a trip to the Pacific Coast where he is making a thorough inspection of conditions. Mr. Shaw will call on the leading representatives and customers of his company, and return to his desk a month hence; stopping for a brief vacation in the Canadian Rockies.

Atlanta Dealers Sponsor Joint Advertising Contest

Accessory and Automotive Merchandisers Stage Novel Co-operative Campaign

ATLANTA, July 11.—A group of several automotive and accessory dealers in Atlanta recently staged a co-operative advertising contest, using a full page of space in one of the Atlanta daily newspapers.

The page was divided into several equal parts, and the first advertisement contained nothing except the photographs of an official of each of these companies taking part in the plan. For the best list of answers received from the public identifying these photographs—that is, giving the name of the man and the company—a prize of $25 was given. The second best list received $15, and the third and fourth best lists $5 each.

At the end of the contest another full page advertisement was published including the photographs again, this time with the names of the men and of the companies.

The automotive firms taking part included the Automotive Sales & Service Co.; W. T. Adams, Ford service; the Rolls Battery Co.; the Meixel Tire Co.; the Nassau Lubricating Co.; the J. B. Anchors Auto Co.; the Lamar Welding Co.; the Rent-A-Car Co.; the Jack Wall Garage; the General Storage Battery Co.; the J. F. Clark Garage; the Camp Cylinder Grinding Co., and the Spring Street Garage Co.

Crowds Throng Showrooms To View New Chrysler Four

DETROIT, July 11.—Upwards of $10,000,000 worth of Chrysler fours have been ordered by foreign distributors from the Chrysler Corporation here for the trade in their respective countries, since the introduction of the new model, according to J. E. Fields, vice president in charge of sales.

From the reception accorded the Chrysler four in this country and abroad, the big problem to be met, according to Mr. Fields, is to step up the production necessary to keep pace with the present demand.

In various parts of this country, the crowds which thronged the different showrooms to see the models were so great, according to reports received at the local office, as to require special details of police in some instances.

Perhaps the greatest reception the new model received was in this city. As the showrooms of the John H. Thompson Co., distributors for this district, more than 24,000 persons inspected the models during the first three days. At the end of that time, the company with the help of its city dealers had taken approximately 500 orders for the different four models.

Yellow Cab Joins General Motors

(Continued from Page 17)

Paul H. Geyser; vice-president and sales manager, P. L. Emmerson; secretary and general counsel, Edward N. D'Ancona; treasurer, C. H. Ritter.

Another manufacturing subsidiary is the Yellow Sleeve Valve Engine Works, of East Moline, Ill., whose officers are the same as those of the Yellow Coach.

Foreign manufacturing subsidiaries include the Canadian Yellow Cab Manufacturing Company, Ltd.; the Societe Francaise des Automobiles Yellow, of Paris; and two companies in Buenos Ayres.

Sales subsidiaries consist of the Yellow Manufacturing Sales Corporation with headquarters in Chicago, the New York Yellow Cab Sales Agency, Inc., and the Hertz Drivurself System, Inc. Of the latter the following are the officers: President, John Hertz; vice-president Paul H. Geyser; vice-president Irving B. Babcock; vice-president and general manager, P. L. Emmerson; secretary, Edward N. D'Ancona.

The finance subsidiary is the Yellow Manufacturing Acceptance Corporation of which John Hertz is president, and Alfred Ettlinger, Mr. Hertz' son-in-law, is vice-president and actuary.

The Omnibus Corporation of America, since its organization, has been the principal outlet for the product of the Yellow Coach Manufacturing Company. John Hertz is chairman of the board of the Omnibus Corporation, while John A. Ritchie, president of Yellow Coach, also is president of the Omnibus Corporation. The directorates are largely interlocking. The two principal operating branches of the Omnibus Corporation are the Chicago Motor Coach Company and the Fifth Avenue Coach Company of New York.

Duesenberg Reports Sales On Strong Upward Trend

Many New Dealerships Requested as Result of De Paolo's Victory At Indianapolis

INDIANAPOLIS, July 11.—Fred S. Duesenberg, president of Duesenberg Motors Corporation, reports that Duesenberg sales and distribution records are on the strong upward trend, with a number of new distributors and dealers to be announced shortly.

Many dealer applications have been received since the De Paolo Duesenberg ran away with the annual 500 mile festivities, and a number of veteran dealers report more demand for this car than at any time in the past. One phase of the new business that may startle some dealers is the large demand for open types of the sport and roadster models. One family in a Pennsylvania city has purchased three open cars that will be delivered this week, a trio of sales that may constitute a record for one family in the 1925 closed car season.

This trend toward open car types with tops that can be folded, while noticed in other Indiana factories, seems to have reached its peak in the Duesenberg plant which has always found a great demand for its sport, touring and roadster types.

STROMBERG OPENS IN LONDON

LONDON, July 11.—The Stromberg Motor Devices Co. of Chicago, manufacturers of Stromberg carbureters, has opened a direct factory branch in London to take care of the company's growing business in England. This branch also is introducing the Stromberg Super Shock Absorbers in this country.

Aged Reo Still Performing Well



Frank W. Bowren of Dousmann, Wis., still drives his 1908 Reo runabout on his trips from his farm to nearby towns. He says it has called for few repairs and such as have been necessary he has done himself. He affirms his love for his little red bus with the declaration that he would not trade it for the most up-to-date car on the market. It has created so much curiosity on his trips to town, that he has pasted a "history" of the car on the radiator, where all who will may read. The history announces that the car cost $510 when new, and that it is paid for

De Palma Wins Opening Race at Rockingham Park

Eleven Start in 100-Mile Event Which Revived Interest in New England Speedways

SALEM, N. H., July 11.—Ralph De Palma won the 100-mile race here from a field of 11 starters in the opening of the new Rockingham Park Speedway.

The track is one and one-quarter miles long with banked turns and a surface of hard clay. There were more than 50,000 present to show that a revival of motor racing here would be welcomed.

De Palma won the pole in the time trials and the drivers were placed in rows of three by Starter Fred J. Wagner as follows: De Palma, Duray, Devore, first line; De Paolo, Shafer, Cooper, second row; Hartz, Elliott, Milton, third row; McDonough and Wonderlich, last. Fred Comer did not start.

On the first lap De Palma swung down the stretch at more than 90 miles an hour with Shafer and Duray close behind. De Paolo, who had the same trouble here as at Indianapolis in not getting started for the first flying lap, was fourth, pacing De Vore. The others began to trail, Milton dropping some distance behind. It was soon evident that De Palma had the race well in hand before 10 miles were finished, for he showed his same superior skill as a dirt track driver taking the turns.

A few times there were real thrills with the drivers fighting at the turns, refusing to give way. Before 25 miles passed Milton, McDonough, Wonderlich and Cooper were out.

De Palma lengthened his lead all the time and before the race ended he had lapped every driver, some of them several times. There was a real fight between Shafer and Duray for second place. Shafer held it for 25 miles then Duray passed him. Later Duray fell back to third but finally overtook Shafer. So they finished with De Palma a lap ahead of Duray; Shafer third, one and one-half miles behind De Palma; De Vore fourth, De Paolo fifth, Hartz sixth. De Paolo was three laps behind the winner. Elliott was flagged off with more than 10 miles to go.

De Palma's time was 1:18:7 3/5, Duray's 1:19:20, Shafer's 1:19:40 1/5. De Palma's victory was a popular one. The winner got $4000, Duray $2500, Shafer $2000, De Vore $1000, De Paolo $500. They also got $6000 appearance money. Jack Le Cain, veteran race driver, ran the meet and he expects to have another one here October 12, Columbus Day, a holiday.

Hudson-Essex to Expand Distribution in Northwest

SPOKANE, Wash., July 11.—Spokane is to become one of the largest distributing points on Hudson-Essex cars in the northwest, doing an annual business of $2,500,000, under a program of expansion announced by Walter S. Evans, general manager of the John Doran Company, factory distributors of Hudson-Essex automobiles in eastern Washington, the panhandle of Idaho and western Montana.

The program, now under way, provides for the creation of 40 new Hudson-Essex agencies in this territory.

"We obtained 10 new dealers in the last week, and are now negotiating with several more in our territory," said Mr. Evans. "Before August we expect to have 100 dealers, who, we estimate, will sell an average of 175 cars a year. Our present dealers are selling about 1500 cars a year.

"The new dealers will be located in the smaller towns, where we have found excellent selling opportunities this spring and summer."

Scientists Pronounce Crude Oil Airplane Engine Without Spark Plugs Practical in Principle

WASHINGTON, July 11.—The principle of the crude oil airplane engine without spark plugs has been found practicable and this revolutionary motor, sought by engineers since airplanes first flew, is now being completed by the National Advisory Committee for Aeronautics, it is announced here. The success comes as a dramatic climax to more than four years of experimentation by a distinguished group of scientists.

Although qualifying his announcement with typical scientific caution, G. W. Lewis, director of aeronautical research, advises that the committee constructing the engine "sees daylight ahead" after years of laborious study.

The new engine eliminates a wide variety of equipment which has contributed to the dangers of flying heavier than air craft, Mr. Lewis says.

Spark plugs and the present types of ignition systems used in airplane and automobile engines are entirely done away with, being supplanted by heavy compression and cylinder heat. Instead of the accustomed spark igniting the gasoline vapor in the cylinder, the engine heat, combined with 3,000 pounds compression, causes an automatic explosion.

The same rough principle is known to motorists whose engines are full of carbon. "Pre-ignition," or an explosion ahead of the spark, caused by the glowing carbon, was the explanation given by the aeronautical engineers of the new system.

The greatest feature of the engine, however, according to Mr. Lewis, is the fact it uses ordinary crude oil. Should a plane crash, crude oil would not immediately ignite and envelop the pilot in flames before he recovered from the shock of the fall.

BADGER MFG. EXPANDS

WEST ALLIS, Wis., July 11.—The Badger Manufacturing Company, makers of automobile bumpers, will move into new quarters here shortly after having secured a 15-year lease on the former Avery Manufacturing company's plant. The new location will offer 95,000 square feet of floor space and production will be more than doubled with the increased capacity. The company now turns out 600 bumpers a day and additional machinery and equipment will be obtained to raise that figure to 1,500 bumpers per day, making it the largest bumper manufacturer in the country.

Instructor's Car Again Used Advantageously by Dealer

NEW ORLEANS, July 11.—Another Nash dealer organization is making use of an instructor's car, equipped with two driving wheels, one for the teacher and the other for the pupil. Employed in connection with an offer of free driving instruction the car is developing many sales. The company is the Nash Mississippi Valley Motor Company, of New Orleans, of which F. E. Truett is general manager. Mr. Truett readily admits that he borrowed the double steering wheel idea from the Jack Neal company, Nash representatives in San Antonio, which also found it a big help in a business way. Following are some of Mr. Truett's observations concerning the New Orlean's company's driving instruction with this novel car:

"With this instructor's car we interest persons whom we could never reach without it. The car makes a big appeal to women, especially to middle-aged or elderly women—and there are more men in the 'I can't learn to drive' class than you might imagine. Every week we find men who do not know how to drive cars well. Then there are almost unlimited advertising possibilities in such a car. Nothing in particular about selling is said as we let the person get the feel of the wheel and become thoroughly convinced that learning to drive is not such an impossible feat after all. Usually the lessons sell the person on the line of cars we handle.

"We have never put on a stunt, campaign or any unusual feature that has brought in as much money for the amount invested as has this and the best part is that it is more than a temporary attraction." The double-steering wheel arrangement was installed for $250.

NEW LOCOMOBILE DEALERS

BRIDGEPORT, Conn., July 11.—Announcement is made by the Locomobile Company of America, Inc., of the appointment of the following dealers who will handle the new JR-8, deliveries of which are now being made:

H. S. Horwood Sales Company, Morristown, N. J.; Norton Motor Company, Edgemere, L. I.; Joseph Schaffer, Brooklyn, N. Y.; Kingsway Locomobile Company, Brooklyn, N. Y.

Finance Co. Condemns Plan of Small Initial Payments

Practice Reacts Unfavorably Upon Used Car Sales, Declares Hare and Chase

NEW YORK, July 11.—The trend toward unsound financing is rapidly bringing a new and serious issue before the dealer, says a statement issued by Hare & Chase, Inc., automobile finance company, which refers particularly to a "finance plan recently announced for a well known car, permitting down payments ranging from less than $15 upward. In a city in which this plan was tried there was an immediate unfavorable reaction on the used car market, it is declared.

"The plan in question requires two endorsers," says the statement, "which the average buyer of limited means cannot command—but the effect of its announcement was to turn the minds of all prospective buyers of those cars, however limited their resources, towards the brand new article and completely away from that which had already seen service in other peoples' hands.

"The automobile man may as well convince himself, before false reasoning leads him into costly mistakes, that the proportion of our population which can afford both to buy and operate a motor car of current design in any price class will only increase very slowly over the present figure. The total number of users should increase as the population grows but their percentage is likely to gain little until the average margin between living costs and income becomes appreciably wider.

"Which being so it is obvious that the process of teasing the public with easier terms will only rearrange the present market without enlarging it. Let the low down payment mania become general and the used car carry-over from the active season would sink the average dealer before he could unload it on a public thus thoroughly under the influence of the new car ownership complex. For when you tell the buyer he can have a new car for a cash outlay equivalent to the cost of two theatre tickets or a suit of cloths you automatically close his mind to the used car appeal.

"Once you sell the market off the used car idea your total sales of both new and used may actually decrease. For if the logical used car buyer feels the new car urge too fiercely he may conclude not to buy at all until he can meet the new car terms, either by getting the needful endorsers or saving a higher percentage of cash.

"And if the endorsement requiring is waived—as it will be by weaker finance companies here and there—he will buy his new car for a pittance in cash and the used car will sit in the same old spot on the dealer's floor until it rots for all the public cares."

Cut Your Initials In This

KAHOKA, Mo., July 11.—Here's bad news for the prophets of the doom of Dobbin!

The city council last week authorized expenditure of $1,450 for a site for a new hitching rack for horses and teams. The rack at the public square was demolished to make way for a paving project and the city dads felt it necessary to provide new accommodations.

Horace Dodge Buys 2,592 Curtiss "OX-5" Air Motors

DETROIT, July 11.—Horace Dodge, one of the directors of Dodge Brothers, has just completed purchase of 2,592 Curtiss airplane engines from the surplus stock of the air service. These engines which were paid for at the rate of $80.26 apiece have been in storage for a considerable time and were originally intended for use in training planes of the "OX-5" series, 90 horsepower.

The "OX-5" engines have been used with success in high speed motor boats and it is understood Mr. Dodge is interested in the construction of speed boats. The possibility of their use in a new type of airplane could not be confirmed.

FORMER TRADESMAN DIES

WASHINGTON, July 11.—Michael J. Keane, a prominent attorney and at one time president of the Oldsmobile Company of Washington died here suddenly recently.

Popularity of Open Car Is Believed to Be Advancing

Sale of Windshield Wings Reaches Highest Total in June in History of Product

KOKOMO, Ind., July 11.—What seems to be a revival in the popularity of the open car is indicated by a very marked increase in the sales of windshield wings by the Kokomo Automotive Manufacturing Co., of this city, during the last two months. More than a year ago, when the trend toward closed cars was at its height, sales in the windshield wing division of the local concern dropped to a low figure, but, starting early last spring, wing sales started up with the result that during June of this year the total was the largest of any single month during the company's history.

"If it is not caused by increased popularity of open cars," said Neil T. Albright, secretary and general manager of the company, "it must be that the use of closed cars has caused motorists to want more protection, when they drive in open cars, than the ordinary touring car affords. I am inclined to believe that both of these factors have influenced the situation."

Albright also reports that mirror sales have been unusually good during the last few months, the total for June being 30 per cent more than any previous month. While distribution has been good in all sections of the country, he said, business is especially strong in the west. The plant has been running night and day for more than six weeks.

25 Years Ago In the Automobile Industry
As Recorded In MOTOR AGE

(*From* MOTOR AGE *of July* 19, 1900)

Across Ohio in Fast Time

CLEVELAND, July 16.—A. S. Ingalls, a leading member of the Cleveland Automobile Club, and a son of President Ingalls of the Big Four Railway, made a flying trip across the state of Ohio Friday and Saturday, establishing a record which will probably stand for some time to come. He left Cleveland early Friday morning and reached Springfield late in the afternoon. He stayed there over night and made the remaining 80 miles into Cincinnati Saturday morning, reaching that city by noon. The distance covered was something over 250 miles and his actual running time was less than 20 hours.

Now Allowed in Munich

The Bavarian Government, according to a statement made by Consul Worman, has just set aside the city ordinance preventing the use of automobiles on the streets of Munich. This opens up one of the best German cities for American manufacturers of horseless vehicles of every sort because of the large class of wealthy residents there. Munich is the third largest city in the German Empire.

Automobile for Customs Delivery

NEW YORK, July 16.—The New York Custom House has in use a locodelivery for the purpose of transferring invoices from the custom house to the public stores. This is one of the first of the delivery wagons now being built experimentally by the Locomobile Co. of America at its Bridgeport factory, with a view of making them a feature of the company's product next season. Collector George R. Bidwell, by the way, is an enthusiastic locomobiler and may be seen any day in the park and on the boulevards in his Stanhope.

German Show

BERLIN, July 2.—The automobile exhibition at Frankfort-on-the-Maine will be opened on July 14, Prince Friedrich Carl of Hesse, a brotherin-law of the German emperor, having undertaken to perform this ceremony. The Frankfort A. C. has entered 23 vehicles for competition.

June Business in Toledo Ahead of Sales in 1924

New Cars Do Not Move So Well As in May Which Set Several High Records

TOLEDO, O., July 11.—Sales of new cars in Toledo and surrounding territory during June were not up to the pace set in May when some lines set new high records but continued very much better than at this time last year.

Farm sales are continuing to hold up and dealers in the smaller towns are contributing much to the better business.

Accessory distributors report a fair run of business.

Replacement business is very good.

Tires are rather slow, business being spread out thin among many dealers.

Used car market continues very good with large cars moving slowly.

Finance is ample and money easy. Banks are advertising to place loans in the real estate field and this is an indication of the best of money conditions.

Dealers are expecting considerable lull in July and August but are preparing sales forces to take advantage of this period to push sales much more thoroughly than in the last few months.

Chevrolet Establishes Two More Zone Sales Branches

DETROIT, July 11.—Two more zone offices, one at Indianapolis and the other at Jacksonville, Fla., have been opened by the Chevrolet sales organization, making a total of 26 zone offices that are maintained throughout the United States.

Charles R. Lee will have charge of the Indianapolis zone office located between the three zone offices in adjoining states. No stock will be carried by this office.

The Jacksonville zone office will serve as the distribution center for Florida and Southern Georgia and will be in charge of Chester A. Smith. Plans are being drawn for a two-story building to provide reserve storage for cars and a $50,000 stock of parts.

CHEVROLET AT HIGH POINT

JANESVILLE, Wis., July 11.—The July production schedule for the Chevrolet plant here calls for 6,100 cars. During the last week in June and the first week in July the company reached the high mark of an average of 300 cars per day, a mark which will be continued for July.

NEW AUBURN DEALERS

AUBURN, Ind., July 11.—New dealers which have been added to the organization of the Auburn Automobile Company follow:

Frank L. Smale, Riverside, Cal., Cole & Andrus Motor Sales, Tiffin, Conn., The Ruhlman Motor Car Co., Inc., Portsmouth, O., C. G. Crawford, Lexington, Ky., Joseph A. Bruno, (Stamford Motor Sales Co.), Greenwich, Conn.

"Tag Boy" Service Develops Volume Storage Business for Seattle Garage

SEATTLE, Wash., July 11.—When you cannot find a place to park in Seattle, just keep smiling until you see a negro boy in a white uniform, with the words "Tag Boy" in black letters on the pocket of his coat. Give him the S. O. S., and he will take your car, give you a receipt for it, park it in a fireproof garage until you telephone for it, and then deliver it to you, wherever and whenever you order it. The charge for all-day parking and this tag-boy service is 50 cents, but if you have your car washed and polished while you are shopping or busy in your office, the charge for storage is eliminated.

This new method of solving the parking problem is being applied by the T. A. G. Garage, owned and operated by James D. Esary, Jr. Arrangements are made with department stores and with the caretakers of office buildings, to station tag-boys from 8 a. m. to 6 p. m. at the entrances. There they offer their service to shoppers and others. The service has packed the garage to capacity with profitable day storage, and has so worked to relieve the parking situation that Mr. Esary has been complimented by the traffic department of the city government.

The tag-boys carry cards with the name and address and telephone number of the garage and very brief description of the service rendered. They present these cards to every person they see seeking a parking space. In addition to this advertising, personal letters are written once a month to prominent business and professional men of the city, outlining the service and the guarantee of safety given for the car.

Optimism in Oakland Field Is Noted by G. M. President

PONTIAC, July 11.—Optimism in the future of the Oakland line was voiced recently by Alfred P. Sloan, Jr., president of the General Motors Corporation who with other members of the executive committee of the corporation were guests of Alfred R. Glancy, president and general manager of the Oakland Motor Car Company.

"During the course of a recent field investigation," Mr. Sloan said, "I found a general spirit of optimism among Oakland dealers which is one of the things that makes us expect much from the Oakland line in the near future."

Besides Mr. Sloan, the delegation included Charles S. Mott, vice-president of the General Motors Corporation, Lawrence P. Fisher, vice-president of the General Motors Corporation and president of the Cadillac Motor Car Company, and Charles T. Fisher of the Fisher Body Corporation.

Indianapolis Realtors Back Plan to Establish Airport

INDIANAPOLIS, July, 11.—An airport for Indianapolis at any early date seems assured by the action of the Indianapolis Real Estate Board which is behind the movement to raise at least $25,000 for the enterprise. Other clubs, commercial organizations and associations are to be enlisted in the campaign to raise money for the airport and to help plan for all the civic support the enterprise needs.

Though no proposed location for the landing field has been picked, the flat country lying on all sides of Indianapolis is said to be favorable for an adequate field at moderate costs. The only field here at present is the Shoen Field at Fort Benjamin Harrison which lies some ten miles northeast of the city. This is the army field where the reserve flying outfit has its headquarters, but army flyers say the field is not adequate or as smooth as it might be.

At one time the landing field at the Indianapolis Motor Speedway was extensively used by civilian and army flyers. There is both interurban and bus transportation to these fields with hard surfaced roads that would facilitate truck transportation of airplane freight or mail. The federal government has already advertised for bids for airmail from Chicago through Indianapolis to Memphis and the south.

DUESENBERG ADOPTS SCHEBLER

The Duesenberg Automobile & Motors Company of Indianapolis, twice successively winners of the Indianapolis Motor Speedway races, has just announced the adoption of the new Schebler Model "S" carburetor for all Duesenberg automobiles.

BALLOONS DEMANDED

DETROIT, July 3.—Since the middle of February when the Ford Motor Company announced that it would provide balloon tires as optional equipment on all new Ford cars until the end of May, the demand for these tires by Ford buyers has jumped 40 per cent. In February, Ford dealers estimated that out of the number of Ford cars produced, 20 per cent should be balloon equipped. Since then the demand for balloon tires among new Ford buyers has increased until at the end of May, 60 per cent of the cars turned out by the Ford company were balloon equipped to meet the demand.

PARIS HAS LARGEST SIGN

PARIS, June 26 (by mail).—The biggest luminous sign in the world is about to be erected on the Eiffel Tower, Paris, for the Citroen Automobile Company. It will be 69 feet at the base and will have a height of 655 feet. The total height of the Eiffel tower is 984 feet.

Ohio N. A. D. A. Meeting Will Stick to Problems of Dealer

Entire Program to Be Devoted to Discussions of Retail Sales and Expenses

ST. LOUIS, July 6.—There will be no discussion of tire vulcanizing or battery repairing at the meeting of Ohio automobile dealers at Cedar Point, Sandusky, O. August 6 and 7, according to an announcement of N. A. D. A. The entire program will be devoted to the car dealer and his profit problems.

Information on automobile sales, service and management will be given by leaders of the industry. The meeting will be under the auspices of the Ohio Council, N. A. D. A., the new unit instituted by N. A. D. A. to carry on the state work in Ohio.

It is estimated that 1500 automobile dealers, their sales managers and service managers, will attend. Everybody who can is being asked to drive to Cedar Point, as it is to be an automobile dealers' meeting from top to bottom.

An invitation has been extended to dealers to bring their families to enjoy an outing on the greatest beach resort in America.

At only seven cities in the United States have similar meetings been held. They were Atlantic City, Boston, Buffalo, Chicago, Milwaukee, San Francisco and Los Angeles. Eleven hundred automobile dealers, salesmen, sales managers and service managers attended the Los Angeles convention recently concluded.

Full discussions of balanced department sales and budgeted expenses will be held at the Ohio meeting.

Everybody attending the meeting will be housed at two hotels, Hotel Breakers and Hotel Cedars. If no preference is specified those attending will be assigned to one of the two hotels by the resort management.

Theory of Quality Rather Than Low Price Has Helped Build up This Business

CLEVELAND, O., July 11.—The Atlas Tire and Rubber Co., at 2111-19 Prospect avenue, at Cleveland, Ohio, which is rated as one of the oldest and largest independent tire companies in the Forest City, has in 16 years grown from an infant enterprise with retail sales of $30,000 a year to a lusty concern with sales of tires which last year aggregated $500,000.

J. M. Mendelson and O. P. Reed, the proprietors, assert that the emphasis that they have placed on the service and quality of their goods rather than price, has been the main factor in building up sales and good-will.

"If of two makes of tires that were offered to us, the one offered at $12 would give 40 per cent more service than one quoted at $10 we would not hesitate in buying the $12 tire, for the owner of such a tire would get about 20 per cent more service for his money than had he purchased the lower priced tire from us" said Mr. Reed.

"We have found that although the original purchase price of a tire from us may be heavier than at some other places, yet if we are able to show better service in our tire, we usually retain the good-will and patronage of our customer.

NORTH EAST IN CANADA

ROCHESTER, N. Y., July 11.—The North East Electric Co. of Canada, Ltd., has begun the manufacture of North East starters, generators and ignition equipment, it is announced by officials of the company here. The Canadian concern will supply electrical equipment to car manufacturers of Canada who are using North East electrical equipment as standard.

NORTH CAROLINA PAYS $10,117,589

CHARLOTTE, N. C., July 11.—The automotive trade and owners of motor vehicles paid $10,117,589.51 into the state treasury of North Carolina for highway construction and maintenance in the fiscal year ended June 30, 1925, according to a statement received here from Revenue Commissioner Doughton, of Raleigh. The several sources of this income and the amounts of each were given as follows: License plates, $4,710,234,87; gasoline tax, $5,277,113,41; title fees paid by automobile manufacturers $35,000; automobile owners' fees for title registration, $130,239.23.

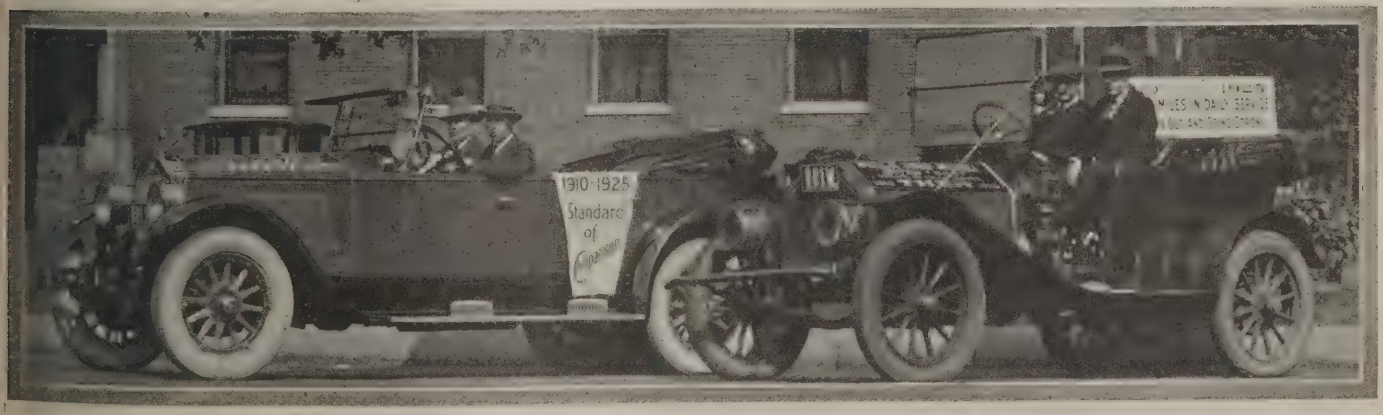
Deed for Maxwell-Chrysler Sale Is Recorded in Detroit

DETROIT, July 11.—The deed by which the Maxwell Motor Corporation transfers all of its property in Detroit, Highland Park, Ill., and Dayton, O., to the Chrysler Corporation has been recorded with the register of deeds of Wayne county.

The papers covering the transaction contained more than 6,000 words in booklet form totaling 14 pages in all. Revenue stamps on the deed amounted to $5,480.50, which indicates the total value of the properties as around $5,400,000.

In transferring its properties to the Chrysler corporation, the Maxwell corporation adds: "Together with all hereditaments and appurtenances of sale lands thereunto, belonging to or in any wise appertaining, and all plants, buildings, structures, fixtures, and erections, additions, betterments and improvements now erected on or attached to any of these premises above described are hereby conveyed and all equipment, machinery, tools, implements and appliances thereunto belonging, whether or not the same be affected to the freehold."

Old-Timer Goes Too When Good Will Tour Is Staged



Accompanying the 1925 Good Will Tour of the St. Louis Chamber of Commerce and making a great impression upon the forty-nine towns in western and northern Missouri visited on the tour were two Buicks, the one shown to the right being a 1910 model, with engine number 8657, and the one pictured at the left, a new Buick sport touring, 1925 model with engine number 1399172. The cars were owned by the Vesper-Buick Auto Co. of St. Louis, Buick distributors. Seated in the cars are, left to right, W. C. King, traveling representative, John F. Dawson, advertising manager, A. F. Stephens, shop superintendent, and F. H. Minshall, manager of sales promotion, all of Vesper-Buick

Along Automobile Row

EAST ST.LOUIS, Ill.—The Davies-Dougherty Company has been organized here and a garage has been opened at 707 Missouri avenue. Capital stock has been fixed at $7,000. A number of makes of motor cars will be distributed and accessories will be handled.

NEWARK, Ohio—The A. P. Hess Co., has been chartered with an authorized capital of $100,000 to deal at wholesale and retail in new and used autos and accessories and conduct a general auto garage.

PORTLAND, Ore.—W. S. Knudsen, president of Chevrolet Motor Company, R. H. Grant, vice-president, accompanied by F. N. Coates, regional manager, W. C. Williams, factory production manager, and W. I. Richmond, zone manager, are making a tour of the Pacific Coast visiting their distributors.

NEW ORLEANS—Milton W. Lusk, until recently New Orleans sales manager for the White Motor Co., and who was recently presented with the president's trophy, in honor of having achieved the highest percentage of White truck sales as per quota, in the company's contest, has been promoted to the position of district manager of the Baltimore district of the White Company.

CLEVELAND—The White Company has completed a new branch sales and servicing plant in Cincinnati and has new branch buildings under construction at Nashville and San Francisco. Additions to branch buildings also are being made at Washington and Dallas.

SEATTLE—Nute Motor Company, Hudson-Essex distributors in the Pacific Northwest has named the following dealers: Myers-Baird Motor Company, 4311 W. Alaska street, Seattle. Bucey Motor Co., Ketchikan, Alaska; Thos. J. McCaul, Juneau, Alaska; Anchorage Commercial Co., Anchorage, Alaska.

DETROIT—The Ayers Motor Sales Company has been appointed local distributors for Defiance trucks. Jules C. Ayers, head of the concern, has been identified with the truck line of the automotive industry when two cylinder trucks were in vogue.

MILWAUKEE—Announcement has been made in Milwaukee that the Shogren-Thomas Co. will distribute the Wills Sainte Claire in their district. The company is well known in the Milwaukee field and has been dealer for Peerless, a representation that will be continued.

HARTFORD, Conn.—Aaron G. Cohen, Inc., New England distributor of the Lexington has appointed Lawrence Sharkey of Meriden associate dealer in that territory.

LOS ANGELES—W. E. Lanphier, who has been connected with the retail department of the Howard Automobile Company of Los Angeles for many years, was recently appointed director of wholesale sales. He succeeds George Powell, who has been appointed retail sales manager.

ST. LOUIS—Walter Shaw Van has been appointed sales manager of the Benjamin Motor Co., Velie, Stutz and Cole distributor in the St. Louis territory.

DETROIT—W. M. Chamberlain, director of sales development of the Oakland Motor Car Co., has appointed M. L. Buck as field instructor succeeding G. A. Johnston who becomes retail sales manager of the Matheson-Oakland Co., Grand Rapids. Mr. Buck previous to joining Oakland was connected with the Dodge Bros. Inc., organization for six years.

ST. LOUIS—Ralph W. Page, who has been connected with automobile industry in St. Louis for the past ten years and lately as a member of the firm of Methudy and Page, Rollin distributors, retired from that firm recently and has been appointed director of retail sales of the Spaulding Motor Company, Inc., Flint distributor in the St. Louis district.

ROCK ISLAND, Ill.—Calvin Thompson of Monmouth, Ill., has purchased the garage of H. W. Kidder, Roseville, Ill. and will continue its Buick and Chevrolet agency.

MILWAUKEE—Organization of the Waltzer-Kern Co. to act as dealer for Chrysler fours and sixes in Milwaukee has been announced. Harry E. Jacobs is president of the new company but will not actively participate in its management. S. E. Kern is vice-president and E. J. Waltzer secretary.

DETROIT—S. E. Houston, advertising manager of Service Motors, Inc., has announced the appointment of E. A. Dennis as sales manager. Mr. Dennis has been connected with the Service corporation for the past three years. Practically all of his business experience has been in the automotive field.

ROCK ISLAND, Ill.—H. W. Neuman Machine Company, Davenport, Ia., established 17 years and specializing in the Jordan and Auburn car but dropping the latter two years ago, has resumed the Auburn agency.

SEATTLE, Wash.—Howell-Thompson Motor Co., Star distributors in King County have recently named the following Star dealers: Mettler-Holman Motor Co., Bremerton, Wash.; Sunset Garage, North Bend, Wash. and Valley Motor Co., Auburn, Wash.

CINCINNATI—The Point Garage Co. has been chartered with an authorized capital of $5,000 to conduct a general auto livery and garage business.

DETROIT—The Frazee Motors, Inc., of Niles, Michigan has been chartered for $25,000 to deal in motor vehicles. Faye Frazee and Carl H. Frazee of Niles and Charles Center Case, Jr., of Chicago are the incorporators.

CLEVELAND—The Wilson Avenue Auto Sales & Wrecking Co., has been incorporated by Philip Novitch, Max L. Lifshitz, Charles Udelefsky, Ruth E. Davis and Israel Weinberg, with a $1,000 capital to buy and sell used autos and parts and accessories.

HOUSTON, Tex.—Hurlburt-Still Electric Company will distribute the E. & J. type 20 headlights in the Houston territory, it is announced by the Edmunds & Jones Corporation of Detroit. The Detroit concern is manufacturing a lense which is said will comply fully with the Texas laws.

MILWAUKEE—The Tully-Hauber Garage has begun business at Wauwatosa, Wis., with capital stock of $6,600. Ray D. Hauber, Richard Tully and William Tully are the incorporators of the company which will engage in the general garage business.

ST. LOUIS, Mo.—Steinger & Tuthill Hudson-Essex Co., has purchased the building at 3438 South Grand Boulevard formerly occupied by Hambuechen Paige-Jewett Co. and will have it remodeled and redecorated after which it will be used for the display of Hudson and Essex cars.

SPRINGFIELD, Ill.—The secretary of state has issued articles of incorporation to the Illinois Auto Appliance Company with office at 154 East Erie street, Chicago. The capital stock consists of 500 shares of no par value. The company will deal in and manufacture automobile accessories.

PORTLAND, Ore.—Union Motor Company, distributor of Cleveland cars in Portland, Ore. announces an enlargement of their business. Frank A. Koehler has been named sales manager and Fred W. Haines, manager of the used car department.

SPARTANBURG, S. C.—J. W. Brown, who has the Cadillac agency for this territory, has taken the agency for the Hudson and Essex cars recently given up by C. D. Entrekin. Mr. Brown also handles Hupmobiles and Oaklands.

BUFFALO, N. Y.—Paige Sales Co. has given retail franchises to Leo Werner, St. Marys' Pa., and to the newly organized Paige-Jewett North Park Sales Co., for the North Park district, Buffalo, N. Y.

DETROIT—Formation of the Export Managers' Club composed of the various export managers of the different automobile manufacturers was effected recently with the election of W. E. Morrison, Paige-Detroit Motor Car Company export manager as president. It has 60 active members with applications yet to be acted upon.

BUNCETON, Mo.—George Hedgpeth, who for several years has been an employee of the local Ford Garage, has purchased a half interest in the Service Garage of which Clayton Eichelberger is the owner.

BUFFALO, N. Y.—The E. H. Baker Corporation, Buffalo, N. Y., distributors of Chrysler automobiles has given a retail franchise for the western part of the city to Joe Cook, until recently salesmanager of the Baker Corporation and to Frank Keefe, for many years one of its salesmen. Messrs Cook and Keefe have formed The Avenue Motor Corporation and taken a large building for sales and service.

CHICAGO—The Strom Ball Bearing Manufacturing Co., has appointed Frank H. Schubert as general manager. John Dlesh succeeds Mr. Schubert as works manager, and Lorenze Peterson continues as assistant works manager in charge of production.

SYRACUSE, N. Y.—T. G. Meachem, vice-president of the Creasalt Products Corporation, announces the appointment of Ernest V. Squier and Edward F. Clemett of Detroit, as representatives of Greasalt Products for the State of Michigan and the city of Toledo, Ohio.

BEAVERTON, Ore.—Otto Erickson & Company of Beaverton, known for years as a Ford dealer, has been granted the Star car sales franchise for Washington county. The organization has branches at Hillsboro and Forest Grove.

POCAHONTAS, Ark.—J. T. Davis & Son Biggers, have opened an Overland and Willys-Knight auto agency here and in connection will conduct a sales and service station.

SAN ANTONIO, Tex.—F. Roy Robinson for the last fourteen years in the tire business here, has joined the Jamison Auto Supply Company, where he will have charge of the tire department.

DETROIT—Headed by Thomas P. Henry president of the A. A. A. and the Detroit Automobile Club, eleven members of the Detroit club attended the recent A. A. A. annual convention at Atlantic City as delegates from the local organization Mr. Henry with William E. Metzger, director and former president of the club also attended the meeting of the executive committee.

MADISON, Wis.—Completion of the new $110,000 home of the Jacobsen Auto Co gives this city one of the most beautiful and at the same time practical and efficient automobile dealer homes in Wisconsin The show rooms, with 2,800 square feet of floor space are the largest in the city Cadillac, Hudson, Essex and Jordan cars are handled by the company on a dealer basis.

DETROIT—E. Reinhardt, identified with the servicing of Oakland cars for the last 11 years, has been appointed manager of the service station of the Richard-Oakland Co., at 440 Burroughs avenue, G. A. Richards, president has just announced.

ST. LOUIS—Fred W. Gatermann, president of the South Side Nash Co., has bought controlling interest in the concern through his purchase of the holdings of William J. Wolf, vice-president and treasurer of the company. Mr. Wolf has retired from the company.

DALLAS, Tex.—William Morris, for the last seven years Hudson-Essex dealer and distributor, has taken over the Chrysler lines in Dallas, it was announced this week. The Hudson-Essex lines were taken over by the Furguson Motor Company, July 1.

With the Associations

National Inventory Planned

NEW YORK, July 11.—Jobbers and rubber and tire manufacturers express keen interest in a questionnaire now being conducted by the National Tire Dealers' Association, which will show the condition of dealers' tire stocks as of June 30.

On April 27 the rubber division of the Bureau of Foreign and Domestic Commerce issued a report showing dealers' tire and inner tube stocks on hand as of April 1, 1925. George J. Burger, president, believes that the association's questionnaire will be of particular value in that it will offer a comparison between stocks on hand April 1 and stocks on hand June 30.

Thus the questionnaire will show what effect the rising prices of tires and tubes, during the April 1-June 30 period, had upon dealers' stocks. In addition, Mr. Burger says that about 80 per cent of the dealers reporting in the government's survey carried not more than 100 casings in stock, whereas the association questionnaire covers between 1,000 and 1,500 of its members who, on the average, carry stocks of from 300 to 400 tires.

Mr. Burger adds that the questionnaire will show whether the sizeable dealer and the consumer, in anticipation of the various boosts in prices, has been buying stocks in advance. Mr. Burger's information is to the effect that this has not been the case.

He points out that the answers to the questionnaire, which are requested by August 1, will be of special interest to jobbers, indicating the amount of dealer stocks on hand and thus gauging the jobbers' orders to the manufacturer.

Mr. Burger does not expect the questionaire to show that dealers' stocks have been appreciably reduced between April 1 and June 30. Each dealer is asked to state the number of tires, tubes and solid and cushion tires he had on hand as of June 30; whether purchases and sales increased during the first six months of 1925 over the same period in 1924; whether general business conditions in June were good, bad or fair; whether consumers are buying in advance of their requirements; whether dealers are securing advance prices for tires and tubes; and whether the dealers have obtained a new number of the association for 1925.

Louisville Moves Headquarters

LOUISVILLE, July 11.—Headquarters of the Louisville Automobile Dealers Association have been moved from 614 South Fifth street to 610 South Third street, in the Elks Club building. The move was made in order to place the association offices in a location more convenient to the automobile dealers of this city.

Will Close Saturday Afternoons

ST. LOUIS, July 11.—What does it profit an automobile dealer or distributor to keep his repair department open on Saturday afternoons? Very little or nothing, according to a recent survey made by members of the service managers' bureau of the St. Louis Automobile Dealers' Association.

At a recent meeting it was determined to have the members survey and report on the work done in their shops on Saturday afternoons. At a meeting held last week the results of this survey reported and all showed that Saturday afternoon was unprofitable in their shops, in some instances not enough being taken in to pay the wages of the men on duty. Therefore a resolution was adopted stating it was the belief of service managers that no loss of money would result to automobile establishments by closing their repair shops at noon Saturday and having them remain closed until Monday morning. The secretary of the bureau was told to bring the resolution to the attention of the heads of the respective firms represented by the service managers.

The officers of the bureau who were elected when it was organized to serve three months were all re-elected to serve nine more months for a complete year's term. They are J. O. Lowell, service manager Vesper-Buick Auto Co., Chairman; W. G. Miller, service manager, Stewart-Warner Products Co., vice-chairman, and Robert E. Lee, manager St. Louis Automobile Dealers' Association, secretary.

G. H. Brown, manager of the Gabriel Snubber business in St. Louis addressed the bureau on the servicing of Gabriel Snubbers and James Jambor, service manager of the United Motors Service Corporation, spoke on ignition troubles.

Johnson Is Re-Elected

LOUISVILLE, July 11.—Alex Johnson, president of the Louisville Automobile Club was re-elected a director of the A. A. A. at its recent convention at Atlantic City. Joseph M. Emmert, another Louisville delegate, was also elected a director. The A. A. A. indorsed the resolution of the Louisville club proposing that the federal government take over Mammoth Cave as a national park.

Oakland and Buick Win

ROCHESTER, N. Y., July 11.—The opening games of the Rochester Automobile Dealers' Association were won by the Oakland and Buick nines, the Oakland team defeating the Oldsmobile outfit, 18 to 12, and the Buick combination winning from the Hudson-Essex team, 14 to 8. The teams are composed of workers at the agencies.

Service Men Organize

INDIANAPOLIS, July 11.—All Indiana section of the Automotive Electric Service Association was organized here recently by Adolph Wagner of the H. T. Electric Company. The new section of the national association will be known as the Hoosier section.

Representatives of 30 authorized electrial service stations were present and after completion of the business session, a general discussion of topics of local interest rounded out an enthusiastic meeting.

The following were the elected officers:

Chairman, C. E. Smith of Indianapolis, vice chairman, H. W. Morris of Paris, Ill., secretary, A. A. Burgman of Logansport, Ind., and treasurer, G. E. Sligh of Evansville, Ill.

The next meeting is scheduled for September 25 at which time a large increase in membership is expected.

New Boulevard Opened

CHICAGO, July 15.—South Park Way, another new boulevard connecting link between Chicago's great South Side and the loop, was opened to traffic today. The Chicago Automobile Trade Association was represented in force with thousands of automobiles and trucks taking part in the floral parade that marked the opening of the new driveway.

Nearly every dealer in the city was present, heading a unit of from 10 to 50 cars, driven by his customers. All the cars and trucks were filled with flowers. Prizes were distributed for the best decorated cars, the best unit showing and many similar combinations.

Following the parade a banquet was held at the Congress Hotel.

Form Credit Association

LOUISVILLE, July 11.—Tire and accessory dealers of Louisville have lost approximately $150,000 from bad credit accounts during the past six months, according to a report presented at a recent meeting of the Louisville Tire and Accessories Association. Members of the recently formed association adopted a plan to exchange credit reports through a central office in an effort to eliminate bad credit risks. Officers of the association are William Mohlenkamp, president; R. D. Heman, vice-president; R. E. Dean, secretary and Ben Schulman, treasurer.

Electric Association to Meet

CLEVELAND, July 11.—The general meeting of the Automotive Electric Association will be held September 14 to 17 at Eaglesmere Park, Pa., according to an announcement by Earl Turner, manager.

Alabama Trade Sets Stage For Tuscaloosa Convention

Program Practically Completed for State Organization's Annual Meeting July 20-21

BIRMINGHAM, Ala., July 1.—The program for the meeting of the Alabama Automotive Trades Association is practically completed. The meeting will be held at the Chamber of Commerce in Tuscaloosa July 20-21 with E. W. Brownell, president, holding the gavel. The meeting bids fair to be the largest the association has ever had, according to Jim Farley, secretary, who has charge of the arrangements.

The following tentative program has been arranged for the meeting.

July 20

Registration of members and visitors.
Formal opening of the convention.
Address of welcome by Jim Robertson of Tuscaloosa, president of the Tuscaloosa Association.
Response by M. K. Johnson of Montgomery.
President's address.
Report of secretary.
Report of committees.
Unfinished business.
New business.

Adjourn for Lunch

Address by Arthur Mogge.
Address by Sidney J. Bowie of Birmingham.
Address by Henry B. Mathews.
Address by Congressman Kister Hill on "Legislative Needs."
Address and Short Talks by other speakers.

July 21

Boat trip to Lock 17 on the Warrior River. Luncheon will be served on the boat and the return trip made in the afternoon.

Mississippi Town Discards Street Cars for Bus Lines

NEW ORLEANS, July 11.—Hattiesburg, Miss. taxpayers have approved the substitution of motorbuses for their electric street car system, official tabulations of the recent election show.

The Hattiesburg Traction Company recently purchased by the Mississippi Power Company already had two motor buses in operation at Hattiesburg, and as soon as additional ones already shipped arrive, the electric street cars will be abandoned.

Hattiesburg is the first city in Mississippi to give up its electric railways for motor bus transportation. Meridian, Laurel, Gulfport and other cities are expected this summer to consider adopting buses for transportation.

NEW GARDNER DEALERS

ST. LOUIS, July 11.—New dealers added by the Gardner Motor Co., Inc., include:

C. E. Gass, West View, Pa.; N. A. Smith, New Castle, Pa.; M. A. Patton, Marietta, Pa.; Kline Motor Co., Colorado Springs, Colo.; Jos. S. Ronnow, Las Vegas, Nev.; T. H. Stuart, Sapulpa, Okla.

Coming Motor Events

Automobile Shows

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition.

Dallas, Tex. ..... Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis. ..... Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal. ..... Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich. ..... Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla. ..... Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal. ..... Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La. ..... Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va. ..... Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt. ..... Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn. ..... Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago ..... Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City ..... Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina ..... Oct. 3-13
Pan-American Road Congress.

London, England ..... Oct. 8-17
Olympia Passenger Car Show.

London, England ..... Oct. 29-Nov. 7
Annual Truck Show.

Races

Altoona, Pa. ..... Sept. 7

Charlotte, N. C. ..... Oct. 24

Fresno, CaCl. ..... Sept. 30

Laurel, Md. ..... Oct. 10
A. A. A. Race, Baltimore-Washington Speedway.

Los Angeles, Cal. ..... Nov. 26

Monza, Italy ..... Sept. 6
Italian Grand Prix Race.

Paris Montlhery track ..... July 26
French Grand Prix.

Syracuse, N. Y. ..... Sept. 19

Salem, N. H. ..... Oct. 12

Conventions

Buenos Aires, Argentine ..... Oct. 3-13
Pan-American Road Congress.

Cleveland ..... Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland ..... Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia. ..... Nov. 12-13
Automotive Merchants' Association Convention.

Everett, Wash. ..... Aug. 3-4
Annual state convention Washington Automotive Trades Association.

Montreal, Que. ..... Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia ..... September
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa. ..... Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis ..... Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Tuscaloosa, Ala. ..... July 20-21
Midsummer meeting of the Alabama Automotive Trades Association.

BUMPER GOES BY AIR

WAUKEGAN, Ill., July 11.—Recently a rush order for Biflex fender guards was received by the Biflex Corporation, Waukegan, and in order to give quick service, a pair was carried from Chicago to Dearborn, Mich., via the Ford Air Service.

NEW PEERLESS DEALERS

CLEVELAND, O., July 11.—Following are new dealers appointed by the Peerless Motor Car Company of Cleveland:

Joplin-Peerless Motor Company of Joplin, Mo.; A. C. Gielow Motor Sales Co. of Michigan City, Ind.

A. A. A. Will Continue Bus Division, President Asserts

Thomas P. Henry Announces Campaign to Enroll Members Will Open at Once

WASHINGTON, July 11.—The American Automobile Association will continue its bus division, according to President Thomas P. Henry, despite the fact that a complete basis for affiliation could not be worked out at the recent Atlantic City meeting with a committee representing the newly formed National Bus Association. Already representatives of several state bus associations have asked the A. A. A. to continue its bus work, officials of the latter association stayed three days after the Atlantic City meeting, and an immediate campaign will be started to enroll members.

"It is vital that the owners of all types of motor vehicles should stand together and work out their common problems, and we will throw our entire organization experience into a program to effect such a condition not only in the public interest, but in the interest of all motor vehicle operators," said President Henry when asked to comment upon the Atlantic City meeting.

"The difficulties we faced at that meeting were perfectly understandable" he said, "when one considers that the independent bus operators have had such hard fights for recognition, and against drastic laws and taxation that they become unduly suspicious and see in simple organizing principles, a deeply laid plot to control their desires and policies. We are seeing light upon this new and intricate transportation problem, and while as an organization, we have been perfectly capable of maintaining our own position for 23 years, we feel that the interests of bus and truck operators and owners are so identical in principle that one great Association ought to represent the varied interests, with all groups making up the association having adequate representation upon the governing board.

"There are bound to be differences of opinion, but it will be far better for all of us if we settle those differences within our own circle and then present a united front and a constructive program."

WISCONSIN CARS INCREASE

MILWAUKEE, July 11.—Figures on motor vehicle registration in Wisconsin as of June 30 indicate a substantial gain over the registration for 1924 at the same time. There was an increase of a half million dollars in the fees received for registration this year over last, the respective amounts being $7,190,449 for this year and $6,712,637 for last year. There were 538,001 vehicles registered in Wisconsin on June 30 this year is compared with 473,913 last year. Most of the funds derived from license fees will be used in the building and maintenance of state highways.

SQUEEKS and RATTLES

THEN IT WORKED



"What became of that hired hand you got from the city?"

"Aw, he used to be a chauffeur, and the doggoned idiot crawled under a mule to see why it wouldn't go."—Santa Barbara News.

It Is

Man, in speeding car, to driver, Say, this is a pretty town, wasn't it?

—Harvard Lampoon.

Metropolis

Mose—"Say, Eph, dis town 'Private' must be some city."

Eph—"How come, Boy?"

Mose—"Cause all dese yere Alabama cars is from dere."

—E. E. Rains.

IN REVERSE

She: He says he has had his car for three years and hasn't been in a wreck.

He: He means he has been in that wreck for three years and hasn't had a car.

—Life.

PAGEANT OF PROGRESS

1895: "Looky, automobile!"
1925: "Looky, horse!"
1955: "Looky, pedestrian!"

—Life.

A JOLLY WHEEZE

"For sale, Studebaker, to seat six, no room for same."

It would have been funnier not to say anything until afterwards.

—London Daily News.

Fable—Once upon a time a radio fan described his set coherently.

—Toronto Telegram.

Padded Cell

Advertisement in the Rosewell (New Mexico) Evening News:

"For Sale—Twelve fresh milk cows, twelve calves and one hundred lambs. Scientifically adjusted. Terms to right party, but no last year's bird nests need apply."

—American Legion Weekly.

A USED CAR

Father (with new car): Can't understand what's wrong. It went all right when I drove it down yesterday.

Bobbie (with vivid memories of his own toys): Yes, but yesterday it was new, Daddy.

—London Opinion.

WATERED STOCKS



Customer—I see you are selling canoes now.

Accessory dealer—Yes, that serves two purposes. It works in well with the tourist trade and gives me a line with a good turnover.

June Marmon Sales Double Those of Same Month, 1924

INDIANAPOLIS, July 11. — Final check-up by Nordycke & Marmon Company sales department shows that retail sales reported by the distributors and dealers for June are more than double the sales made in June 1924. Fifteen per cent more Marmons were sold and delivered than in May, and summer sales have been in excess of factory shipments in spite of the fact that factory shipment for June, 1925, were three times as large as those of the same month last year.

The record of unfilled orders on hand July 1 will keep the plant at capacity during July, while for some models in high demand there are sufficient unfilled orders on hand to assure production all summer.

These records show that the prospects for late summer Marmon sales and production were never better, and that the next quarter may equal the pace established during the first six months of the year when the total volume of business exceeded the total 1924 volume.

DURANT PRICES REDUCED

LANSING, Mich., July 11.—Effective July 10 prices of Durant cars were reduced as follows: Chassis from $720 to $710; Standard Touring from $830 to $810; Standard Coupe from $1160 to $1090; Standard Sedan from $1190 to $1150; Special Touring from $950 to $930; Special Coupe from $1235 to $1160; Special Sedan from $1310 to $1280.

Balloon tires were made standard equipment on all Durant models. All prices quoted above are f. o. b. Lansing, Mich.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
------	5-p	Phaeton	$1,575
3100	5-p	Sp. Phaeton	1,650
3145	5-p	Coupe	2,050
3470	5-p	Sp. Sedan	2,100
------	5-p	Brougham	2,050
		"ST 8"	
------	5-p	Sp. Phaeton	1,995
-------	4-p	Coupe	2,450
------	4-p	Brougham	2,450
------	5-p	Sedan	2,595
AUBURN "4"			
------	5-p	Touring	$795
		"6-66"	
------	6-p	Roadster	1,495
------	5-p	Brougham	1,595
------	5-p	Sedan	1,795
		"8-88"	
------	6-p	Roadster	1,975
------	4-p	Sport Roadster	1,975
------	4-p	Club Roadster	2,075
------	4-p	Sport Brougham	2,250
------	5-p	Sedan	2,350
BARLEY "6" 6-50			
2750	5-p	Touring	$1,395
2800	5-p	Sp. Touring	1,495
3100	5-p	Sedan	1,850
3150	5-p	Sp. Sedan	2,250
BUICK "Standard"			
2750	2-p	Roadster	$1,150
2920	5-p	Touring	1,175
2960	2-p	Coupe	1,375
3075	4-p	Coupe	1,565
3185	5-p	Dbl. Srv. Sedan	1,475
3245	5-p	Sedan	1,665
3050	5-p	Coach	1,295
		"Master" (120 in. W. B.)	
3285	2-p	Roadster	1,365
3465	5-p	Touring	1,395
3850	5-p	Sedan	2,225
3560	5-p	Coach	1,495
		(128 in. W. B.)	
3485	3-p	Sp. Roadster	1,750
3550	5-p	Sp. Touring	1,800
3610	7-p	Touring	1,625
3745	3-p	Country Club	2,075
3770	4-p	Coupe	2,125
3905	5-p	Brougham Sedan	2,350
4030	7-p	Limousine	2,525
3995	7-p	Sedan	2,425
3850	7-p	Town Car	2,925
CADILLAC "V-63 Standard Line"			
4190	2-p	Roadster	$3,185
4280	7-p	Touring	3,185
4200	4-p	Phaeton	3,185
4240	5-p	Coach	3,185
4610	7-p	Sedan	3,885
4525	5-p	Landau	3,885
4655	7-p	Std. Imperial	4,010
		"Custom Built" (132 in.)	
4260	2-p	Coupe	3,975
		(138 in.)	
4400	5-p	Coupe	4,350
4490	5-p	Sedan	4,550
4590	7-p	Suburban	4,650
4655	7-p	Imp. Suburban	4,950
CASE J. I. C.			
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3034	5-p	Touring	1,595
3923	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3309	5-p	Coach	1,595
CHANDLER (Cont'd)			
3309	5-p	Chummy Sedan	$2,045
3469	5-p	Met. Sedan	2,195
3428	5-p	Sedan 4 d.	1,995
3521	7-p	Sedan	2,195
3598	7-p	Limousine	3,095
CHEVROLET			
		"Superior" (Series K)	
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	715
2110	5-p	Coach	735
2220	5-p	Sedan	825
CHRYSLER "Four"			
		(109 in. W. B.)	
2390	5-p	Touring	$895
2440	2-p	Club Coupe	995
2590	5-p	Coach	1,045
2680	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2730	5-p	Touring	1,395
2785	5-p	Phaeton	1,495
2895	5-p	Coach	1,545
2935	4-p	Coupe	1,895
2995	5-p	Brougham	1,965
3060	5-p	Sedan	1,825
3085	5-p	Imperial Sedan	2,065
3090	5-p	Crown Sedan	2,195
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3040	5-p	Sedan	1,495
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
2990	5-p	Brougham	1,545
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$6,300
4500	4-p	Sp. Touring	5,800
4700	4-p	Coupe	7,150
5000	6-p	Limousine	7,650
DAGMAR "6-70"			
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	2-p	Roadster	1,785
3200	4-p	Sp. Touring	1,785
3150	5-p	Touring	1,985
3400	2-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS "90"			
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
------	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
------	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
------	5-p	Roadster	$1,895
------	5-p	Phaeton	1,895
------	5-p	Std. Sedan	1,995
------	5-p	De Luxe Sedan	2,195
------	5-p	Cabriolet	2,095
------	5-p	Brougham	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	885
2695	5-p	Spec. Touring	985
2708	2-p	Coupe "B"	995
2823	2-p	Spec. Coupe "B"	1,095
2995	5-p	"B" Sedan	1,095
3077	5-p	Spec. "B" Sedan	1,195
3020	5-p	Sedan A	1,245
3107	5-p	Spec. "A" Sedan	1,330
2723	5-p	Coach	1,095
2823	5-p	Spec. Coach	1,195
DORRIS "6-80"			
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800
DUESENBERG			
		Straight "8"	
3920	3-p	Roadster	†
3700	5-p	Phaeton	$6,650
3920	7-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
------	5-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT "D"			
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT A-22			
------	2-p	Sp. Roadster	900
2225	5-p	Touring	810
------	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
------	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
------	5-p	Spec. Sedan	1,280
2480	5-p	Coach	1,050
------	5-p	Spec. Coach	1,100
ELCAR "4-55"			
------	5-p	Touring	$1,095
------	5-p	Coach	1,195
------	5-p	Sedan	1,395
		"6-65"	
------	5-p	Touring	1,295
------	5-p	Coach	1,395
------	5-p	Sedan	1,595
		"8-80"	
------	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
------	7-p	Sp. Touring	2,265
3000	3-p	Coupe Roadster	2,315
------	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2130	5-p	Touring	$850
2395	5-p	Coach	850
FLINT "55"			
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-6	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN "11-A"			
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	7-p	Cabriolet	4,400
GARDNER "Series 5"			
2680	5-p	Coupe	$1,275
2895	5-p	Sedan	1,475
3070	5-p	Sp. Sedan	1,595
		"6"	
3010	5-p	Touring	1,395
3240	5-p	Brougham	1,595
3310	5-p	Sedan	1,795
------	5-p	Sport Sedan	1,895
		"8"	
3350	5-p	Touring	1,995
------	4-p	Cabriolet	2,245
3510	5-p	Brougham	1,995
3600	5-p	Sedan	2,495
GRAY "O"			
1750	5-p	Touring	$630
1880	3-p	Coupe	845
2020	5-p	Sedan	895
2130	5-p	Royal Sedan	975
HAYNES "60"			
3295	5-p	Touring	$1,600
3650	5-p	Brougham	2,200
3765	5-p	Sedan	2,300
HERTZ D-1			
3360	5-p	Sedan	$1,695
HUDSON "Super Six"			
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,250
3425	4-p	Brougham 4 d.	1,595
3675	7-p	Sedan	1,795
HUPMOBILE "R"			
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT "23-25"			
3025	4-p	Roadster	$1,680
2835	5-p	Touring	1,205
3015	5-p	De Luxe Touring	1,320
2835	2-p	Bus. Coupe	1,340
3025	5-p	Sedan	1,580
3305	5-p	De Luxe Sedan	1,780
3000	5-p	Coach	1,260
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,575
3340	5-p	Touring	2,575
3450	3-p	Friendly "3"	2,875
3625	5-p	Brougham	2,875
3520	4-p	Victoria	2,775
3525	5-p	Sedan	2,975
3470	7-p	Sedan	3,325
3800	7-p	Suburban Sedan	3,375
KISSEL "55"			
3130	2-p	Speedster	$1,895
------	2-p	Sp'dster De Luxe	2,185
------	4-p	Speedster	1,995
------	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
------	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
------	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
------	7-p	Touring	1,785
------	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
------	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	2,250
------	5-p	Broug. Sed. DeL.	2,685
------	5-p	Brougham 2 d	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
------	5-p	Victoria De Luxe	2,685
		"75"	
------	2-p	Speedster	2,195
------	2-p	Speedster De L.	2,485
------	4-p	Speedster	2,295
------	4-p	Speedster De L.	2,585
------	2-p	Speedster De L.	2,585
------	2-p	Enc. Sp'd'r DeL.	2,985
------	4-p	Tourster	2,195
------	4-p	Tourster De L.	2,385
------	5-p	Phaeton	1,985
------	5-p	Phaeton De Luxe	2,185
------	7-p	Touring	2,085
------	7-p	Touring De Luxe	2,285
------	4-p	Coupe	2,485
------	4-p	Coupe De Luxe	2,885
------	5-p	Brougham Sedan	2,395
------	5-p	Broug. Sed. DeL.	2,985
------	5-p	Brougham 2 d.	2,195
------	7-p	Sedan De Luxe	3,485
------	7-p	Berl. Sed. De L.	3,585
------	7-p	Victoria	2,585
------	7-p	Victoria De Luxe	2,985
LEXINGTON "Concord"			
------	5-p	Touring	$1,595
------	5-p	Touring (Enc.)	1,695
------	5-p	Spec. Touring	1,795
------	5-p	Sedan	2,185
------	5-p	Spec. Sedan	2,445
		"Minute Man"	
------	2-p	Roadster	2,145
------	5-p	Touring	2,095
------	7-p	Touring	2,195
------	5-p	Lark Touring	2,345
------	5-p	Cal. Touring	2,495
------	7-p	Cal. Touring	2,495
------	5-p	Royal Coach	2,495
------	5-p	Brougham	2,595
------	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000

MOTOR AGE

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A Trade Paper —Exclusively—

MOTOR AGE is a trade paper. It is published in the interest of those engaged in the retail automotive trade, and it is not intended for anyone else.

You know that, of course. So does everyone else that reads MOTOR AGE. Yet it is surprising how many people outside the trade think they want the paper. Every day we return a batch of subscriptions received from people who are not in the business, but who want to read MOTOR AGE. One month we sent back $300.00 worth of orders of that kind.

As an exclusive trade publication, MOTOR AGE gives its editors an opportunity of thinking in the terms of the dealer or merchant, whose business life is wrapped up in things automotive. These editors can talk to you in your own language. With such a well directed editorial policy their attention is not diverted along other lines. They can concentrate in studying and writing about automotive sales and service exclusively.

We believe that our policy of restricting our circulation to the trade is correct. We know that it is necessary if we are to continue to supply a magazine of the type that we are now sending you. And we hope that you will lend us your co-operation in our efforts to maintain MOTOR AGE as a trade paper—exclusively.



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A word to the Parts Distributor

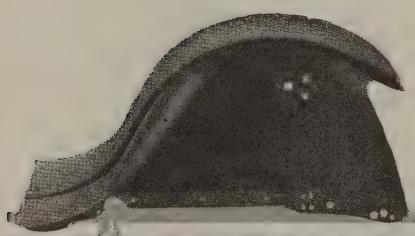
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Department B
FOSTORIA, - OHIO



The Fostoria Pressed Steel Company, Department W, Fostoria, Ohio.
Please send me, without obligation, my copy of the Fostoria Fender Wall Ch
in a special mailing tube without folding.

Name..... Address.....

FOSTORIA FENDERS

MOTOR AGE

Vol. XLVIII July 23, 1925 No. 4

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

AUTOMOTIVE production now at low point for the year but sales continue in heavy volume, many predicting last half of 1925 will be as good as or better than first six months. Page 32.

Meeting of Yellow Cab Manufacturing stockholders to ratify merger with General Motors scheduled for August 18. Page 32.

Climbing prices of crude rubber have little bad effect on Wisconsin factories thus far. Page 33.

Net sales of Dodge Brothers passenger cars and parts totaling $117,045,569 for first half of 1925 set new high record. Page 32.

Goodrich and Ames Holden Canadian products now being developed with consequent expansion. Page 33.

Tire prices raised by Goodrich for fourth time this year. Other companies expected to follow. Page 33.

General Motors' sales during June, 1925, are 10,557 greater than those of same month last year. Page 34.

New Ford branch at Mexico City will be headed by A. R. Lajous, formerly manager of the Havana branch of the Ford Motor Company. Page 34.

Transportation section of the International Chamber of Commerce to study economic phases of motor vehicular freighting with relations to other transportation. Page 39.

The second of a series of sales meetings is held by Velie Motors Corporation at the factory in Moline, Ill. Increases in business over 1924 are reported. Page 43.

Diana Eight is received enthusiastically by the public, says Vice President Rengers after extended tour of metropolitan centers where new Moon product is being shown and sold. Page 38.

Secretary Mayes of Missouri agricultural board urges farmers to establish roadside markets for accessories as well as produce. Page 43.

Number of unfilled Stutz orders at the end of June is greatest in history of the company. June business 20 per cent better than May. Page 38.

Ford roadster is sent from Detroit to Cleveland by air when the new airport at the latter city is opened. Page 35.

Canadian automobiles pass 600,000 mark in registrations for the first time in history. Number is 652,121 January 1, while last year it was 593,323. Page 35.

With about 40,000 orders on the books, Chrysler plants at Detroit speed up production to 750 cars daily. Page 35.

Maudslay Motors Company of Coventry, London, brings out a safety coach chassis in three models, designed for high speed bus travel. Page 42.

June sales by Hupp Motor Car Corporation are reported to be greatest in history of the company. Eight cylinder models increase in shipments 77 per cent over May. Page 42.

Manufacturers of motor cars seek through N. A. C. C. to arrange return of replacement parts business, largely held by independent makers. Page 39.

C. C. Hanch, general manager of National Association of Finance Companies, will speak on time-payment problems at meeting of Ohio council, N. A. D. A., August 6-7. Page 37.

IN NEXT WEEK'S ISSUE—Driving All Wheels of the Car

As the Editor Sees the Automobile Business

Random Observations on Sales and Service

By SAM SHELTON

PYROXYLIN painting systems are making a wonderful impression on automobile dealers. Some see the possibilities for new and profitable business opened up by this development and, as might be expected, there are others slumbering peacefully while opportunity saunters by.

Dropping in here and there among small city dealers the other day I was highly gratified upon finding in a town of 2,000 population a dealer who had a pyroxylin painting system in full operation although he had not yet had time to build special spraying booths, install ventilators or do a number of the other things that it is advisable to do if one expects the best and most profitable results.

This dealer did what many others have been thinking about. He put in an outfit primarily to repaint used cars to give them readier sale at better prices than they otherwise would command. He found that one of his men soon became very adept at spraying cars and could put on a very presentable refinish job. It was the kind of job that could be put on in a reasonable time and that customers were willing to pay a fair amount for.

There is such a thing, you know, as doing too good a refinish job. I may be offending the old time painters in saying so, but to spend days and days of a high priced man's time painting and polishing a used car until it shines like a new piano seems to me to be nonsensical. The car owner is not likely to be in the market for a repaint job until his vehicle is at least a year old and then what he wants is a new finish that will preserve the vehicle and make it look well without the pretense of trying to pass it off for a new car.

Just a decent refinish job that a moderately skilled workman could put on at a cost the car owner can afford to pay is what the trade needs, and that is just the sort of job this dealer I started out to tell about was doing.

The work was done in a corner of the shop near a large window. Fenders and hood were taken outside, in a protected place, and sprayed in the open air. The work was going along nicely. The equipment hadn't cost much, the spray gun operator was on to his job and there were plenty of customers in sight. The proprietor was planning to install a regulation spraying booth, but meanwhile he was educating a lot of car owners to the advantage of the pyroxylin method of refinishing their old cars.

Another dealer handling a car that comes finished with pyroxylin found that a spraying outfit was a big help to him in making sales. His customers frequently demanded new cars in unusual colors, in which case by means of a spraying outfit he would proceed to change the color of any car in stock to suit the requirements of the customer, having the vehicle ready for delivery within a day. And $35 extra on account of a special paint job easily covered the cost of the transformation with a reasonable profit included.

Unfortunately not all good dealers recognize the advantages of the possibilities opened up by the pyroxylin painting systems. In one town the dealer with the largest plant had leased space on the second floor to a painter who promised to put in a pyroxylin painting establishment.

The painter did put in considerable equipment, including spray gun, air separator and other needed apparatus, but his heart was not in the enterprise for he had been a painter of the old school too many years to forget it. Furthermore he was a commodious consumer of moonshine and naturally the business was a failure.

Pyroxylin painting got a severe setback in that town simply because the dealer did not appraise it highly enough to be personally responsible for it and see that it was done right. Another dealer without so large a plant and business, but with more foresight, probably will annex this profitable business.

Fire and insurance regulations in some states and localities seem to make it hard for the dealer to put in a plant that complies with all the regulations.

And yet a lot of nonsense has been spread abroad about the hazard of pyroxylin painting.

Repeated tests have demonstrated that it is not to be considered any more hazardous than ordinary painting.

In fact one of the large manufacturers conducted an experiment recently in which a car was sprayed in a room with no more ventilation than ordinary windows while two men in the room smoked cigars. This practice is not recommended.

There is no use taking fool chances, but it simply shows that considerable exaggeration has been spread around about the extreme danger of fire in a pyroxylin painting shop.

Letters received by MOTOR AGE indicate that this series of articles on Pyroxylin Finishes is pleasingly appreciated by our readers. The articles are practical, containing information for those contemplating equipment for this work and others who are already at it. All tradesmen who want to keep abreast of the times will find them well worth reading.

SINCE the running of the last Indianapolis 500-mile race in which the front wheel drive Miller-built car finished second and only a few seconds behind the winning Duesenberg, there has been much talk pro and con about the application in the future of front wheel drive to passenger cars and other automotive vehicles.

Many hold that front wheel drive alone for passenger cars would be doing the job but half and that if anything the future cars will be ones in which all wheels are driven. The logic behind this is that it is just as feasible to accelerate as it is to brake on four wheels.

In the belief that much of interest could be published about driving and braking independently on all wheels of an automotive vehicle, multiple drive in other words, a representative of MOTOR AGE recently interviewed a recognized authority on the subject and results of this interview will be published in the July 30 issue.

Should Floor Days for Automobile Salesmen Be Abolished?

N. A. D. A. Spokesman Says—"Yes"

COMPLETE abolition of floor days for automobile salesmen is recommended by A. R. Kroh, of the sales promotion department of the National Automobile Dealers Association, and his argument in favor of its abolition will be presented at the first annual convention of the Ohio Council, N. A. D. A. at Cedar Point, Sandusky, Ohio, Thursday and Friday, August 6-7.

Between 1,000 and 1,500 dealers, their salesmen, sales managers and service managers are expected to attend. Attendance at the meeting will be by automobile, the members having decided to make this a "motorized meeting."

"Salesmen spend three-fourths of their time now praying for floor day" is Mr. Kroh's description of happenings in the automobile salesroom. "Their prayers are well founded too, from all dealers tell me, some dealers declaring that as high as 75 per cent of their prospects walk inside the salesroom before the salesman is aware they are prospects. The salesman who is on duty the day the most prospects walk in is the salesman with the most prospects and the greatest number of sales. Naturally the salesman who draws an unlucky day is considerably perturbed about it. As a consequence the entire sales force is in turmoil.



A. R. Kroh

"The question of compensation for salesmen is agitating not only the automobile business, but all business. We are asked constantly, 'which is the best plan of paying salesmen, salary or commission?' There is no hard and fast answer to that question. The thing the salesman is interested in, is not HOW he is paid, whether by salary or commission, but HOW MUCH he is paid.

"There has been very little constructive attention paid to this subject in the automobile industry until recently. Many of the leading dealers are paying salaries, salaries and commissions, commissions and bonuses in the hope of getting greater efficiency from the sales force. Elimination of floor day seems to me one of the first steps to be taken in the balancing up of the sales situation in a modern manner. There is too much hazard and too little recognition of pre-sales effort as a vital part of the closing of the deal."

Mr. Kroh is one of the three automobile sales experts of the United States, who will be heard at the Cedar Point dealer convention. For many years he was with the sales department of the U. S. Motor Truck Company, later became dealer development manager for the Goodyear Tire & Rubber Company at Akron, and for the past two years he has served in the same capacity with the Chevrolet Motor Company, of Detroit. Other sales experts will be Edward Payton of Cleveland, considered the leading retail sales manager in the automobile industry today, and Howard J. Wisehaupt of Cleveland, of the N. A. D. A. staff of sales specialists.

"The salesman problem in the large town is a matter of grave concern to the merchants," Mr. Wisehaupt declares, "but the problem is greatly aggravated in the small town.

"This is largely the result of the belief of the home town boy that his opportunity lies in the larger city, while as a matter of fact it is often right under his nose.

"It may be true in a number of cases that the salesman of the large city will make a bigger gross income, but the percentage of satisfying, satisfaction-giving incomes in the smaller towns is greater than it is in the large city.

"The small town salesman who keeps his mind on the job has more at the end of the year than the average salesman in the large city.

"While it is true that the large city salesman has a greater opportunity for study and training than the small town salesman, it is also true that the diversions of the large town are greater and the percentage of those who study and train in the city isn't much larger actually than the percentage in the small town.

"Since the perfection of the trade organization movement in the more substantial industries, the facilities for salesman education is extending farther and farther into the rural communities and the traveling institutes maintained by the larger trade organizations actually give to the salesman who is seeking information, as much material as the large city salesman will acquire."

Mr. Wisehaupt is considered one of the foremost authorities of the country in the training of salesmen.

After a special tour of 50,000 miles in which he visited more than 150 merchandise distributing centers of the United States studying retail selling methods, he was engaged by the National Automobile Dealers Association for special sales work among the automobile tradesmen.

He is one of the staff of merchandising specialists maintained by the National Automobile Dealers Association for consultation and analysis of business in the automobile industry.

The Ohio meeting will be one of the more important dealer events of the year and is to be unique in more rspects than one.

Association affairs of the Buckeye dealers are distinguished in the fact that they now are under the complete supervision of the N. A. D. A. through the Ohio Council of this national organization.

Since assuming this responsibility, following dissolution of the Ohio Automobile Trade Association, the N. A. D. A. has been doing some intensified and fruitful campaigning in that state. Big accomplishments are expected to be scored through the great gathering Aug. 6-7.

Common Sense in the Saddle

New Wave of Sounder Business Practice By Dealers, Plus Sanity in Makers' Policies Proving Profitable

BY CLARENCE PHILLIPS

WERE we to hunt for a bit of paraphrasing that the trade would like to sing in lusty voice—and conditions would lend the proper enthusiasm—the song could well start off with:

"Yes, we have no used cars."

It will be generally conceded that this would make an inspiring chorus.

Conditions at present would not warrant such a great din of vocalization. Yet it is worthy of note that here and there are automobile merchants who could qualify today for participation in this song.

Last year they could not have done it, but that was last year when conditions were less favorable and when they did business, as a rule, in a different way. Last year at this time most of them were too well supplied with used cars and with the shadows of the season lengthening the middle of July found them working hard to clear the floors.

That is how well the used car situation has been taken in hand in certain localities and by certain dealers..

Rarely as such reports are received it is sweet music to hear actual *complaints* that the dealer is hard pressed to find used cars for prospective buyers—where his usual experience at this time has been quite the reverse of this situation.

In these exceptional cases we hear of dealers going into the open market to replenish used car stocks. They are not fighting to get out from under large stocks bought unwisely but rather they are bending energies to stock used cars at a period which often before has found them overloaded.

What is the answer?

Something has happened, for one thing, in the field of motor vehicle merchandising. A new power has taken root in the trade. There is a slow but steady revolution taking place which is bringing the merchant into the possession of his better business judgment. These dealers who are buying used cars in the open market simply have caught step with the new movement in the trade which prescribes sound and conservative used car practices.

It is safe to venture that the used cars which they buy now to meet demands of their trade will be bought at figures enabling them to sell at a profit.

Investigation of some of these cases divulges that allowances on trade-ins invariably have been closely figured. That is one of the big screts of the quick clean-up. Having bought the cars "right" they have been easier to sell quickly without a sacrifice of profits and by moving the stock swiftly capital was liberated for other operations—capital, in this instance, being diverted *to the purchase of more used cars.*

Notwithstanding the "worry" to which these dealers are subjected in finding suitable used cars for their business needs they are in an ideal situation and they have demonstrated what might be done by any retailer who will apply the same brand of horse-sense in dealing with this problem.

Ability at this time of the year to sing that thrilling refrain "Yes, we have no used cars"—is an attainment well worth striving for. If the time comes when all the trade can join in the chorus we will quit talking about the used car as being a burden to the new car business. That much is certain.

As previously indicated the cases to which we have just referred are isolated instances, yet they hold a big significance, standing as outward signs of a tendency toward better practices that is steadily developing in the trade. Theoretically used car stocks should be well worked down toward the last of July, yet we observe some dealers upsetting previous rules and cleaning up their large accumulations of used cars before the first of July and even by the middle of June.

They are the luminaries of the retail field at a time when the used car situation for the trade at large is exceptionally good.

Reports from substantially all sections of the country tell us that stocks of used cars have been satisfactorily reduced. In some localities the summer is making a new record respecting this important phase of merchandising operation. Of course there is a certain spottiness and there are dealers who are overburdened with used cars. But we can't expect too much.

From all accounts the trade doubtless is buying second hand vehicles more closely than in former years, indicating again that the new force of practical business sense in handling trade-ins is really asserting itself.

A factory representative who has just completed an extensive tour to study retail conditions made this comment: "There is a sharp and highly favorable contrast between the business methods employed by dealers this year and those of last year. I see it nearly everywhere I go. They are attacking their problems generally in a more gratifying manner."

Contributing to the improved situation, it should not be overlooked, is the sane policy of manufacturers, in planning production schedules from the first of the year to meet only the demands of the market.

This policy has rendered so-called "factory pressure" a substantially negligible element of which relatively little has been heard during the present year.

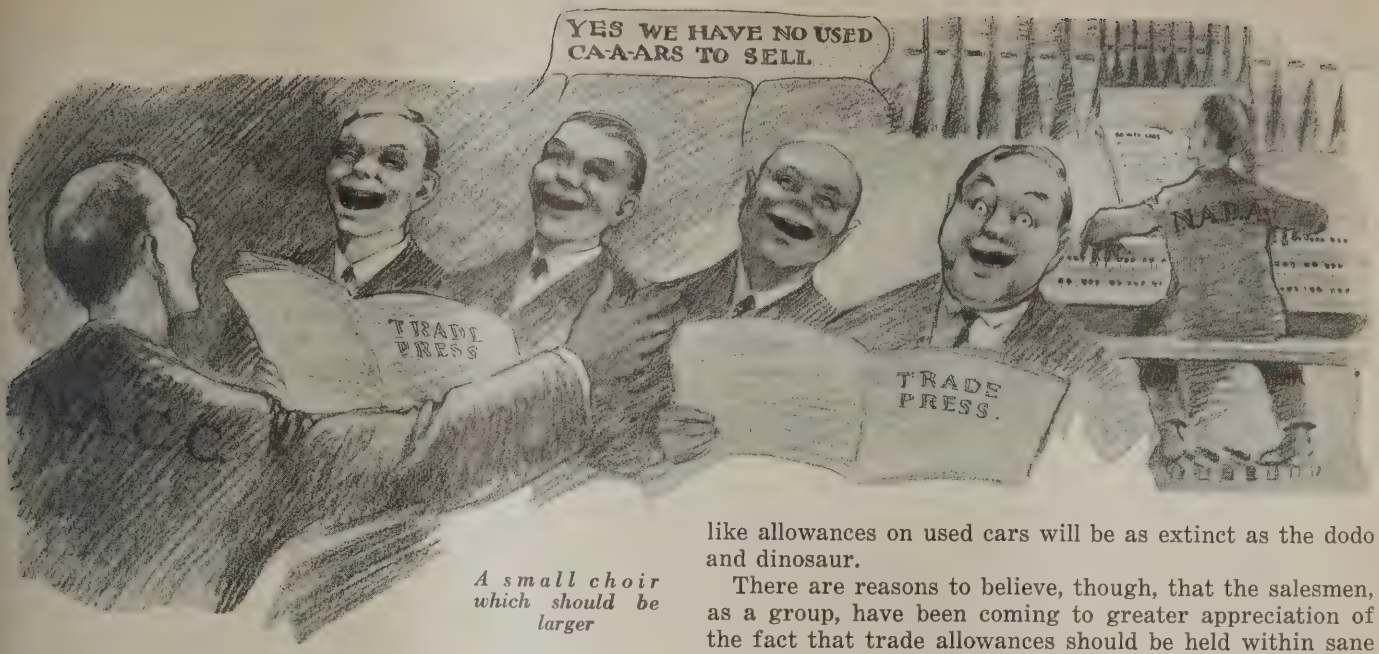
MANUFACTURERS and retailers are going to profit this year as the result of the new movement of saner business practices throughout the industry and the trade.

An important contribution by the producers has been in the policy of striving to hold output within the limits of demand.

Dealers have not been overloaded by the factories and hence they have not been guilty of the wild used car trading that characterizes a period of overproduction by the maker.

And it is apparent that the trade as a whole is operating on business lines of an improved character.

Business sense is taking hold. Let business sense continue its reign.



A small choir which should be larger

What has been and what still is being heard in numerous quarters are complaints of salesmen that they are unable to make sufficiently quick delivery of new cars. We can sympathize with the salesman on this point but his position is vastly better than would be the case were the house stocked to overflowing with cars that could not be moved without a sacrifice of profits. Such losses for the house are losses for himself, if he will only analyze.

The salesman's prosperity can not exceed the proportion of prosperity enjoyed by the retailer he represents.

Not So Sorely Tempted

Not overloaded by the factory and often having to wait his turn for factory deliveries the automobile dealer this year has not been so sorely tempted as in times past to make reckless allowances on used cars in order to move an over-abundance of new cars.

This has been to the salesman's advantage for he has not been obliged to stand his share of the sacrifice. And where he is called upon to sell used cars as well as new cars the low level of used car stocks, composed of models wisely bought, is a situation decidedly in his favor.

It enables him to give more of his time to new car selling and also make more money for himself on the used cars that he markets.

That dealer having a force of salesmen fully recognizing the importance of allowing for the used car only what it would be worth on the resale market is the kind which we trust will be typical in the future.

Resisting the salesman's unreasonable insistence for excessive allowance in order that he might collect a commission on a new car sale is something which has put the retailer severely on trial and inability to stand by his guns in such emergencies has cost the dealer many a dollar, if not those necessary extra dollars that mean continuance in business.

What the dealer, ordinarily, has failed to put across in the mind of the salesman has been the vital truth that such practices also minimize the salesman's own opportunity for profits.

Convince him of that and the used car problem will be greatly simplified, brought closer to the basis of profitable merchandising—and new car selling can be made more attractive for all concerned. One of these days, we trust, the salesman who talks the house into making unbusiness-like allowances on used cars will be as extinct as the dodo and dinosaur.

There are reasons to believe, though, that the salesmen, as a group, have been coming to greater appreciation of the fact that trade allowances should be held within sane limitations. Explanation of this awakening might be found largely in indications that there has been a steady ascendency in the intelligence and general capacity of the group. Misfits and those who are utterly unfit have been stepping out to make room for others more capable and with a broader grasp of business principles.

It is the salesman of this higher school who is looking out after the broad interests of his employer and who, if a confident guess will be permitted, has had much to do this season in helping move new and used cars and helping make real profits for the business.

He, so we believe, is representative of the type that eventually will dominate the selling field. All others gradually will be eliminated. It is the salesman, of course, who to a great extent makes or unmakes the dealer's business. He has helped unmake it more in the past than he will hereafter.

Looking behind the entire picture of the healthful condition now prevailing and of the trend in the direction of sounder practices we easily discern the influence of organized effort and educational campaigning.

Undergoing Important Transition

Led by the National Automobile Dealers Association and the National Automobile Chamber of Commerce recent years have witnessed a remarkable catalog of assaults upon business evils readily capable of doing untold damage to the interests of all concerned. Eradications and progress toward further eradications and corrections have resulted and as cases stand today leaders in the trade are justified in the belief that the entire industry now is undergoing the most important transition in its history—a changing over from policies and practices of less sound character to those that make for a better and sturdier general business structure.

In the final analysis it might be said that Common Sense has come to the front and it is being well demonstrated that Common Sense pays. Conditions respecting the used car still are far from ideal but much fine headway has been made and there will be further progress. With factories holding steadfastly to the policy of limiting production to meet requirements of buying demand, with increasing factory cooperation, and with the dealer conducting his business in used cars upon a sensible merchandising basis the trade will have little to fear in the future.

Saying the least the situation has improved and sanity has figured materially in the betterment.

Applying a Pyroxylin Finish to a Car

Polishing Operations After Application of Enamel Coats. Striping Over Lacquer. Amount of Material Required for Average Job

By B. M. IKERT

RUBBING constitutes quite an important part in the various operations necessary in applying pyroxylin finishes to motor cars. While most of the newer finishes dry with some lustre naturally given by the enamel itself, a higher lustre can only be had by rubbing or polishing.

These rubbing and polishing operations as ordinarily performed by hand require considerable time, as much as 20 hours being needed some times to get the desired results after the application of the last enamel coat. Consequently it is very desirable to have on hand equipment or other means for reducing the time for rubbing and polishing. In this connection it might be stated that it is possible to buy rubbing, polishing and sanding machines pneumatically operated which very materially cut down the time required for any polishing or rubbing operation.

The particular machine as illustrated herewith is one which imitates very closely hand rubbing, or in other words it has a reciprocal motion. The machine weighs nine pounds, measures 7½ in. long, 3 in. high and 3 in. wide. The maximum length with the felts fully extended is 8¾ in. and the length of stroke is 2¾ in. It travels at a speed of 1800 strokes per minute with no load and 1600 strokes per minute with a light load at 80 pounds air pressure. It requires 8 cu. ft. free air at 80 lbs. to operate.

Has Holder for Steel Wool

It is possible to get this machine with what is called a universal holder designed to hold steel wool for the surfacing of curved or irregular surfaces such as automobile bodies. These holders also provide a simple and efficient means for securing felt and sandpaper. A sandpaper or emery cloth attachment permits 6 or 10 sheets being applied at one time which as the paper fills or becomes worn is torn off leaving a fresh sheet underneath.

The sandpaper attachment is very desirable since the use of water-proof sandpaper has greatly increased and is being used quite extensively in place of felt and pumice. Steel wire brushes are also useful in a machine of this kind and are quite extensively used in the removal of rust and so forth preparatory to painting a surface.

A moisture trap with the necessary gage and fittings is considered essential in connection with every rubbing machine in order to remove the water condensation in the air line and also to prevent scale, dirt and other foreign substances from getting into the working parts of the machine.

If a rubbing machine is not used it is customary to use a folded pad made of clean burlap. This is immersed in water and the excess water rung out before applying the rubbing compound. Rubbing should also be done in straight lines with even strokes the same as in rubbing varnish. As a general thing it is better to rub the body lengthwise and the same is true of the hood.

Striping Done After Rubbing

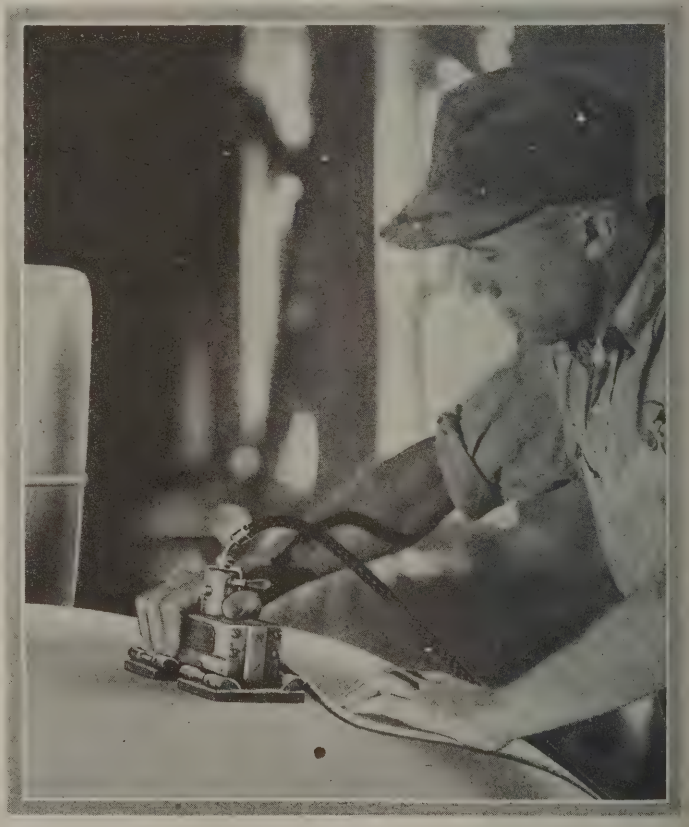
When it is desired to do any striping it can be done immediately after the rubbing operations. Any of the enamels can be thinned down to striping consistency with special reducers furnished by the makers or with regular Japan color reduced with a long oil finishing varnish and turpentine to striping consistency. A soft striping pencil of the proper size to give the desired width of stripe should be used and the latter should be put on with one straight stroke if possible, as the less the stripe is disturbed after it has once been applied the better will be the results.

If a lacquer stripe is used it should be allowed to dry for one hour or even longer before polishing and if Japan color has been used, at least six hours should be allowed before any polishing is attempted.

Requires Skilled Operators

It will generally be understood, of course, the striping is something which can be done only by a skillful operator. In one case today striping is being done by using a wire bound striper and a mixture of 50 parts of color and 50 parts of thinner and when using this mixture and stripers the maker advises to go over the work twice.

Very often the question is asked as to how much material is needed to finish a car using nitro-cellulose materials. It is rather difficult to give a definite reply to this question because the quantity of materials needed varies and each maker of materials has a somewhat dif-



The rubbing and polishing operations are the most tedious and a high lustre can only be had on the final coats by such operations. For this a rubbing machine is a decided help and above is shown a pneumatically operated machine for rubbing, polishing and sanding

ferent answer. It might be interesting, however, to know what the chemical products division of E. I. Dupont De Nemours & Company specifies as to the materials needed for finishing the average car. Here are the materials as listed by this company:

1 quart primer.
2 pounds putty glaze.
½ gallon sanding surfacer.
1 gallon Duco.
1 gallon thinner No. 3601.
1½ pounds Duco rubbing compound No. 2.

In connection with the subject of pyroxylin finishes it might be interesting to know that in a recent demonstration in a large automotive plant a small car was finished completely from the bare metal up to and including the final coat in 4 hours and 10 minutes.

The particular finish applied was the natural or satin finish as it is called and is known by this company as the "One day system." This system, as used by Valentine & Co., is applied as follows:

One Day System

Natural or Satin Finish—(Surface—perfectly clean, bare metal wood, or composition board)

(A. M.)

NITROCELLULOSE PRIMER: Spray a thin even coat just as the material is furnished, after careful stirring, and allow to dry at room temperature for half an hour.

NITROCELLULOSE GUNGLAZE: Spray on the necessary amount of nitrocellulose gunglaze—double or triple-coating where surface conditions demand. The gunglaze should be thinned only with the maker's type of solvent, using not more than one part solvent to one part gunglaze by volume, nor less than one part solvent to two parts gunglaze by volume. Gravity or pressure feed is desirable, especially if heavier mixture is used. Allow the gunglaze to air dry for 2 to 3 hrs. at room temperature.

(P. M.)

Scuff sand very lightly with fine dry sandpaper to remove dust specks and nibs. Dust off carefully and tack tag if desired.

NITROCELLULOSE ENAMEL: Spray on two coats of nitrocellulose enamel of the desired color thinned with equal parts of solvent by volume, the second coat following immediately after the first. Finish with a final coat—one part nitrocellulose enamel colored, one part nitrocellulose enamel clear, and two parts solvent by volume.

A car so finished may be safely driven out under normal air drying conditions (75 degrees Fahrenheit or over) a couple of hours after the final coat of enamel has been applied.

Standard Two-Day System

Natural or Satin Finish—(Surface—perfectly clean, bare metal, wood or composition board)

(First Day)

NITROCELLULOSE PRIMER: Spray on a thin even coat just as the material is furnished, after careful stirring, and allow to air dry at room temperature for half an hour.

NITROCELLULOSE GUNGLAZE: Spray on necessary amount of nitrocellulose gunglaze—double or triple-coating where surface conditions demand. The gunglaze should be thinned only with the maker's solvent, using not more than one part of solvent to one part of gunglaze by volume, nor less than one part of solvent to two parts gunglaze by volume. Gravity or pressure feed is desirable, especially if heavier mixture is used. After the gunglaze has air dried 1 to 2 hrs. at room temperature, nitrocellulose spot putty may be used to fill any extra deep imperfections not filled by the gunglaze. Allow to air dry at room temperature over night.

(Second Day)

Sandpaper the gunglaze coat. This should be done with two grades of water sandpaper—starting with No. 180 to No. 220, and finishing with No. 280 to No. 320. For final sanding add a little pumice powder, and on the highest grade work, finish with a fine pumice flour, felt and water, if desired. This sanding operation is highly important and care should be taken to avoid scratches. Rinse off thoroughly and dry with compressed air, taking special care to blow out all water from under mouldings, etc. Then wipe off with clean dry rags or chamois, and then tack rag carefully.

NITROCELLULOSE ENAMEL: Spray on two to four coats of nitrocellulose (according to color) thinned with equal parts of nitrocellulose solvent by volume only. Each coat may be sprayed on immediately after the application of the previous coat is complete, or any desired interval may be allowed between coats. The last coat should be made up as follows: One part enamel colored, one part enamel clear, and two parts of solvent by volume.

In next week's issue of MOTOR AGE the complete directions for cleaning a car with the Deoxidine Process will be given. So much depends upon the proper preparation of a car before refinishing it and so much interest was shown in one of the previous articles on this particular point that we have prepared an article on the Deoxidine Process since it is recommended by many paint and varnish makers for automobile refinishing establishments.

From letter of Sherwin-Williams Co., Cleveland, Ohio

Thank you for sending us the copies of the June 11th and June 18th issues of MOTOR AGE. We are very glad to have these.

In reading over the article as appears in the July 2nd issue, under the heading "Preparing the Car for Pyroxylin Refinishing," we experienced a couple of reactions that we are at least going to tell you about.

You say that in applying lacquer over the old finish the old coats may look all right for a time but eventually the vibration and time will break the coat away from the body. There are a number of expensive cars running in New York City today that have been on the road for two years and look practically as good as new, that were finished with our Clear Binder and Binder Surfacer by our Mr. Saxe a couple of years ago.

We have gone into the matter of a fire hazard pretty thoroughly and find that there is a lot of bunk connected with this. We know of a reliable source of reference, one of the largest underwriters in the country, who, in a recent bulletin stated that 18 months of investigation has definitely proven that the use of pyroxylin was less hazardous than paint and varnishes.

Last week in a local shop, where the only ventilation was windows, several cars were sprayed with the operator and several looking on smoking cigars and cigarettes. Of course, this is extreme, but it simply confirms our belief that all this excitement and extreme caution is out of order. Of course, the safest thing to do is to avoid smoking and not place any unnecessary hazards.

Remember that any time we can be of service, please feel free to call upon us.

Yours very truly,
THE SHERWIN-WILLIAMS COMPANY.

(Signed) E. W. Windsor.

Oakland Has New Line of Bodies and Numerous Chassis Refinements

Five Styles Now Available. Harmonic Balancer Applied to Crankshaft. Oil Filtering Device and Air Cleaner Regular Equipment

WITH the introduction of a new line of bodies, improved radiator design, a harmonic balancer for the crankshaft, and more than one hundred refinements in design, including the addition of an air cleaner and oil filter, the prices of the new Oakland cars are from $70 to $350 lower than the previous models.

Concentrated production has resulted in five body styles. Prices on the five models are as follows: Touring $1,025; Coach $1,095; Landau Coupe $1,125; Sedan $1, 195; and Landau Sedan $1,295.

Has Harmonic Balancer

An exclusive and outstanding development of Oakland and General Motors Research engineers, the new harmonic balancer which is applied to neutralize torsional vibration of the crankshaft, is fitted to the new Oakland cars for the first time. Forming an integral unit with the crankshaft and located between number one and two crank pins, the balancer is a positive non-wearing medium, requiring no adjustment. The device consists of a light steel bar, pivoted to the shaft at its center and tensioned by stiff springs at both ends. The weight of the bar and the stiffness of the springs are so selected that the balancer has a frequency of vibration the same as the shaft itself. When, therefore, there is the slightest movement of the shaft, the harmonic balancer immediately picks it up and vibrates in an opposite direction. Each movement of the shaft is opposed by a heavy force which the balancer applies through its springs, and thus holds the shaft steady.

Turning to the latest chassis changes, the majority of the improvements have been made in the engine to provide for longer life and ease of maintenance. There has been no departure from the characteristic Oakland features and dimensions.

Increasing the weight of the crankshaft 13 lbs. to a total weight of 66 lbs. has allowed the webs to be greatly strengthened making the shaft stiffer and stronger. This together with the harmonic balancer virtually eliminates all vibration. To provide greater rigidity for mounting the crankshaft, the center main bearing has been lengthened from 2⅛ in. to 2⅜ in., while all main bearing caps are secured by four bolts instead of two bolts only.

To keep the lubricating oil free from grit, carbon particles and other foreign matter, an oil cleaner consisting of filtering cloths and screens carried inside a metal case is adopted. The interior of the filter which may be replaced at nominal cost when choked, allows the oil to pass through freely but retains the sediment. Under ordinary summer driving conditions, it is recommended that the oil be replaced between every 2,000 and 2,500 miles.

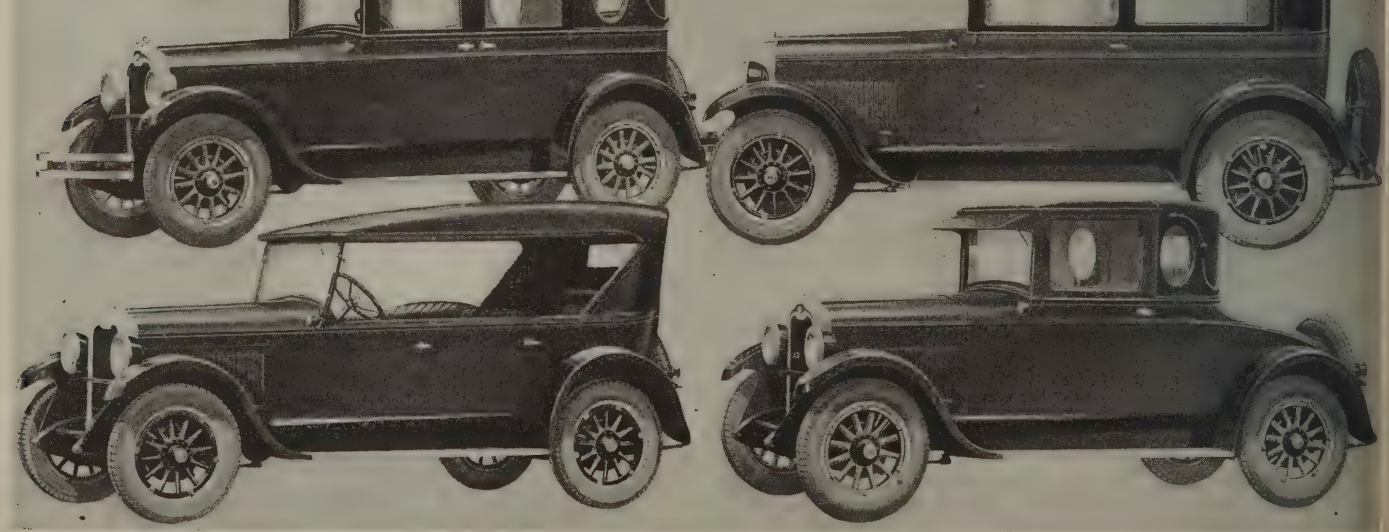
Oil is now fed through ducts in the crankshaft which form a continuous passage the entire length of the shaft thus eliminating exterior oil tubes. Through each of the three main bearings, oil is forced into this passage thereby equalizing the pressure of flow to all main and connecting rod bearings. Leads from the oil distributing system also go direct to all the camshaft bearings, the timing chain and sprockets. The use of pressure feed to the connecting rod bearings through holes drilled in the crankshaft provides for positive lubrication.

Instead of being at the front of the engine as formerly, the oil pressure regulator is located in the center of the crankcase where it is accessible for adjustment, and insures full uniform pressure throughout the oiling system. The line to the pressure gauge is now taken off from this point.

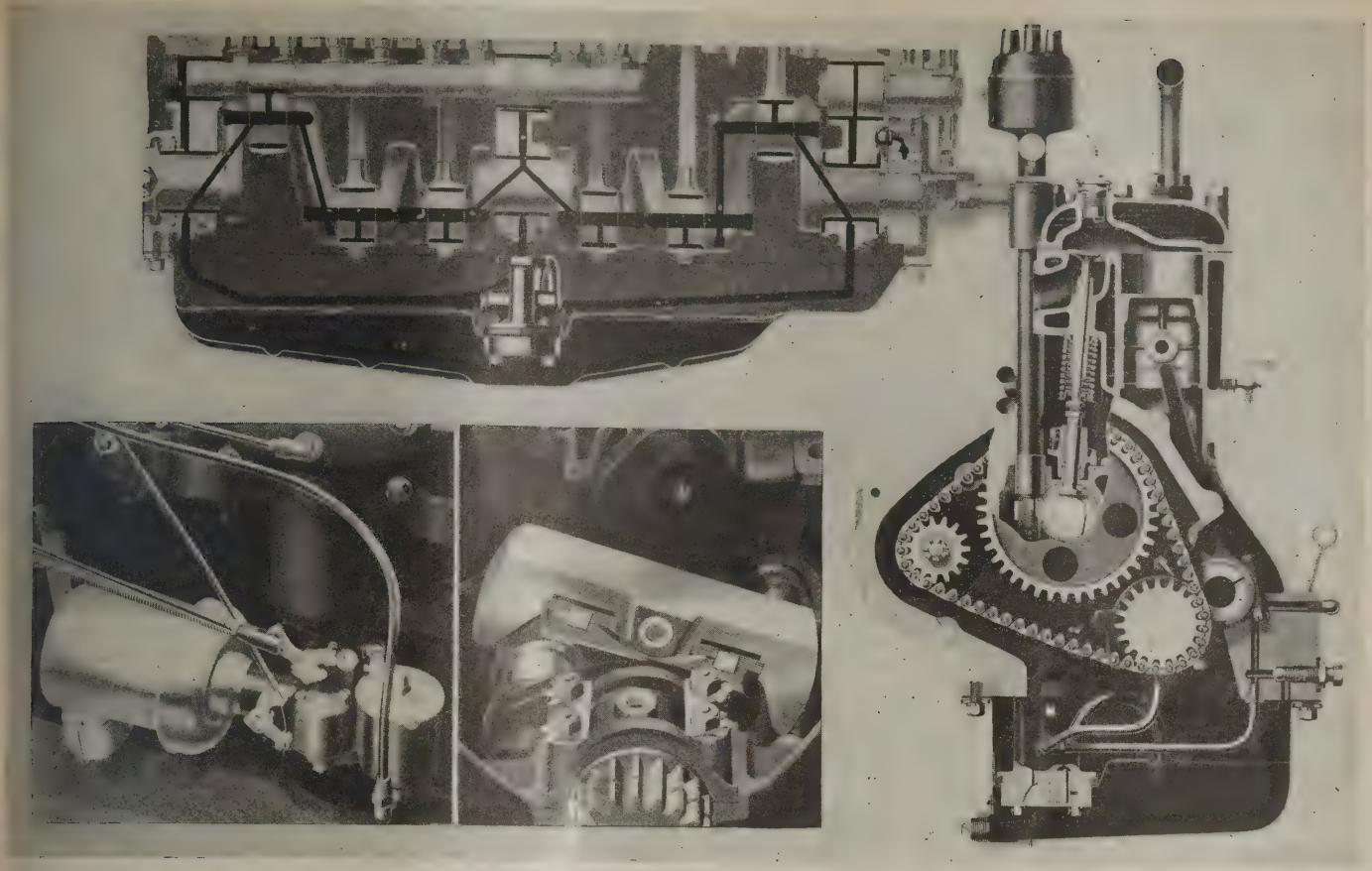
Oil Pan Deepened

Deepening the oil pan below the pump allows space for the accumulation of water below the level of the oil pump, thus preventing the pump from freezing in cold weather. Extending the screen across the entire length and width of the pan, strains the oil as it returns from its passage through the oiling system. In the extreme possibility of this screen becoming clogged, a by-pass pipe extending from the pump below the screen will automatically allow the oil to be delivered to the engine without passing through the screen.

An important feature from a service standpoint has been incorporated in the redesigning of the oil pan. Instead of placing the drain plug in the bottom cen-



Four of the new Oakland models. Top, left, landau sedan; right, coach. Bottom left, touring, and right, landau coupe



Some of the mechanical details of the Oakland. At the top is shown the oiling system, which is further shown in the cross section view of the engine. The two lower views show the carbureter air cleaner and the harmonic balancer on the crankshaft

ter of the oil pan, it is now located at the lowest position on the right hand side of the pan so that it is no longer necessary to crawl under the car to drain the oil. On account of its location, when the oil is released, it carries wtih it any water or foreign matter which may be collected beneath the pump.

Formerly the valve lifters were of case-hardened steel, now they are built up with cast iron feet welded by a patented process to steel barrels. The diameter of the valve lifter stems has been increased by $\frac{1}{16}$ in. while the valve stem guides have been lengthened by $\frac{11}{16}$ in. To give better high speed performance, the valve springs have been compressed more tightly at their upper ends.

Two Locking Devices

Two locking devices are now employed to secure the piston pins. Instead of the former full floating type, the pin is now locked in the piston by a set-screw and works in a solid bronze bushing in the connecting rod. The locking rings at each end of the pin are still retained.

An A. C. air cleaner, General Motors development, of centrifugal type is provided as standard equipment to filter the air entering the carbueter. While there are no moving parts in the cleaner, the design imposes a minimum restriction on the air flow which is estimated to be 72 cu. ft. per minute at 25 m.p.h. road speed of the car. Save for the emptying of the quick detachable sediment container at the front end once a year, the cleaner requires no attention. Improvements in the gasoline tank to prevent water and foreign matter passing into the fuel line have been made by extending the gas line further into the tank.

To eliminate the possibility of the ignition coil becoming wet in inclement weather, it has been removed from the side of the engine and placed under the cowl. At the same time the headlight wires are now carried through the inside of the raidator shell to afford greater protection. A fully perfected automatic spark advance is also fitted.

Making the radiator core deeper and wider has provided 12½ per cent increased cooling area.

Lowering the running boards by 1½ in., the adoption of 30 by 5.25 in. balloon tires mounted on artillery wheels in place of 31 by 4.95 tires on disk wheels and a change in the four wheel brake leverage, constitute the alterations of any importance which have been made on the remainder of the chassis. Braking efficiency of the mechanical four wheel brakes has been accentuated by increasing the wrap of the rear brake. This change allows all brake bands to be interchangeable. To make the brake pedal action softer, the brake pull-back spring has been lengthened and made more flexible.

A new nickel plated radiator shell of ornamental and distinctive design together with special head lamps now supported by a tie rod and cowl lights to match, gives an impressive front view. The design of the Oakland name plate has also been improved.

Nickel Plated Radiator Shell

Because of the reduced body height, lower running boards and fenders full crowned and deeper by ¾ of an inch, the new cars have a long low symmetrical appearance which harmonizes with the new radiator design. All bodies which are built by Fisher and finished in Duco have compact low-hung lines achieved through the use of beading of the double moulded type extending from the radiator entirely around the body.

Genuine leather is used in the upholstery of the touring car. The windshield is of a new one piece design and swings outwards from near the top where it is fastened to the standards in such a way as to prevent water leaking through into the front compartment. Side curtains fit unusually tight as the top is of the permanent type which allows the employing of glass enclosures, the latter being obtainable at extra cost. Finish is in duo-tone Buckingham gray below the beading with Waverly light gray above.

Pullman type front seats double hinged to fold forward with a large three

passenger rear seat are provided in the Coach. Doors, 34 in. wide allow easy entrance and exit. Interior finish is in rich gray corduroy upholstery with gray side walls while the outside is Buckingham gray with black upper structure.

Finished in Bowling green, the Landau Coupe is upholstered in genuine Spanish leather and comfortably seats three persons. Besides the spacious compartment in the rear deck, smaller parcels may be carried in the opening behind the seat.

Pleasing lines have been worked out in joining the top structure to the rear upper panel, while drip moulding along the sides of the top prevent water dropping from the roof on the Sedan model. A fine grade fabric is used for the interior upholstery while the exterior is done in Cobalt blue with black upper section.

Exterior finish the same as the Coach is employed on the Landau Sedan with a gray upholstery completing the color scheme. In addition to the equipment which is standard on the other closed models, it has many distinctive features that make for beauty and utility. The head, cowl and tail lights are nickel plated, a visible gasoline gauge is mounted on the instrument board, nickeled bumpers in the front and fender guards in the rear, motometer and wing cap, snubbers and special walnut steering wheel are some of its other special distinctive equipment.



The lever for operating the door latch is now located in the center of the door on the Oakland closed models

All closed models have double beading extending along the hood and cowl. Natural wood wheels are supplied on the Landau Sedan and Coupe, while the other three models have wood wheels finished in the respective body colors. Disk wheels may be had at slight extra cost.

Instrument board and steering column fastenings are concealed beneath the cowl on all cars. Instead of being located in the center of the steering wheel as formerly, the ignition switch and carbureter choke have been placed back on the instrument board within easy reach of the driver. The dimmer control, throttle and horn button are still retained in the center of the wheel.

All closed models have a stationary visor designed to harmonize with the bodies, dome light, crank type window regulators in doors and quarter windows, door locks, rear view mirror, window shades, automatic windshield cleaners and Fisher "VV" windshields. The open model is supplied with a hand operated windshield cleaner.

Checking Up on the Allowance Shopper

ST. LOUIS, July 18.—Frank C. McDonald, president of the St. Louis Automobile Dealers' Association, recently remarked that his company would be able to sell many more new cars than it otherwise would be able to sell—providing it submitted to the lure of paying fancy prices for old cars taken in trades.

There are plenty of prospective customers, said Mr. McDonald, but a large share of them want excessive trade-in allowances and the excessive trade-in allowance is a thing that promises steadily to fade away into the history of past practices on the part of St. Louis dealers.

One of the forces that has caused St. Louis dealers to take a more solid stand against foolish trade-in allowances is the educational campaign that the local dealer association has been waging among its members.

The chief instrument of the association's movement along this line is its Used Car Bureau.

Two Years' Test of Plan

This bureau has been in operation for nearly two years now and has proved conclusively, association members say, that it is a good thing. It is under the control of the Used Car Bureau committee of the association, composed of George T. Berry, president of the Berry Motor Car Co., Packard distributor, Jack Sallsbury, salesmanager of the More Automobile Co., Marmon distributor, and Joseph T. Kellerman, salesmanager of the Hudson-Frampton Motor Car Co., Hudson and Essex distributor.

The work is divided into two parts, one covering the field of high-priced cars, that is from $2,000 up, under the chairmanship of Mr. Salisbury, the other covering the field of cars with prices ranging up to $2,000, under the chairmanship of Mr. Kellerman. Mr. Berry is chairman of the entire organization.

A young woman is employed by the association to do the clerical work for this division. She sits at a telephone in the offices of the St. Louis Automobile Dealers' Association and each dealer as he appraises a car calls her up and gives her particulars of the transaction, detailing the make of the car, the yearly model, the serial number and the amount he offered for it.

Check Up on Buyer

Should the prospect go to another dealer, this merchant goes through the same process. Such a practice makes it impossible for a prospect to go from one dealer to another and say the first dealer offered more money than he really did, because the second dealer would only have to call the Association office to ascertain the truth.

There is no effort to fix prices. A dealer may offer any amount he cares to for any car and if the other dealers refuse to meet the bid he is at liberty to close the deal at that price.

$8,000,000 CHRYSLER ORDER

DETROIT, July 18.—An order for $8,000,000 worth of Chrysler sixes and fours to be delivered during the twelve months starting with July 1, 1925, to July 1, 1926, was recently placed with the Chrysler Corporation by the John H. Thompson Co., Chrysler distributors for the Detroit area.

Approximately $2,700,000 worth of Chrysler cars have been contracted for during the months of July, August and September. Since the announcement of the Chrysler four, orders have been coming in at the rate of 40 to 50 a day.

MOTOR DELIVERY FORMED

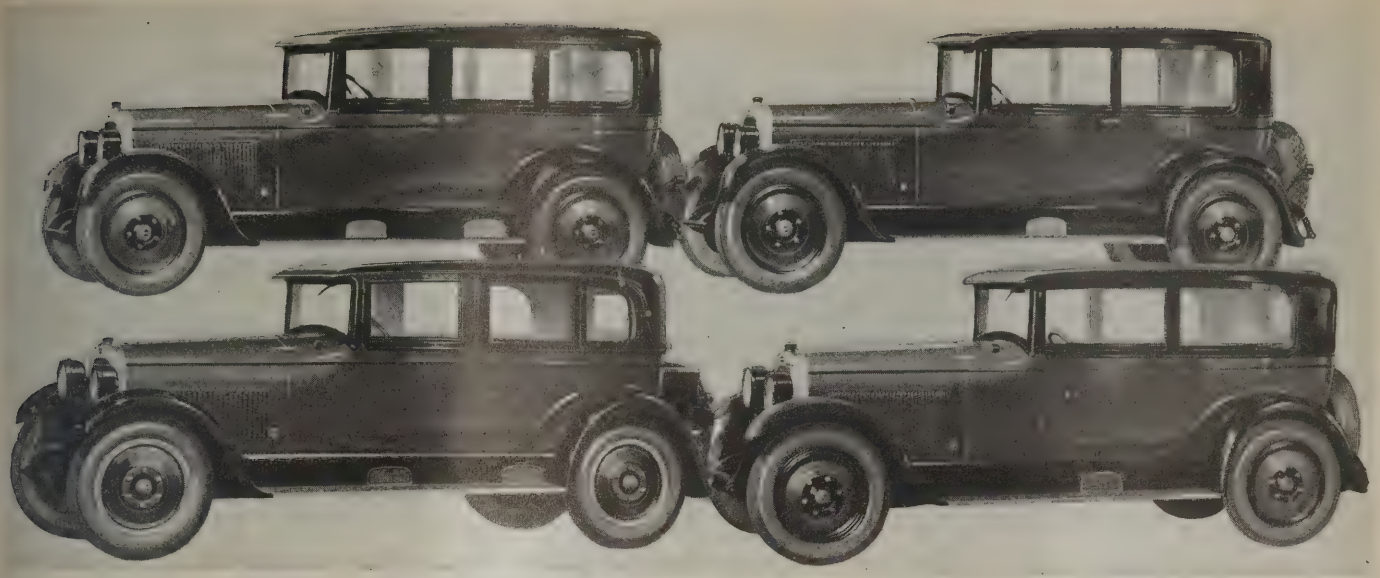
PEORIA, Ill., July 18.—The Rapid Motor Forwarding Co. has been launched here with offices at 213-215 South Water Street, and Edwin A. Watson, president has secured James A. Burbidge as traffic manager. The Peoria station is the main office although a Chicago plant is maintained at 2619-21 South Michigan Avenue. Mr. Burbidge said that the system will be an innovation in carrier service trucks making deliveries from door to door, guaranteeing delivering within 12 hours of receipts of parcels, the system covering any Illinois point on hard roads.

Jordan Reports Earnings of $228,575 in Second Quarter

CLEVELAND, July 18.—The Jordan Motor Car Company has just finished the second largest quarter in the history of the company from the standpoint of volume, it was announced by officials today. With the Jordan Line Eight selling in the $3,000 class, the number of cars delivered was approximately the same as the number helivered in the same quarter last year when Jordan was building sixes priced around $2,300.

Earnings for the second quarter which totaled $228,575.80 covered the dividend more than twice over. With no bank obligations and no other indebtedness and all current bills paid to date, Jordan has $1,604,710.01 in cash and securities.

Quick assets as of June 30 totaled $2,526,897.71. Liabilities totaled $590,945.11, more than a four to one ratio.



Four of the new models in the Nash Special and Advanced Six lines. At the top are two of the Special Six closed models, while the lower ones are of the Advanced Six series. From this the similarity of the bodies can be noted

Eleven Bodies in New Nash Line

Announce Number of Refinements—Trunk Platform at Rear Has Been Eliminated

ELEVEN types of body styles four on the Special Six and seven on the Advanced Six chassis contitute the new line of Nash cars just announced. The particularly outstanding feature of the bodies on both the Special and Advance Six is the similarity. Excepting for the size the bodies look very much the same.

In the Special Six line is a touring, roadster, four-door sedan and a two-door sedan, while the Advance Six line includes a five passenger touring car, seven passenger touring, roadster, two-door sedan, Victoria, four-door coupe, a seven passenger sedan. All models in both lines are fitted with balloon tires, five Budd disc wheels and four-wheel mechanically operated brakes.

Number of Refinements

Quite a number of refinements have been made in the bodies which are built by the Seaman Company and among other things the trunk platform at the rear has been eliminated adding length to the body which affords quite a bit of space in the interior. This together with widened doors and forward folding front seats gives ample space to get in and out of the rear compartment.

To add to the riding comfort the front seats are wider and deeper and adjustable so that passengers may regulate the tilt of the seats to any desired position. The adjustment is by knobs located in the floor. An added touch has been given to the appearance by fitting ebony toned moldings on the window frames of both the Special and Advanced Six five-passenger sedans and these models are now both equipped with dome lights of colonial pattern and with the new type door latch and window lift. The latch on the left hand door is a combined opener and inside door lock.

Deeply crowned fenders have been added to the Special Six. The hood also is higher and better proportioned with high and narrow louvres. The radiator is finished in a heavier and higher polished nickel plate. All enclosed models in both series have the new French type roof and visor and the length of the cars is accentuated by a molding which runs the entire length of the body and hood.

Some change has been made in the location of the gear shift lever and hand brake lever whereby the latter is now placed on the left side of the driver while the gear lever is shaped so that it allows entrance or exit from either side of the car.

The instrument board layout on the Special and Advanced Six series has been refined and the lighting on the Special Six series is now done from beneath the car, somewhat similar to the arrangement of the Advanced Six. The instruments on the latter model have been supplemented by a gasoline gauge operating hydrostatically.

Several changes have also been made in the chassis of both series and outstanding of the chassis refinements is the application of an air cleaner on the carbureter. A heat treated steel band is now shrunk on the flywheel of both engines and the teeth are cut in this band. It is claimed by this construction injury to the flywheel is impossible by incautious use of the starting motor.

All models in both series are now equipped with a new type of gasoline tank filler cap as well as a cap for replenishing the oil supply. These caps instead of having the conventional threads are fastened in place by a half turn. The front springs on all cars in both series are now equipped with rubber bumpers which materially add to the riding comfort when the car is passing over rough roads.

Equipped With Accessories

All open and closed models in both series are equipped with an automatic windshield wiper, rear-view mirror and many other items adding to the comfort and safety of the occupants.

In speaking of the introduction of the new models E. H. McCarty, Nash general sales manager said: "It can be disclosed that our plans for increasing factory production capacity still further have been completed and we are now entering into a period which will establish the heaviest production records ever achieved by the Nash Motors Company."

Mr. McCarty stated that sales and production by the Nash organization for the past 12 months averaged monthly close to 62 per cent over and above the high mark set by the same period of a year ago.

"Now, with these new Special Six and Advance Six models in our dealers' showrooms throughout the United States," remarked Mr. McCarty, "we are looking forward to seeing the coming months sweep far beyond the notable records achieved during the past twelve months."





Left: Chrysler Six roadster model showing barrel nickel plated headlights, nickel plated windshield, etc., as well as new design top. New colors also are a feature; right: New Imperial sedan revealing more rounded corners at rear of body

More Powerful Engine Features New Chrysler Six

Vibration Dampener Added, Single Plate Type Clutch as Well as Several Improvements in Chassis. New Colors Are Introduced

FINER BODIES in new color designs, a vibration dampener, added to a more powerful and refined engine, new single plate type clutch and several improvements on the chassis, characterize the latest Chrysler Six cars.

The revised list of prices follows: Phaeton, $1,390; Coach, $1,445; Roadster, $1,625; Crown Sedan, $2,095; Imperial Sedan, $1,995; Brougham, $1,865; Coupe, $1,795; Sedan, $1,695. Roadster prices remain the same. Other prices have been reduced.

Except for changes in the roadster design, a droop in the top line of the closed bodies towards the rear, rounding off the back corners and the new color schemes, the distinctive body lines which identify the Chrysler cars are retained.

In order that performance would be unaffected by the increased weight of the new improved bodies and other refinements, ⅛ in. has been added to the bore of the engine which now stands at 3⅛ in. in diameter. This change increases the rated horsepower from 21.06 to 23.44, the piston displacement from 201.4 cu. in. to 218.5 cu. in. and allows 8½ per cent greater engine torque.

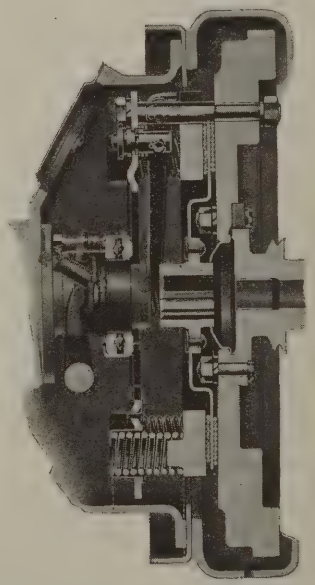
To balance the increased power, the crankshaft has been made larger and heavier. All seven main bearings are enlarged in diameter from 1⅞ in. to 2¼ in., while ⅛ in. has been added to the connecting rod bearings which are now 2 in. in diameter instead of 1⅞ in. Corresponding increases in sizes have been made on all main and connecting rod bearing caps, studs and bolts.

Smooth operation at any engine speed has been insured by mounting a vibration dampener which is friction driven from the hub on the front end of the crankshaft, thus taking the place of the former weighted lower fan pulley. The dampener is a simple automatic device acting as the secondary flywheel, the latter providing the drive for the fan.

Piston Design Modified

Of the same design but slightly modified, the pistons are now fitted with a pin of $\frac{13}{16}$ in. diameter instead of ¾ in. and of greater length. Similar to the ends of the crankshaft, welch plugs instead of screw-in plugs are used to seal the ends of the hollow camshaft.

Wider by ⅛ in. the face of the oil pump gears has been changed to provide the same oil pressure as used on the smaller engine, which represents an increase of the pump capacity by 12½ per cent. At the same time, an improvement in the oil suction feed has been made. If the oil screen should become clogged, the suction of the pump will open a valve held in place over relief holes by spring tension. This opening of the relief holes will allow the oil to come through the pump without passing through the screen.



Sectional view of Chrysler Six new single plate clutch

Although no changes have been made in the radiator or water pump, the water capacity of the cylinder jackets has been increased to provide greater cooling for the engine. No changes have been made in the fuel system or manifolding except that the intake of the Ball and Ball carbureter has been enlarged by ⅛ in. Extra rigid front support of the engine has been accomplished by casting the legs integral with the timing chain case cover.

Into a slightly larger flywheel has been fitted a new and simpler type of clutch which is claimed to make gear shifting much easier, has greater capacity to resist heat and will stand considerable more wear.

In place of the former multiple disk type clutch, a single dry plate unit similar in respects to that used on the Chrysler Four, is employed. Comprising a pressure plate assembly having six springs, pressure is applied to a drop forged hardened steel splined hub to which is riveted the metal disk carrying the special woven asbestos cord facings. Three release levers provided with spring locked knurled nut adjustments are connected with the stationary sleeve which carries the clutch release bearing. A hole drilled in the bottom of the clutch housing permits any oil leakage from the rear crankshaft bearing, clutch release bearing or from the transmission to drain off.

To compensate for the added engine

torque, the face of the transmission gears has been increased in size ranging from 1/16 in. to 3/16 in. larger. Instead of the stub type teeth which are customarily used, teeth are of full depth, thus giving larger rolling contact. By grinding all constant mesh and intermediate gears, smoother and quieter transmission operation has been obtained. The speedometer gears are now located under the rear main bearing where they operate constantly in a bath of oil. Because of the larger transmission case necessary to accommodate the new gears and shafts, the propeller shaft has been shortened while at both ends the flanges have been changed. The gear shift lever has been made longer to give greater comfort in changing speed while the pedals have been changed in shape and material. To make for smoother application, the emergency brake has been redesigned and in its new form incorporates several parts common to the four cylinder model. The diameter of the transmission brake drum has been increased by one inch.

Rear Axle Housing Strengthened

In line with the other chassis changes, the rear axle housing has been strengthened and the differential carrier made more sturdy and rigid making at the same time for quieter operation. Both ring gear and pinion are now larger by ¼ in. and have the spiral teeth cut at a steeper angle forming a more substantial engagement. A change has also been made in the angles and capacities of the pinion shaft bearings as well as on the pinion shaft sleeve.

On the frame, the cross members have been altered slightly, the body holes are in new positions and the position of the battery box changed. As a result of the basic alterations on the chassis, there have also been changes in the design of the hood sills, radiator hold down bolts, dust pans, front fender brackets, muffler, exhaust and tail pipes.

Except for changes in the master cylinder body, tube leads and "T" fittings, there has been no alteration in the four wheel braking system.

Turning to the bodies, most changes have been made on the roadster model



Chrysler Six Coach showing top line lower at the back

which is now finished in two-tone drab, copra drab above the streamline bead and chickle drab below, set off with black molding and a fine flamingo carmine stripe. New bullet type nickel-plated headlights and nickel-plated windshield frames and stanchions give an added touch of dash. Both doors have been widened by 1 1/16 in. to afford easier access while the door of the golf club compartment now opens sideways instead of downward as formerly. The top bows which are now of wood, finished, in walnut to match the steering wheel and new type of instrument panel, fit into nickel-plated thimbles, giving a neat finish. Directed to appeal to a growing number of persons who prefer to drive with the tops down, the latter cannot only be folded down neatly but are so designed to be readily detachable by those who desire to have no top at all. A new top material of taupe tan effect made of two ply rubberized fabric ensuring durability and waterproof features is employed. An automatic nickel-plated windshield cleaner is provided as standard equipment.

Distinctive Colors Employed

Plymouth and Pilgrim grays are used on the phaeton which is set off by a striking stripe of flamingo carmine. Long grain, bright finish waterproof material is used for the top which has a white whipcord lining to harmonize with the Colonial gray ivory tinge soft leather of the upholstery. Side curtains are now of the same weight and material as the top and are equipped with new type of rods and stiffeners, the latter being steel reinforcements to hold the curtains more rigid and provide additional comfort in inclement weather.

A "D" shaped window in the rear quarter adds greatly to the appearance of the Crown Imperial, which is now finished in two-tone color schemes with a black upper structure. The belt is in Bagdad green and lower part of the body in Topango green while the striping is of gold bronze. In place of wood window molding, steel finished to resemble walnut is employed. The body trim is of gray mohair with head lining to match.

Little change has been made in the Imperial except that the interior fittings are the same as those on the Crown Imperial.

Body colors on the Brougham have been changed to correspond with those on the new roadster model, the interior being the same style as the Crown Imperial.

The new top lines and rounded corners on all closed models are more noticeable on the Sedan which also is finished in chickle drab, black upper structure and carmine striping. Its interior trim is of blue gray worsted pile fabric with a velour headlining.

On the Royal Coupe, the back window has been altered so that it can be lowered by a crank making it possible to converse with the persons seated in the rumble seat, the latter being raised 3 in. to provide greater riding comfort. A striking finish is obtained by using an Algerial Blue above the bead, Bambalina below the bead and fawn gray striping which harmonizes with the interior finish of blue gray mohair.

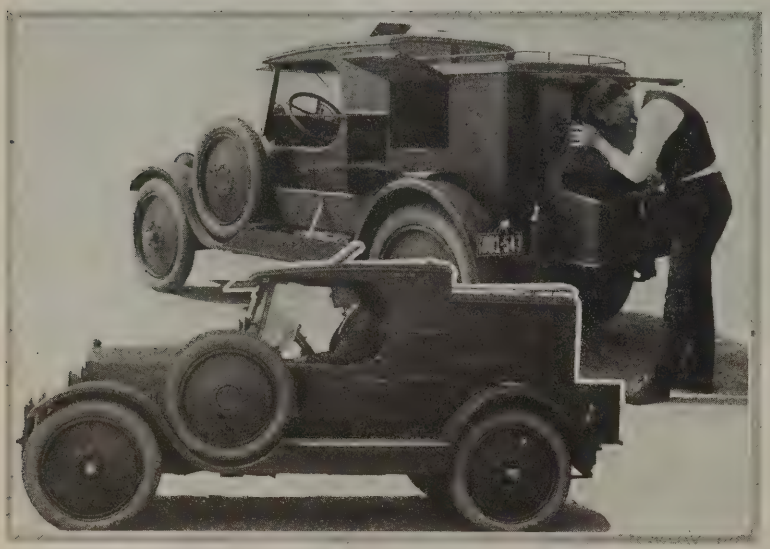
The color of the Coach has been changed to Thebea gray with fawn gray striping, which with the exception of the changes already mentioned as applying to all closed cars, remains the same as the previous model.

In addition, the doors of all closed models are fitted with the remote type of latch control which greatly facilitates the opening of the doors from the inside.



Gardner Foursome Cabriolet body mounted on the six-cylinder chassis. The company only recently announced a similar body on the eight-in-line chassis. The price including complete equipment is $1845 f. o. b. St. Louis.

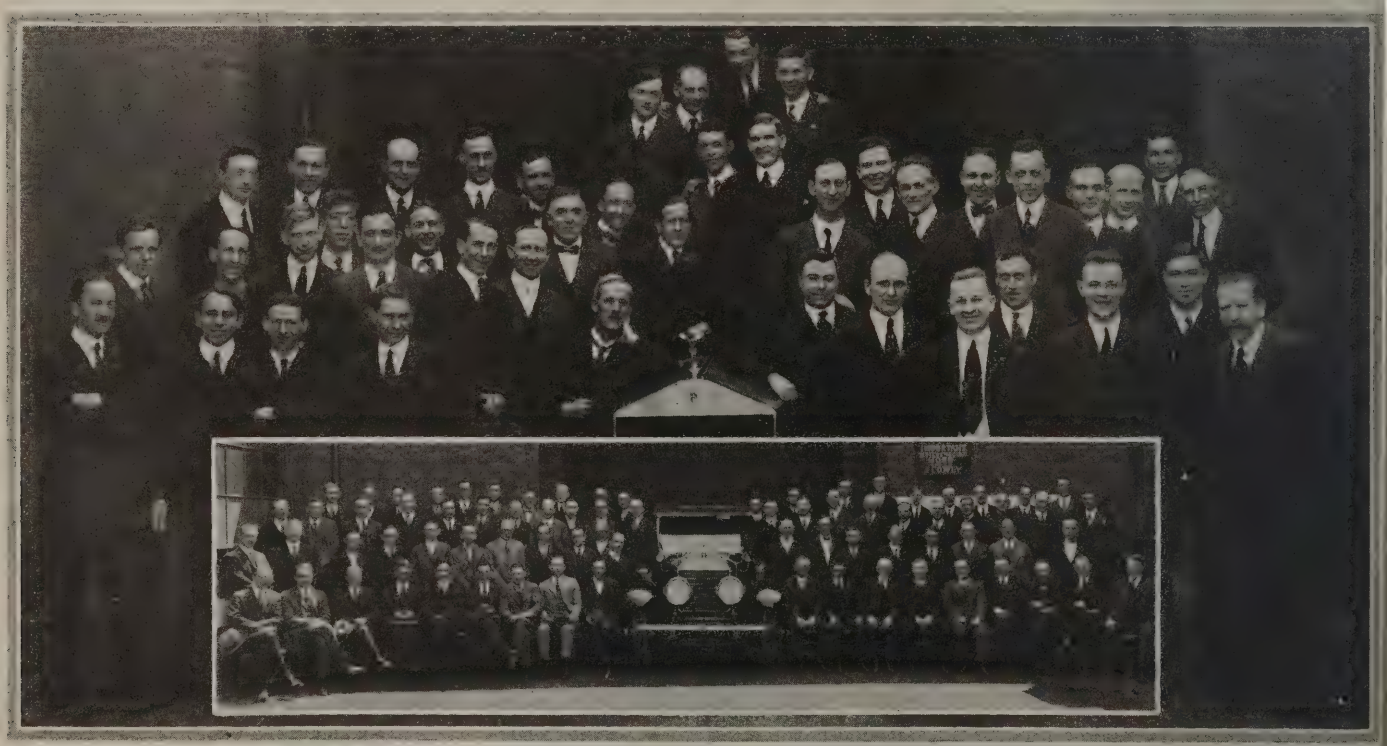
MOTOR AGE'S PICTURE PAGES



ADD CAMPING JOYS. Hart L. Weaver, San Francisco automobile dealer, built the special camping car shown at the left. It has an especially constructed compartment in which is carried an outboard engine for motorizing row boats and has a special top designed to withstand a "tipover." Guns and hunting equipment are carried in a special compartment, and there also is a place for fishing poles and tackle. The car is for the exclusive use of Mr. Weaver's employes.



AT THE PITS. Italian Diatto stopping for repairs during 24-hour stock car road race, for the Rudge-Whitworth cup, held at Le Mans, France. A six-cylinder Lorraine Dietrich covered a distance of 1,388.1 miles at an average speed of 58.83 miles per hour. French, Italian, English and American cars were entered.



THE FUGITING OF TEMPUS. The large picture shows the first Rolls-Royce chassis made in America and some of the men English and American, who produced it. In the group, which was taken at the Springfield, Mass., works in 1921, are 30 executives and experts selected from the staff of the company at Derby, England, to launch the American enterprise. The insert shows a 1925 model emerging from the works at Springfield, with most of the men who produced the first chassis still on the staff. Of the thirty and more Englishmen who came to the United States, not more than two or three have returned to the mother country

OF AUTOMOTIVE INTEREST



THE ETERNAL OVERHEAD. One car atop another, to demonstrate the strength of the Studebaker Duplex-Phaeton body, attracted much attention at the Fresno, Calif., Raisin Day festival. In the baby racer on the top was seated R. K. Morey, manager of the Visalia, Calif., branch of the Chester N. Weaver Co. of San Francisco. The baby racer was built by Delmer Wood, a mechanic in the Visalia branch.

PUBLICITY PLUS. Display of the new Diana by Krause Motor Car Co., Moon dealer at 5200 Delmar boulevard, St. Louis. A living model impersonated Diana. The display attracted a great deal of attention. On some occasions three traffic policemen were required to keep the street open.



The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ^ ELECTRICAL ^ FLAT RATES
SHOP ^ LEGAL ^ PAINT & TRIM ^ ACCOUNTING

Gears That Sing and Oil That Clicks

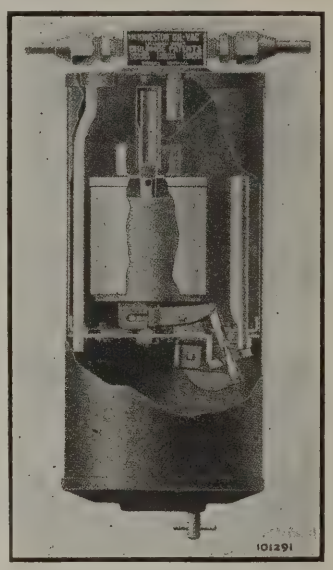
Q.—We have a 1924 Jewett with metal timing gears that have become noisy. What would you recommend? M. F. Huffaker, Magna, Utah.

If this is a very slight rattle, draw up the water pump packing nut. If the rattle is very much pronounced, due to end play in the pump shaft, it may be necessary to install a new pump shaft bearing. If the gears sing as would be the case with improper meshing of the teeth, it may be necessary to install a new set of timing gears.

Q.—Describe the Vane type oil pump used on 1924 Jewett and state whether it is possible to take the click out of same. If not what kind of pump can I use that will operate without this noise?

The Vane type oil pump is another way of describing the centrifugal pump, which has blades which in rotating carry the oil from the center to the outer portion of the pump, due to centrifugal force. We assume that this car is equipped with a Kingston Oil Vac fuel system and if this is the case, the click is due to a hydraulic noise. To see if this is the condition, have the engine running and then loosen the connection slightly which is on the pipe running from the vacuum tank to the oil pump.

You can loosen the connection at the oil pump end of this line. If allowing a slight leakage at this point overcomes the click, then you can remedy the trouble permanently as follows: Remove the nipple at the end of the line next to the oil pump and drill out the hole with a No. 60 drill. The hole in the standard nipple is made with a No. 70 drill. This slight enlargement of the hole in the nipple will overcome this condition. The appearance of the tank of the Oil Vac system is shown in the illustration.



Kingston Oil Vac fuel tank used on Jewett

LEAKS TWO QUARTS OF OIL IN TWENTY MILES

Q—We have a 1922 Rickenbacker that leaks oil from the crankcase into the generator. The oil seems to work past the silent chain sprocket and back into the generator. At speeds of 30 or 35 miles per hour and higher the leakage amounts to one or two quarts of oil for every 20 miles of travel.—L. A. Williams, R. F. D. No. 2, Box No. 72, Bradford, Penn.

At the front of the generator there are supposed to be two felt washers and also a metal oil slinger, which is designed to throw the oil back and prevent most of it reaching the bearing. We suspect that at some time or other the generator has been overhauled and this oil slinger left off. The nearest American Bosch authorized service station, can take care of this requirement as far as these parts are concerned. If leakage occurs at the starter it is necessary to place a felt washer and in some cases it is necessary to take the starter off and grind the metal surfaces to improve the contact.

MUD SPOT PREVENTION BETTER THAN CURE

Q.—I have found that after washing a new car and after it has been splashed with mud that it leaves a spot and if you could advise any remedy, I will certainly appreciate it.—R. E. Allen, Eufaula Motor Co., Eufaula, Okla.

We are sending you by separate letter the name of a polish which was given to us by one of the large service stations here in Chicago. The best remedy, however, is to prevent the occurance and when it is necessary to have a new car go out in the mud and rain it is desirable to have it immediately put on the wash rack and washed off. If mud is allowed to stand on new varnish for any length of time there is a great chance that it will spot. It is possible that the mud contains either acid or alkali which affects the finish.

WANTS A CURE FOR A COFFEE GRINDER

Q—We have a Ford car in which the transmission has been overhauled and it operates all right at low and high speeds. When the foot brake is applied however, it makes a snapping and grinding noise as though something was going to break. —C. Harper, Borough Garage, 679 McDonough Street, Brooklyn, N. Y.

The trouble is doubtless in the rear axle and is due primarily to wear in the thrust washers. The strain on the rear axle produced by applying the brakes is greater than when accelerating which probably accounts for the condition you describe.

Taking the Cooling Strain From Cylinder Castings

Q—What method is used in curing th cylinder blocks used in Pierce Arrow cars

To the best of our knowledge these ar seasoned by being allowed to stand fo a period of time after they are cast be fore the necessary machine work is don

Q—What method is used by Studebaker Willys Knight, Wills Sainte Claire, Olds mobile, Stevens Duryea, and Stearns.— Edgar F. Durnan, Jr., Grant Hotel, 75 Bush Street, San Francisco, Calif.

We are going to answer your questio in a general way rather than specificall Where a large production is necessar the time required and the space necessar makes seasoning an impractical metho Under these circumstances the same re sult is obtained by annealing the castin in order to take out the strain which i produced in the metal when the castin cools after being poured.

TIMING A 1919 CHALMERS

Q—I am installing a new timing chai in my service car and wish you woul tell the proper valve timing for a 191 model C Chalmers. Give this informatio in degrees as well as inches.—Woods Serv ice Station, Morse avenue, Westfield, Mas

The intake opens on top dead cente and closes 50 degrees after bottom dea center. Exhaust closes ten degrees afte top dead center and opens 50 degree before bottom dead center. Checkin the intake opening and exhaust closin will be sufficient. You can get the exac top dead center position by measurin the piston travel. Turn the engine b hand until the piston has come up t within one-half inch of the top positio Note the position of the crank handle o the front of the radiator.

Turn the engine farther until the pisto goes up to top dead center and goe down so that it is again one-half inc from the top position. Again mark th crank handle position on the front o the radiator. The crank handle positio in between these two marks will give yo the exact dead center position. Ten de grees is 1/36 of a complete revolutio which would mean a one-inch movemen of the crank handle if the crank were 5.7 inches long. For a longer crank it wi be increased in proportion.

Q—What would be the effect if the tim ing were one tooth early or late?

If the engine is timed too early ther is a tendency for the exhaust gas in th cylinder to be slightly compressed an to cause a slight fluttering in the ca bureter when the intake valve opens. O the other hand the timing which is to late is characterized by overheating an loss of power. The best timing is worke out when the engine is built and shou be adhered to when it is repaired.

Planning Your New Building

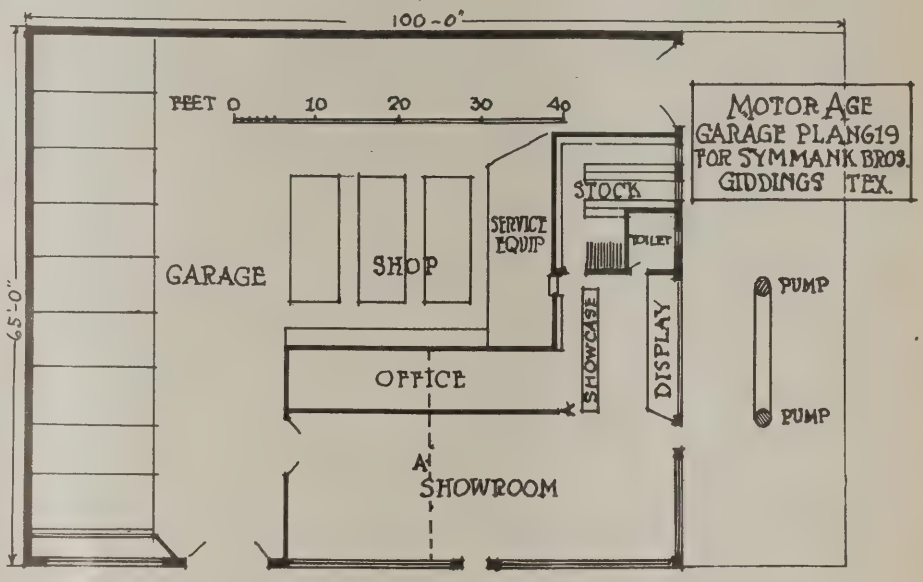
By TOM WILDER

The READERS CLEARING HOUSE

Replacing Two Old Frame Buildings

Q.—We note in your issues you give descriptions of how to build inexpensive garages. We have two frame buildings side by side facing east and south. Building on south side is on corner, frontage on both buildings being 65 feet and length 100 feet. We want to have a drive-in filling station on the corner and we also want to have showroom for cars, not forgetting display for accessories.—Symmank Brothers, Giddings, Texas.

Although you have not said so in your letter you no doubt wish to tear down the frame buildings which are on your lots. This would be almost necessary, if you build a drive-in filling station. Since the long side of your lot is on the front on the main street it would be better to install the filling station facing this street, but we found that upon doing this the space would be cut into seriously and the space left would be almost unusable, being too narrow at the rear and also at the sides. By placing the filling station at the end of the lot instead of the side there is a large square space left which will be much more applicable to garage purposes.



Two entrances are convenient but waste space.

If you are desirous of having more storage space than we show in our plan, the showroom and office could be cut down to the line A giving room for four more cars. If you would be willing to eliminate the entrance on the side street, this space could be used for service equipment and another car could be serviced where the service equipment now is shown.

This plan will undoubtedly not be possible if you wish to use your old frame buildings. It is however, a very good layout for a plot of this size and if it will not suit your convenience, write and tell us just what you have and we may be able to alter things somewhat so that it may still be used.

Legal Questions Answered—

By WELLINGTON GUSTIN of the Chicago Bar

MUST LIVE UP TO GUARANTEE

Q.—Attached to the present letter you will find a copy of a letter written to a firm in San Francisco in regard to a deal we made with them. We do not know if we have the right to claim against that firm, and we want your advice in that respect. The history of the transaction is as follows: Early in April, we received a catalog from the firm. Attached to the catalog was a letter in which they offered entire satisfaction and a definite guarantee to the customer that would order second hand parts. We wrote them asking the price of new and second hand parts for a Cadillac Model 63-E-622. They answered, giving price of $160 for new parts, and $120 for second hand ones.

They said they were behind the used parts, assuring of the good condition they were. We ordered the parts used, and when they arrived here we found out that they were not as good as they claimed to be. We did not want to return them, because that means a great loss of time and we needed the car. When we tried to put them on the car we found out that the parts were for an older model and could not be used on the car we have. The carbureter intake flange is on a different way and the screws that hold the blocks to the crankcase are set different. We wanted to see if the cylinder heads were the same as the ones on the car, but they also will not fit. Now we are sending the letter, copy of which you will find attached, and, in case that the firm refuses to back their offer, what shall we do?—Alfonso Rome Gandoulff, Aguascalientes, Mex.

Where a firm sells goods on a guarantee as stated, the buyer can hold the seller to the strict terms of the guarantee. Two remedies are open in the case you present. You can keep the parts and sue for the loss under the guarantee or you can return the part or parts and sue to recover the full purchase price. From your letter it appears that the parts ordered by you were not only not according to the guarantee, in that they were not in good shape as you desired, but they were actually not the parts ordered. So, if the parts are as you state, you have a good and valid claim against the seller for the full purchase price of the parts. If you are not able to get an amicable settlement of the matter then you will be forced to send your claim to attorneys at San Francisco for collection.

RECORD LIEN IN TENNESSEE

Q.—Does a mechanics lien hold good on cars in my state where there is a mortgage on the car held by another party? That is where the car has been allowed to be carried out of the shop without being paid the repair bill. The thing that I want to know is if the car is good for the repair bill in a case of this kind.—Robert M. Smith, Parsons, Tenn.

Regarding the garagekeeper's lien in your state. He has a lien for repairs, labor and materials furnished, good for six months, and where suit on the lien has been brought within that time, the lien continues good until judgment has been obtained. This lien is not good against purchasers or other lienors who buy in good faith and without notice of your lien. Notice to all is given usually by recording the lien claim with the recorder of deeds, etc. This lien is good regardless of the fact that the repaired car has been returned to the owner. Now if another holds a valid mortgage on the repaired car, which mortgage was created and recorded before a repair lien was made and recorded, the rule is that the prior lien of the mortgage is superior to the subsequent repair lien. A few states have by statute attempted to give the subsequent repairman's lien a preference. The wording of the Tennessee statute would imply that the legislature did not intend to give preference to the repair lien.

Clearing Up Electrical

EDITED BY A. H. PACKER

Electric Welding and Rod Alignment

Q—We have a 110 volt D. C. generator made for charging batteries of a farm lighting plant. This is a Western Electric generator and has three terminals. We would like to rig this up to do small arc welding jobs on fenders and light sheet metal work. Can you tell where to put the resistance and how much to use.—Nichols' Garage, Jackman Station, Maine.

We are showing two diagrams, one of which gives the general principle of the arc welding circuit and the other gives the general principle of the spot welding circuit. Ordinarily for arc welding a generator capable of developing 220 volts is recommended and a rather high current is also desirable. It is possible that you could use your machine however, for light work to which you refer. In the illustration of the arc welding circuit two pieces to be welded are shown in place on a metal plate which is connected through a resistance to the positive terminal of the generator. A carbon stick is then connected to the negative terminal and is used for the purpose of making contact with the joint to be welded.

Heavy Arc Will Form

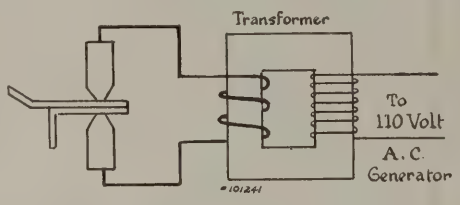
When this is done a heavy arc will form and great heat will be generated at the work which is the positive end of the arc. You may have to experiment using iron wire in various lengths and sizes for the resistance unit. As the generator you have was not designed for this class of work we have some doubt as to the ability of the machine to stand up under the heavy current which is usually required for this work. In the other diagram the circuit indicates that your machine would be entirely unsuitable. In the first place an alternating current generator is required for the voltage must be reduced to from 3 to 5 while the current must be increased proportionately. Here the principle of current flowing through a comparatively high resistance producing heat, is used to form a weld.

In the illustration we will assume that two pieces of sheet metal are placed between the copper electrodes, which when brought together permit a short circuit current to flow through the sheet iron thus causing a spot weld. From an experimental standpoint a weld of this sort might be made by using a battery as a source of current, but the battery would soon become discharged.

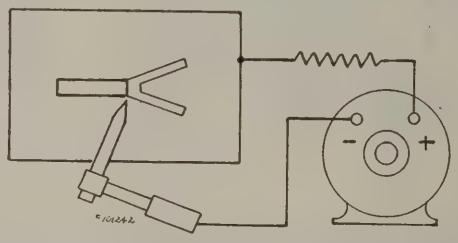
Q—How can we line up the connecting rods on a Hudson super six so as to get the proper distance between the piston pin bosses. After the cylinder block is on, the piston will not come down through and we would like to know about the alignment before the job is carried this far. We have a connecting rod aligning gage.

If you check up the connecting rods, with reference to the lower end you will be still more nearly correct. However the check for twist and bend are the most important.

Then after the pistons and rods have been installed and the cylinder block is in place you can get under the car and see whether the upper end of the connecting rod has clearance at both sides



General scheme of spot welding circuits



Arc welding requires using a resistance with the generator

both for twist and bend before installing them you will have them about right. If you further check to see that the upper end of the rod is in its proper location as far as the piston bosses are concerned. It is not essential to have the rod exactly in the center. Then if you find that the rod touches one boss or is very close you can spring it away by means of a bar. This method while not ideal from a theoretical standpoint seems to work out all right in practice when the rod has been previously checked on an aligning gage.

THREE CYLINDERS ADVANCED—THREE RETARDED

Q.—I noticed our Pike's Peak Chandler engine had a peculiar rhythm some time ago, occurring at all speeds. It sounded as if the spark (magneto ignition) were retarded when three of the cylinders fired and advanced when the other three fired. An inspection of control rods and wiring revealed nothing out of the way and it was not until the general overhaul at five thousand miles took place that the cause of the irregular running was found.

I took the magneto off and found that the bottom cam had come unscrewed and was sliding about for a distance of ½ inch. Dressing up the cam and inserting another screw cured the trouble, which many might have thought was due to improper carbureter adjustment.—J. B. Flynn, Mgr., A. B. C. Taxicab, 48 Domain Terrance, Spreydon, Christchurch, New Zealand.

We wish to compliment Mr. Flynn on his capable trouble shooting, for a job of this character might readily lead a good man astray.

Charging Batteries in the Land o' Lakes

Q.—Will you please give us your opinion on a complete battery charging outfit? We have an 850 k.w. Koehler automatic lighting plant which is too small for this work. Our battery storage was limited to about 30 last winter but is rapidly increasing each year and our Koehler has about all it can do to take care of the Radio batteries in use here. We are located in the land of the lakes and during tourist time we have considerable occasion for recharging outfits, the nearest battery station being 23 miles away. We are thinking of securing a four or six K. W. generator second hand, and drive same with a stationary gas engine or a Ford motor.

We prefer a Ford motor on account of the different ranges of speed obtainable which could be regulated according to the amount of current required. What is your opinion on this matter and how much power would be required to drive this generator.—Boulder Junction Garage, Boulder Junction, Wis.

Ford Engine Handles Either

A four K.W. generator is the equivalent of a 5.4 h.p. generator while a six K.W. generator is the equivalent of an 8 h.p. generator. The first will require about 6.7 h.p. to drive it while the second will require about 10 h.p. to drive it figuring an efficiency of 80 per cent. A Ford engine will handle either one, the larger type being about the maximum that the Ford engine should drive as a continuous load. If you can secure a Fordson engine it will stand up longer in this sort of service for it is built for heavy duty. What you refer to as an 850 k.w. lighting plant is probably an 850-watt outfit which is less than one k.w. The speed to run the engine would be about 900 or 1,000 r.p.m. while the generator would probably have to run about 1,800 r.p.m. Accordingly you would need to belt drive the generator with a 2 to 1 ratio having the larger pulley on the engine.

This would mean the necessity of some provision for taking the thrust such as an idler shaft mounted on large ball bearings, or at least plain bearings very well lubricated to take care of the pull of the belt. In getting a generator of this sort it would be desirable to have a field rheostat so as to control the voltage although as you say you can get some voltage control by reducing the speed below the rated speed given on the generator name plate. You would also need a cutout of some sort and we will give you name of concern making such a device, also name of concern having used generators for sale. With the cutout you might find that it will be necessary to maintain approximately the same voltage in order to have it work properly. In other words if you have a 32-volt cutout it will work with five or six batteries on the line but will not work very well if you have too many or too few batteries.

Trouble With Bill Fixit

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Franklin Circuits Wanted

Q.—Can you send me a wiring diagram of the electrical system used on Franklin car No. 90970-S. This may have been given in some of your publications of MOTOR AGE but my old copies have been destroyed and are therefore not available.—Wade Stevens, Beaver City, Nebr.

According to our records this is a Franklin Series 9-B, a wiring diagram having been published on October 11th, 1923. As other MOTOR AGE readers will also doubtless be interested, we are publishing it again and also sending you a copy by letter.

HOME MADE ELECTRIC LIGHTING FOR A GAS STATION

Q.—I want your advice on lights for a small filling station 5 miles from town. At present I am using three gasoline lanterns but as there is a lot of traffic at night I thought I might arrange for better lights in connection with a free air outfit. Here is the proposition; I do not want to put $400 into a lighting plant and even if I had a plant I would have to buy an electric motor at a cost of $55.00 to run the air compressor.

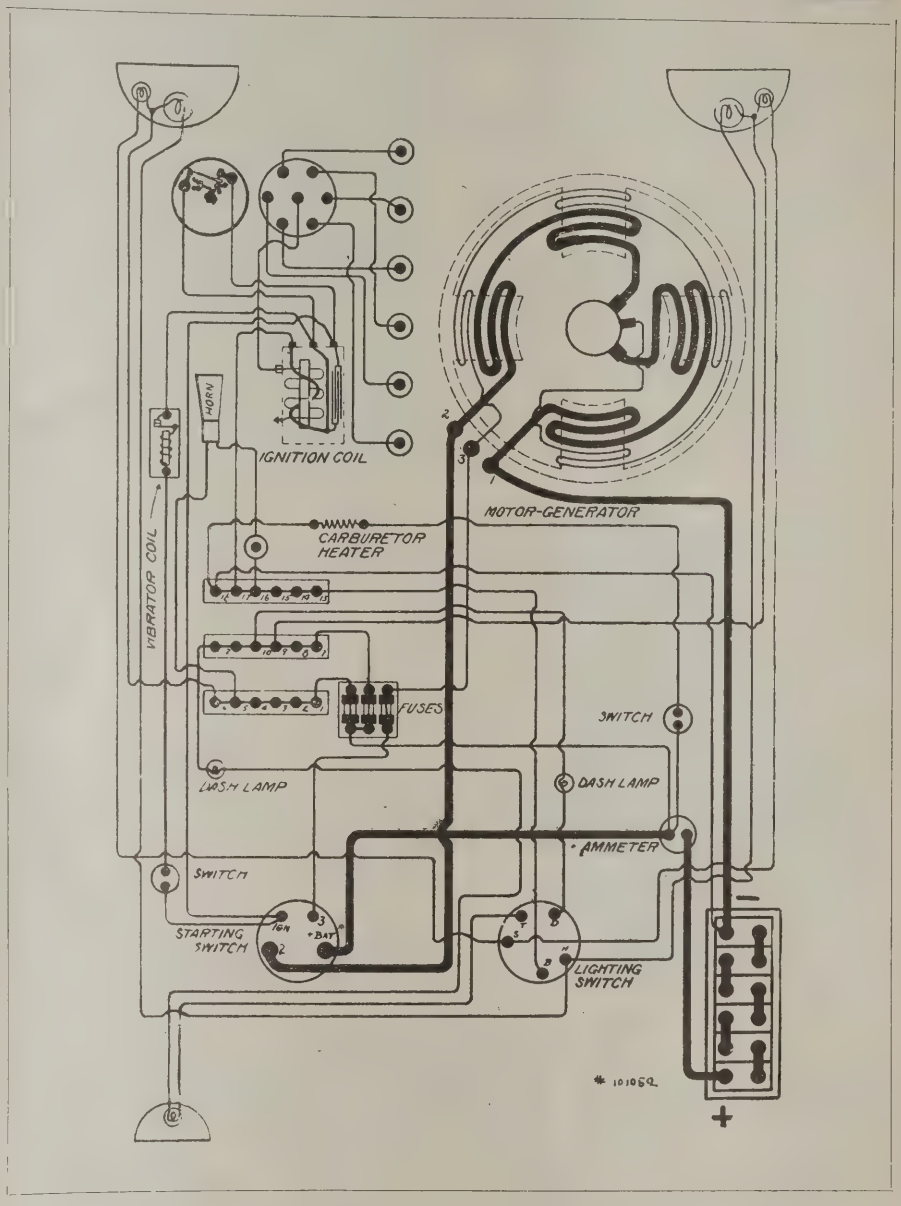
Now if I buy a 2 or 2½ horse power gas engine to run the air compressor would it be practical to belt drive one or two automobile generators and by using about two storage batteries have 6 or 7—27 or 32 C.P. lights for an average of three hours per night, with one to burn all night? Would there be much loss of current if some of the lights were thirty feet from the battery? What size and kind of wire is best for me to use? What size and type of air compression and tank is best for small place and what will be the approximate cost of such an outfit?—Texas Gas Station.

If the gasoline lanterns are of a type that we have seen they produce a rather high candle power so that it would take a rather heavy current to give the equivalent amount of light from electric light bulbs. The ordinary head lamp bulb for example which is rated at 21 candle power draws about 2.5 amperes from the battery and on this basis a 32 candle power bulb would draw about 3.8 amperes. To obtain the watts we multiply the current by the volts which in this case would be 3.8 times 6 or approximately 32 watts as the energy consumed by each lamp.

The ordinary small generator as used on average automobiles would be capable of lighting three of these lamps, but if you use six of them two automobile type generators would be required to balance the load. Of course if the lamps were required for three hours it would be possible with a storage battery to run the generator for six hours but we have some doubt as to the desirability of this scheme. For one thing we suspect that the light distribution would not be ideal. You might try out a single light and an automobile type reflector, hoisting it up in the air to see what the distribution is like. If the bulb is in focus you will have a bright spot of light on the ground underneath the lamp and around the bright spot the illumination will not be so good. Perhaps you can improve it by putting the bulb out of focus, that is either farther in or farther out from the reflector. If you have a battery, bulb and a reflector out of a Ford headlamp you can try this some night and see what the results would be. Generators for belt drives should have ball bearings, for the pull of the belt would rapidly wear out plain bearings.

If a generator such as a Ford is used it would be necessary to provide an oiler at the front end for normally this bearing is lubricated by means of oil from the crankcase. We would recommend using No. 10 wire and would suggest running separate leads from the battery to each of the lights. No. 10 wire has a resistance of 1 ohm for each thousand feet. A 30-foot length of wire would then have a resistance of .06 ohms for the double circuit, that is the wire carrying the current to the lamp and the wire carrying the current from the lamp back to the battery. To find the loss we multiply this resistance by the current which gives us .06 ohms multiplied by 3.8 amperes or .23 volts.

In other words the voltage of the lamps will be approximately ¼-volt less than at the battery. If you would run the same pair of wires to three or four lamps there would be a greater voltage lost. If it is desirable to do this however, you could use larger wire such as No. 8 or No. 6. In regard to the air compressor, would suggest that you get in touch with concerns making this type of equipment.



Wiring diagram of Series 9-B Franklin

Motor Age's Flat Rate Forum

The READERS CLEARING HOUSE

EDITED BY B. M. IKERT

Selling Flat Rate Operations In Groups

SOME shops have not as yet cashed in to the fullest extent on the flat rate system when they have not made up a combination of operations to be sold as a group.

For example there are certain operations which lend themselves very well to grouping and a little time spent in working out such a group usually will be found worth while because it is quite easy to sell the whole job to a customer particularly when it is a matter of only a few dollars cost.

As is pretty well known there are operations such as engine and chassis lubrication which can be grouped and others taking in such things as tightening shackle bolts, spring clips, etc.

One Chicago concern which specializes in maintenance work on Hupmobiles has for example what it calls a Hupp Owners Economy Service consisting of thirty-two operations which as a group are sold at a flat price of $10.00 complete.

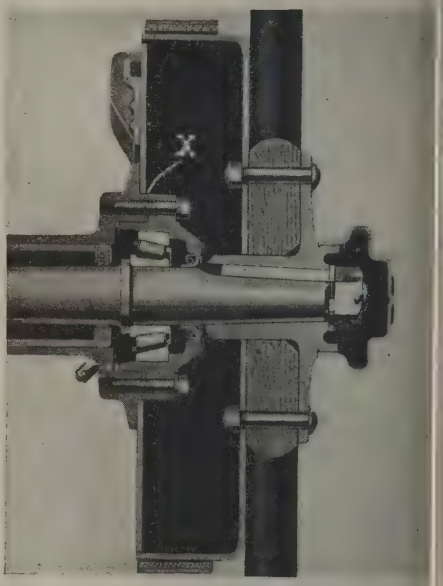
The thirty-two operations included are as follows: Change oil in engine, regulate oil pressure, lubricate generator and starting motor, adjust timing chain, lubricate steering gear, adjust steering gear, lubricate fan assembly, adjust fan assembly, lubricate clutch studs, adjust clutch pedal, grease universal joints, fill transmission to level, grease front wheel bearings, adjust front wheel bearings, align front wheels, tighten steering spindles, tighten spring clips, paint springs with oil, tighten tie-rod bolts, grease Alemite system, fill differential to level, tighten body bolts, tighten all dash lines, tighten running boards, tighten fender bolts, adjust rear axle shaft nuts, flush and test battery, make lights burn, adjust tappets and points, tune engine, adjust carbureter and clean screens and adjust brakes.

The same concern, Hawkins & Bergland Maintenance Company, 2532 S. Wabash Avenue, Chicago, also has a Hupp Owners Special Service consisting of sixteen operations selling at a flat price of $6.25. These operations consist of changing the oil in the engine, checking oil pressure, lubricate generator and starting motor, grease Alemite connection, grease universal joints, fill transmission to level, tighten all body bolts, tighten running boards, tighten fender bolts, make lights burn, flush battery, lubricate clutch studs, adjust brakes, paint springs with oil, align front wheels and road test.

The Right Way and The Half Baked Job

To the Editor of MOTOR AGE:

The Flat Rate Manual issue of April 30th denotes a flat rate charge of $44 for renewing engine main bearings in a Dodge Brothers car. Give your opinion either by letter or through The Flat Rat Forum of any method of doing this fo $12 flat rate. The method employed o the $12 basis is to remove the pan an the bearing caps and drive out the uppe bearing. The new bearings are then pu in by sliding them around the shaft an then new lower caps are also fitted. Ca this operation be successfully done i your estimation and if not what would b the result.—H. R. Reed, Service Foreman A. H. Henneberger Company.



Rear wheel bearing adjustment on the Hupmobile easily is accomplished by the use of shims, as shown in the above illustration. Such constructions largely have cut down the time factor in maintenance work

This is a method which may or ma not work and it is a 100 per cent gues as to whether the upper halves of th main bearings are properly lined up. I they are not the tightening of the lowe half will put a bend in the crankshaf and the bearings will rapidly pound ou again. The local Dodge Brothers servic station advises that whenever all mai bearings have to be replaced the onl safe way is to tear the engine down, al though if only the center one needs re placing then there is a fairly good chanc of getting by in the method suggested When all bearings are replaced the shaf is rotated in the upper half and an bearing which is low is shimmed up wit shim stock.

Finds Manual a Help

New Haven, Conn.

To the Editor of MOTOR AGE:

Enclosed you will find check for $1.0 for two copies of the MOTOR AGE Fla Rate Manual. I think the manual is a great help to all garages running on fla rate. You deserve praise for your work on this manual.

—Frank N. Mason.

MOTOR AGE'S FLAT RATE FORUM

No. 23

CHEVROLET MODELS FOUR-NINETY, SUPERIOR AND UTILITY EXPRESS

FLAT RATES FOR BEARINGS, CONNECTING RODS, PISTONS AND PISTON RINGS AND PINS

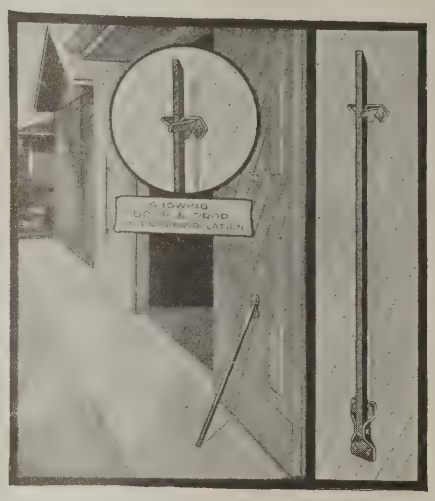
Manufacturer's Official Designation		Time Hours
43	Bearings—490 Motor. Tighten all bearings (Includes Operation No. 36-40-41)	3.9
44	Bearings. Same as Operation No. 43 on Superior motors	4.4
45	Clyinder Head, Under Pan and Oil Pan. Remove and replace (Includes flushing of oil pan, oil lines and adjust tappets)	2.5
	(a) Grind and reseat valves	1.0
	(b) Connecting rods and piston assembly. Remove and install one (includes the lining up of the rod removed and tightening the other three rods)	1.2
	(c) Connecting Rod. Replace, refit and adjust one rod bearing and true up rod	.6
	(d) Cylinder. Read and burnish one cylinder	.8
	(e) Piston. Install and fit one oversize piston, 3 piston rings and one pin	.8
	(f) Piston Rings. Replace one set of 3	.3
	(g) Piston Pin. Replace 1 (Includes reaming and fitting)	.3
46.	Connecting Rod and Piston Assembly. Remove and install 4 connecting rods and pistons. (Includes tightening and truing of 4 connecting rods and Operation No. 45)	4.5
	(a) Main Bearings—490 motor—Tighten	1.0
	(b) Main Bearings—Superior motor—Tighten	1.5
47	Piston Rings. Install 12 new piston rings (includes Operations No. 45-46)	6.0
	(a) Grind and reseat valves	1.0
48	Piston Pins. Install 4 new piston pins. Includes Operation No. 45-46	5.9
49	Piston Rings and Pins. Install 12 new rings and 4 pins. (Includes Operations No. 45-46)	6.8
Operations No. 36-40-41 referred to above are as follows:		
36	Under Pan and Oil Pan. Remove and install. (Includes flushing oil pan and oil lines)	1.5
40	Connecting Rod Bearings. Tighten. (Includes Operation No. 36)	2.5
41	Main Bearings—490 Motor. Tighten. (Includes Operation No. 36)	2.9

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Properprop for Garage Doors

SERVING as a prop to hold the swinging garage door open and as a handle for opening the door when it is closed the Properprop is being made and marketed by the Bovey Automobile Heater Company, 3911 Prairie Avenue, Chicago. When it is desired to close the door the device is folded up into a door handle and held in position by a gravity latch. The Properprop is said to work equally well, in preventing a door from closing, on concrete, dirt or any other surface. One of its merits is in preventing the door from slamming shut when the car is being taken in or out of the garage. Price per pair $1.25.



Properprop



New Spring Control Device

Hassler Stabilizer

A NEW spring control device known as the Hassler Stabilizer has been perfected by Robert Hassler, Inc. of Indianapolis. The product is offered at present for such cars as Chevrolet, Dodge Brothers, Hudson, Essex, Buick, Overland, etc. It was created to meet the needs of peculiar spring reactions created by requirements of the balloon tire. Based upon the principle of "smooth friction" as opposed to "rough friction" it is said that the Hassler Stabilizer eliminates the jiggling sensation which is experienced when the balloon tired car is driven at certain speeds over uneven roads.

Another feature is said to be the quick recovery of the flexible member, or connecting belt, this accelerated recovery being urged as very important especially where balloon tires are used. The internal mechanism is sealed against mud, water, dirt and other destructive elements. A separate model has been developed for each make of car to which the stabilizer has been fitted. While the device is being made at present for a limited number of makes it is announced that it will be fitted to all other popular makes of cars.

Show and Demonstrate

And this bit of advice from the manager of a large sporting goods house to the clerks in that establishment:

"Don't be afraid to show or too lazy to demonstrate."

This sounds almost like the manager of the sporting goods house has had experience in running an automotive accessory store. And his advice to sporting goods sellers is excellent also for accessory store salesmen.

Rare types of patience in showing stock to prospective buyers can be found in any large department store. It is this patience and pleasant willingness to go the limit for a customer that makes the cash register ring. The accessory salesman must have lots of such virtues. It is well to remember that so long as the person being served is "interested" he is a "prospect."

EXTENSIVE price reductions on all Schebler package outfits for carburetor replacements on automobiles were announced July 1 by the Wheeler-Schebler Carburetor Company, Indianapolis, to all their distributors and dealers. These reductions particularly affect package outfits including the new Schebler Model "S" Carburetor.

The Silent Salesman

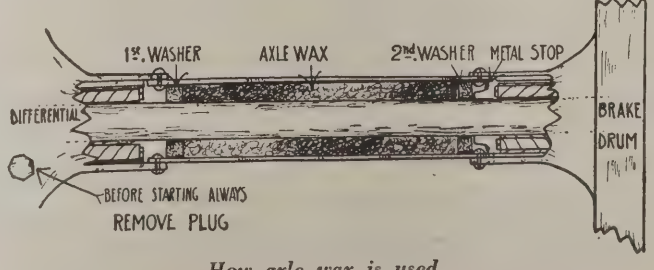
TO facilitate sales of Tex-Oil Silencers and Fabroil Silent Tappet Adjusting Screws John C. Hoof & Company, 157 W. Illinois Street, Chicago, offers to furnish automotive merchants, without cost, a handsome display case for counter use. The company calls the case "The Silent Salesman" and it is sent to the dealer with an assortment of the items it is intended to exploit. The case, in orange and black, is made of pressed metal, with a glass top through which the customer may view the assortment. In the rear is space which may be used for storage of surplus stock.



"The Silent Salesman"—a counter display case

Axle Wax

HUTCHINSON & Company, of Dallas, Texas, describe their Axle Wax as a "grease retainer on a new principle." It is a wax compounded preparation which goes in the rear axle housing for the stoppage of dope leaking. The substance is packed between the outer and inner bearing, filling the entire space between axle and housing. It is said to be a sure "stop," holding regardless of the condition of the axle or bearing. This preparation is packed in a tin can, each such unit including two fiber washers and one metal stop washer. Prices—touring, 75 cents; truck $1.

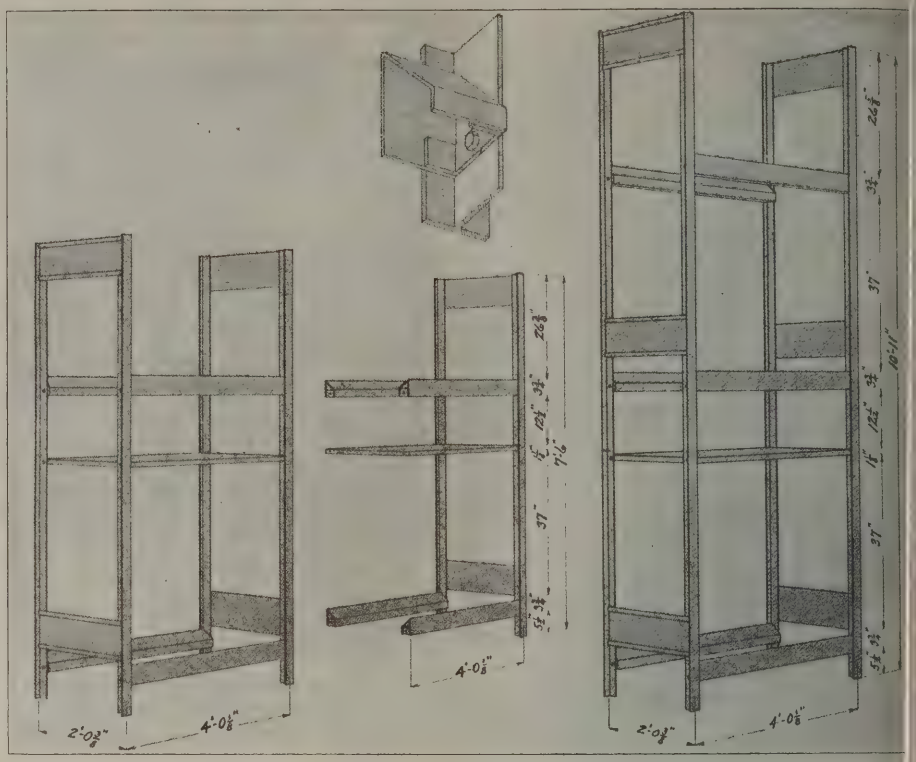


How axle wax is used

GETTING MORE OUT of the SHOP

Lupton Tire Rack

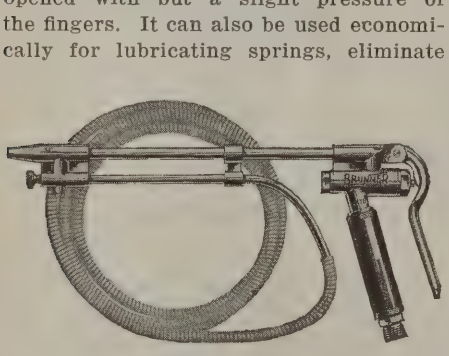
An addition to the Lupton line has been made in the shape of a new type 2 tier and 3 tier tire rack designed with particular attention to rigidity to resist sway in both directions. The uprights are heavy rolled T sections and each rack is equipped with a shelf for carrying tubes. The depth of the rack is properly designed to take tires from 30 inches in diameter to 36 inches, the distance in the clear being 37 inches, which makes it possible to handle cord and balloon tires on the same rack. The height of the 2 tier and 3 tier rack is 7 ft. 6 in. and 10 ft. 11 in. respectively, while the depth in each case is 24⅜ inches. The total capacity based on 4 in. tires is 22 for the 2 tier and 33 for the 3 tier and each rack holds 36 tubes. Price for the first unit is $20.00 for the 2 tier rack and $31.00 for the 3 tier rack. The prices are based on a first unit and an additional unit making it possible to have a continuous tire rack in multiples of 4 ft. Additional racks cost $16.00 for the 2 tier and $22.50 for the 3 tier. The above equipment is made by David Lupton's Sons Co., Philadelphia, Pa.



New two and three tier rack recently introduced by David Lupton's Sons Co. It will handle cord and balloon tires.

Brunner No. 78 Engine Cleaner

This tool can be profitably used for cleaning engines and its balanced pistol grip makes it easy to hold without tiring or cramping the hand. The valve is leakless when closed and can be easily opened with but a slight pressure of the fingers. It can also be used economically for lubricating springs, eliminate



Brunner No. 78 engine cleaner

body and chassis squeaks, blow out clogged gasoline and oil lines, etc. To lubricate springs the tension is taken off the springs by a jack against the car frame, any rust, dirt or corrosion is removed with a wire brush and then a good grade of penetrating oil sprayed on the springs. This engine cleaner is made by the Brunner Manufacturing Co., Utica, N. Y.

Transco Aluminum Solder

This is a self fluxing solder for aluminum which flows at 355 degrees Fahrenheit, a temperature so low that there is no danger of distorting or burning the aluminum. The solder is non-electrolytic which means it is not affected by oxygen in the air or the oxides of aluminum. The solder will take a polish and when used on aluminum and then polished it is impossible to find the part soldered, it is stated. It is not affected by acids and it acts like a weld and when applied to aluminum drives out the oxides and becomes a part of the aluminum. In its application if a soldering iron is used the latter should be filed clean and tinned with half and half in the usual manner.

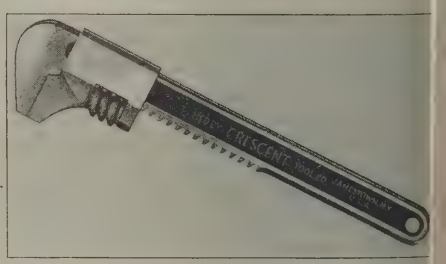
Transco X X brazing solder flows at 470 degrees Fahrenheit and is also self fluxing. It is puddled with a small flat tool instead of a brush, any tool similar to a screw driver being acceptable. It is especially suited to repairing cast aluminum parts such as crankcases, manifolds, etc. If it becomes necessary to repair a small sand or air hole, the Transco X solder can be used, but if a casting is cracked so it is hard to get the solder in place a V groove is filed in the crack and filled with Transco XX. The above solders are made by L. D. Beck, manufacturer, 901 Irvin Park, Blvd., Chicago, Illinois.

PYROXYLIN FINISHES

Are you reading the instructive and comprehensive articles on the new pyroxylin finishes appearing in MOTOR AGE each week? You can't afford to miss these. Turn to pages 14 and 15 of this issue.

Crescent Auto Wrench

The Crescent Tool Company, James town, New York, has introduced a ne wrench known as the 019 which retail for 75c. Features of this wrench whic is conventional in style include a dro



Crescent Auto Wrench

forged handle and jaw made from ste of a special analysis. The teeth a accurately milled to afford strength a easy adjustment. The adjusting knu is turned from a solid bar of steel a hardened and a small spring pressi against the knurl holds the adjustment the setting. The entire tool is harden by a special process of heat treating a oil tempering. It is hand polished improve its appearance. The total lengt is 9 in. with a capacity fully open 3 in. The length of the jaw is 1⅛ i

EDITORIAL

Why Is The Sticker?

IF an automobile dealer desires to profit by past mistakes in used car trading he must begin with an effort to analyze, in so far as possible, the mistakes of which he has been guilty.

While this can not be done comprehensively one way for the dealer to get a fair line on past errors of judgment is by making a study of the "stickers" in comparison with cars that move more readily.

Just why have certain cars been "stickers"? The answer to this question often will give the retailer some valuable suggestions for application in future transactions involving used car trades.

In the great majority of cases the "sticker" fails to move because of poor initial judgment in making the allowance when it was taken in. Very often in order to sell it the price is cut to a point below possibility of profit—which is a confession that the house was out-traded when it agreed to accept the car at the terms of some bargain-driving owner determined to shift a loss, properly his own, to other shoulders.

When a car is priced right aggressive merchandising effort usually will place it in the hands of a buyer. If the dealer prices it too low for a profitable sale, just to get it out of the way, he is certainly paying a premium on a previous blunder.

Buy them right in the first place and selling them profitably becomes a much more simplified matter.

Study the stickers comparatively with the better sellers. They are always with you *for a reason.*

If that reason is chargeable to error or folly on the part of the house you want to know it for the purpose of future guidance.

Success, in the first place, is erected largely with the lessons we learn from our mistakes.

1926 Models

AND now for the 1926 models. Factories will be announcing the new offerings from time to time as usual at the seasonal period. Ordinarily the announcements are followed by more or less stimulated sales and it may be expected that the 1926 models will deliver a certain merchandising impetus.

Harking back a year we see a different condition in many quarters of the trade as the new models were about to come forth than we behold today.

When we hit the new model introductions in 1924, heralding 1925 designs, many dealers still had on hand cars of 1924 vintage in numbers embarrassingly large. As you went about among them you heard considerable sour comment about the practice of "yearly models" which they said were so often catching them in a bad position.

Whether bringing out new models each year will continue permanently as an outstanding feature of factory policy only the future can reveal but this much is certain—dealers will complain less about yearly models this year than they did last.

And they will never be so inclined to complain about the policy of yearly models if their floors are well cleared of the previous year's cars when the new models are introduced.

The yearly introductions of 1926 designation will be given full advantage to show what selling impetus they are capable of engendering.

A Campaign in Huntington

AUTOMOBILE dealers in Huntington, West Virginia, recently launched a "Buy a New Car This Year" campaign. The idea is to keep constantly before the public the thought suggested in the slogan. Through consolidation of efforts it was agreed that a considerable awakening of public interest could be aroused and most likely the campaign will cause people of that locality to "think" more about buying new cars than would be the case without this reminder. While people do not always buy the thing they think about we know one thing for sure—they never buy the thing they don't think about. This Huntington campaign is to set the folk to "thinking"—and keep them thinking.

Automobile Merchants

ONE of the factories announces the appointment of new automobile "merchants" for its line. There is compelling charm in that word. Assuredly these "merchants" will be known popularly as automobile "dealers," but more specifically they are "merchants" and the more they commit themselves to that impression the more they are apt to conduct their establishments as real merchandising institutions.

In noting the obsolescence of the word "dealer," as used in this sense, Webster's recognizes a distinction which is worth more than passing thought. Pursuance of custom will maintain the "dealership" in popular use but in treating with his own business it is well for the "dealer" to bear constantly in mind that while a "dealer" in the popularly accepted sense he is first and foremost an automobile —merchant.

Oregon's Anti-Theft Laws

OREGON has fallen in line with enactments intended to curb automobile stealing. One of the new statutes makes it a criminal offense to tamper with a serial number with intent to defraud while another requires that all applications for licenses shall be accompanied with certificates of title. Both laws, as drawn up and passed, seem to cover their objectives adequately. They are laws which work well together and which, if rigidly enforced, should do much toward a reduction in automobile thefts.

Automotive Production at Low for Year

Sales, However, Continue Good And Optimism Is Predominant

Business for Second Half of 1925 Predicted as Good or Better Than First Six Months

NEW YORK, July 20.—Production of motor vehicles is at low ebb for the year, due to seasonal closing down of plants for vacations and inventories, but reports from all sections of the country show that sales continue heavy and many in the industry are optimistic enough to predict that business for the last six months of 1925 will prove as good if not better than during the first half of the year.

Domestic production in June was 364,806 cars and trucks. This compares with an output of 249,868 in June of 1924, but it is slightly below the June, 1923, figure, which was 376,000.

It is not expected that July production will approach that of June, especially since several of the biggest manufacturers including Ford are operating part time during the taking of inventories, but there is as yet no very definite indication that sales are slacking up.

As a matter of fact the demand for motor vehicles remains so firm that many companies which otherwise would slow down at this period of the year are compelled to keep going at capacity to keep up with unfilled orders on their books. One factor which is interfering somewhat with production is the inability of the manufacturers to get sufficient closed bodies to meet the demand.

An outstanding feature of the automotive industry so far this year is the great earning power it has displayed. Financial statements covering the first six months of business evidence an extremely healthy condition. This is due in large measure to the fact that producing companies have kept their manufacturing geared closely to demand, thus keeping finished stock-end inventories lower probably than ever before.

Fresh buying activity is expected to develop with the coming of new models, beginning this week. Nash and Oakland are bringing out new lines and Chrysler is announcing important changes in the six-cylinder models. Along with the new models will come some price changes.

In discussing prices, it is interesting to note that practically all manufacturers have reduced the cost of their cars since January. The cuts in some instances have amounted to as much as $800 on higher class jobs, but despite these reductions profits have never been more satisfactory. Makers of commercial vehicles, trucks and buses, report an unusual volume of business. Buses, especially, are selling far in advance of a year ago. Accessory and specialty manufacturers are working at capacity to keep pace with the demand.

A. A. A. Standings

1.	DePaolo	2500
2.	Milton	1070
3.	Hartz	780
4.	Cooper	555
5.	Lewis	465
6.	McDonogh	405
7.	Elliott	330
8.	Shafer	245
9.	Comer	204
10.	Duray	135
11.	Kreis	117
12.	Batten	110
13.	James Hill	55
14.	Bordino	54
15.	Bennett Hill	50
16.	DePalma	46
17.	Shattuck	35
18.	Devore	21
19.	Hepburn	16
20.	Mourre	11

Sales of $117,045,569 By Dodge Brothers Set Record

Increase of Business Over First Six Months of Last Year About $10,000,000

DETROIT, July 18.—Net sales of Dodge Brothers, Inc., passenger cars and parts totaling $117,045,569 for the first half of the present year established a new high record. Net earnings after depreciation but before deducting debenture interest and federal income taxes were $16,487,891. This is more than $2,000,000 better than the estimate made earlier in the year.

For the half year, preference dividends were earned four times over, and after deducting all charges, taxes, bond interest and preference dividends the company earned at the annual rate of $9.48 on its 2,000,000 shares of outstanding common stock.

Earnings of Dodge Brothers, Inc., combined with those of its predecessor company for the six months ending June 30 as compared to the same period last year follows:

	1925	1924
Net sales—		
Cars and parts	**$117,045,569**	**$107,250,350**
Earnings from sales	**15,129,205**	**8,592,774**
Net earnings after depreciation but before deducting debenture interest and federal taxes	**16,487,891**	**9,111,099**
Other earnings	**1,358,686**	**508,325**

In a statement of earnings sent to stockholders by Frederick J. Haynes, president, was the company's initial dividend check on its 7 per cent preference stock. This dividend, which inaugurates quarterly payments on the stock, amounted to $1.75 per share payable July 15 to stockholders as of record July 1.

Yellow Cab Merger to Come Before Stockholders Aug. 18

Hertz Believes All Holders Will Readily Agree to Consolidation With General Motors

CHICAGO, July 23.—Ratification of the recently announced plan to merge the Yellow Cab Mfg. Co., with a division of the General Motors Corp., will be acted upon by Yellow Manufacturing stockholders at a meeting set for Aug. 18. The stockholders' meeting will be held in Portland, Maine.

Meanwhile proxies are being prepared to mail to stockholders. Indications, it is said, are that the two-thirds vote necessary for the ratification of the proposed merger will be forthcoming.

"We have every reason to believe that our stockholders are overwhelmingly in favor of the merger," said John Hertz, who engineered the deal and who became chairman of the board of directors of the new corporation which is to be known as the Yellow Truck & Coach Mfg. Co. "I believe that the stockholders of the Yellow Cab Mfg. Co., realize that our plan is the most logical combination of interests. This is not a deal arranged for a few insiders, but is one which is calculated to benefit all concerned.

"The merger plan was handled direct by representatives of both sides. There was no intermediary. Consequently no one individual will especially benefit by it, nor will anyone receive any commission or a bonus of any kind."

While the merger will result in voting control passing into the hands of General Motors the destiny of the Yellow organization remains with Mr. Hertz and his associates under the arrangement. Active management of the new company will be almost entirely in the hands of the present Yellow Manufacturing officers and the present management will also have majority representation on the new board to the extent of thirteen out of twenty-one members, the other eight being directors of General Motors.

STUDEBAKER ADDS MODELS

SOUTH BEND, Ind., July 13.—The Standard Six line of the Studebaker Corporation now includes a sport phaeton listing at $1255 and a sport roadster listing at $1235. Both models are finished in a dark gray lacquer, and have leather upholstery. The equipment of these new models is identical with the Duplex roadster and Duplex phaeton, but in addition they are furnished with a spare tire, a front bumper, and a motometer.

DUESENBERG PHAETON $6,850

INDIANAPOLIS, July 8.—A new price of $6,850 for the five-passenger phaeton model has been announced here by Duesenberg officials.

Wisconsin Rubber Factories Unhurt by Climbing Prices

National Association Plans Conservation Program—No Immediate British Relief Seen

MILWAUKEE, July 18.—Wisconsin's big rubber factories have not yet felt the pinch of soaring crude rubber prices, according to an investigation made among leading units in the industry in the state. Immunity from price increases to date has been due to fairly liberal supplies on hand in the majority of instances.

"The boost in raw rubber means the producers will be compelled to conserve present supplies to the best of their ability," said H. A. Githens, sales manager of the Federal Rubber Co., division of Fisk. "Earnings ought to be fair on prices received for tires manufactured from crude materials for which from 35 to 50 cents per pound was paid. Tire prices advanced in May, June and on July 1, and it may be necessary to again increase the prices if the market for raw material does not cease to skyrocket. Conservation of supplies and curtailment of production seem to be the only methods that can keep prices down right now. We have about 2,200 men employed at our Cudahy plant and have not yet thought of following the lead of some of the small producers who have already curtailed or shut down."

L. T. Vance, vice-president and manager of the Ajax Rubber Co. of Racine, Wis., which employs between 1,300 and 1,400 men, asserts that raw rubber growers in Java and Sumatra have largely increased production since the prices reached high figures. Mr. Vance expresses the conviction that maintenance of the ruling prices of this period will result in higher tire prices.

L. H. Sheperd, vice-president and sales manager of the Racine Horseshoe Tire Co., described the present high price of raw rubber as "speculative." Salvage plants are doubling their capacity since the advent of high prices, he pointed out, but asserted that the life of the built-up tire is nearly twice as long as that of the rebuilt tire so that the factor of dependability assures the industry of little relief from this source. Tire prices will go up, Mr. Sheperd says, unless crude rubber prices come down. Only companies forced by lack of stock are paying the holdup prices for crude rubber now prevailing, in his opinion.

CONSERVATION PLANNED

NEW YORK, July 18.—A. L. Viles, secretary of the Rubber Association of America, has paved the way for a special sub-committee to make drastic recommendations to the industry with the idea of conserving rubber.

The committee will be appointed probably this week, as the result of a special meeting here a week ago when directors determined to abolish the "spring dating purchase plan." Under this arrangement orders for crude rubber were placed in the autumn, ordinarily in November, for delivery of rubber at the seller's option, up to March 1. In some cases settlement for the invoices was carried until June.

Elimination of this plan, Mr. Viles explained, undoubtedly will cause manufacturers to make larger use of their current stocks of rubber.

It also is intended by the manufacturers to clear out the stocks on hand of odd-shaped and odd-size tires. The subcommittee will recommend the reduction of types and sizes and will be specific in every point in its plea for drastic conservation.

NO TARIFF REDUCTION

LONDON, July 11.—(By mail.)—With the price of crude rubber four times what it was in the spring of 1924, the British government is not inclined to consider that it justifies reconsideration of the existing ordinance restricting the output of the Malay Peninsula.

W. G. A. Ormsby-Gore, parliamentary under-secretary for the Colonial office, replying to questioning in the House of Commons, said the legislation originally was drawn to restrict export, not production. Admitting that the existing price of rubber was a surprise, Ormsby-Gore said that it would bring an automatic increase in the amount of rubber for export August 1.

Nevertheless, if the prevailing high price continues, the situation would be re-examined, the Under Secretary added. Legislation would be necessary in the Straits Settlement, the Federated Malay Settlements, the Federated Malay States and Ceylon, to increase the percentage of August 1 by 20 per cent instead of 10.

Rubber soared to 4 shillings, 2 pence (about $1.00) today. Last spring the price was about a shilling a pound. The present price is the highest since the famous rubber boom in 1910.

Aviation Oil Found in Crickets

WASHINGTON, July 18.—It appears that a very precious oil, suitable for aviation, since it does not congeal even at a very high altitude, can be extracted from crickets, says consular advices to the Department of Commerce from Algiers.

Recently about eighteen tons of crickets were sent to Holland from Algeria. Part of this quantity was utilized for feeding poultry, and from the remainder the oil for aviation purposes was extracted and has apparently given every satisfaction.

Goodrich and Ames Holden Expand Canadian Projects

KITCHENER, Ont., July 18.—Completed plans for the expansion and development of the Goodrich and Ames Holden products have just been put into effect. Under the new arrangement the B. F. Goodrich Rubber Company, Ltd., now becomes a sales company with separate warehousing facilities while the Canadian Goodrich Company is now mainly concerned with the engineering and production of tires.

With Kitchener as the headquarters of the sales company premises at the corner of Waterloo and Victoria Streets formerly occupied by the Canadian Consolidated Felt Company have been taken over. Tentative arrangements to obtain additional premises have been made to take care of increased business.

The manufacturing company is now known as The Canadian Goodrich Rubber Company, Limited, and its products in the way of tires, footwear, etc., are turned over to the sales warehouse. The sales company is also planning distribution of the Ames Holden product. Distributing warehouses under the direction of the new company are being maintained with complete stocks at important centres throughout the Dominion of Canada.

Goodrich Raises Tire Prices For Fourth Time This Year

Automobile Pneumatics Jump 10 to 15 Per Cent—Other Companies Expected to Follow

AKRON, O., July 18.—The B. F. Goodrich Co. today initiated the fourth tire price increase since crude rubber started its phenomenal rise early this year.

Announcement is made by Goodrich officials of advances of from 10 to 15 per cent in prices of all pneumatic and balloon automobile casings and 15 per cent on inner tubes. Solid and cushion tires are boosted 10 per cent.

While official announcements were not ready it is learned that executives of other companies are prepared to meet the Goodrich advance. The new schedules became effective today.

Simultaneously with the announcement of the latest tire increase, crude rubber soared to a new peak of $1.17 a pound, the highest price reached in the last six years.

Prices of tires sold as original equipment to the motor car manufacturers also have been advanced from 40 to 60 per cent, it is announced here. The higher tire prices have increased car costs from $5 to $25 and, while this must be added to future car selling, it is not believed automobile prices will not be raised immediately.

Tire manufacturers say that several of the volume automobile producers have contracted ahead for tire requirements throughout the last half of 1925. Many other car makers, however, are being forced to pay higher prices for their original equipment. Furthermore, the tire companies are showing reluctance in making long term contracts for future delivery to the automobile manufacturers.

Greater Activity Is Expected to Result From Big Merger

Leaders of Industry See GMC Trucks and Yellow Buses Making Strong Bid for Leadership

DETROIT, July 18.—In the recent General Motors Corporation and Yellow Cab Manufacturing Company merger, those in the automotive industry in the greater Detroit area see GMC trucks and Yellow buses making a strong bid for the leadership in their respective fields.

Two reasons are given to support their claim, one is that General Motors is well equipped to operate on a large basis and the other is that Yellow Cab distributing facilities are exceedingly good. Under the new company, The Yellow Truck and Coach Manufacturing Company, these two factors can be operated to advantage.

Turning over of Northway Motors and GMC truck divisions to the new company will give these two companies an outlet for their products, especially Northway Motors. It is well known in local automotive circles that both plants had been operating at but 10 per cent of their full capacity and with the formation of the new company, they will be able to increase their production materially.

This increased production is expected to make for greater competition, and with Yellow Truck and Coach Manufacturing Company striving to gain the leadership in the field, the industry is looking forward to much greater activity than in the past.

Carolina Sales Districts Reorganized by Ford Co.

CHARLOTTE, N. C., July 18.—Reorganization of sales territories in North Carolina and South Carolina and several promotions in connection with the enlargement of the sales supervising staff are announced by the Charlotte branch of the Ford Motor Company.

The four sales districts were divided into eight districts, and Zone Supervisor L. H. Diehl of Charlotte, was promoted to the newly created position of chief roadman. Other promotions announced were: F. M. Wright, truck sales representative; T. W. Hancock, truck department representative; A. J. Beck, truck sales representative; H. G. Thrasher, service department representative; J. D. Perry, tractor department representative, all of whom were appointed zone supervisors.

The duties of those supervisors in a general way will be to see that the dealers in the Carolina territory are carrying out sales, service and advertising policies satisfactory to the company, it was explained.

DELAWARE TAX RECEIPTS

WILMINGTON, Del., July 18.—The state highway department reports that the motor vehicle fees from January to May, this year, totaled $588,638. The budget estimate for the entire year was $605,000. There are seven more months in which to make up the estimated amount. The gasoline tax collected by the department for the first six months of the current year, January to the end of June, aggregated $148,322.20. The budget estimate for the year was $300,000. Last year for the last six months the gasoline tax aggregated $184,007.25.

Would Standardize Highway Terms

WASHINGTON, July 18.—Standardization of a large number of technical terms in the English, Spanish and Portugese languages will be one of the results of the Pan American Congress of Highways at Buenos Aires next October, the Pan American Confederation for Highway Education.

It is advanced that international communications on the subject of highway building will be greatly expedited if an exact definition is given to the many technical and semi-technical words used.

It is proposed, therefore, to compile a glossary of all terms including many common to the automotive industry, which may be useful to highway engineers. The North American delegation will present to the Congress a tentative glossary.

General Motors Sales Beat June of 1924 by 10,557

DETROIT, July 18.—Sales of General Motors passenger cars and trucks to ultimate consumers during June totaled 75,781, or 10,557 more than for June, 1924. The sale of passenger cars and trucks to dealers by the manufacturing divisions of General Motors for the past month totaled 70,974 as compared to 32,984 for June, 1924.

Following is the tabulation which shows monthly sales of General Motors cars to ultimate consumers and sales by the manufacturing divisions to their dealers:

	Dealers Sales to Users		
	1925	1924	1923
Jan.	25,593	33,574	31,437
Feb.	39,579	50,007	33,627
Mar.	70,594	57,205	74,632
Apr.	97,242	89,583	105,778
May	87,448	84,715	90,327
June	*75,781	65,224	74,423

	Division Sales to Dealers		
	1925	1924	1923
Jan.	30,642	61,398	49,162
Feb.	49,416	78,668	55,427
Mar.	75,527	75,484	71,669
Apr.	85,583	58,600	75,822
May	77,223	45,965	75,393
June	*70,974	32,984	69,708

*These preliminary figures include passenger cars and trucks sales in the United States, Canada, and Overseas by the Chevrolet, Oldsmobile, Oakland, Buick, Cadillac and GMC Truck manufacturing divisions of General Motors.

Havana Manager Heads New Ford Branch at Mexico City

A. R. Lajous Leaves Cuban Post to Handle Constantly Mounting Mexican Sales

MEXICO CITY, July 18.—A. R. Lajous, formerly manager of the Ford Motor Company at Havana, Cuba, is manager of the new branch office of that company which was opened here July 1. The opening of this branch is expected to be the means of greatly increasing sales in this country.

When President Plutarco Elias Calles learned that the Ford Motor Company was seeking a suitable location here he showed his personal interest in the matter and gave official aid in carrying out the company's plans.

The sale of Ford Motor Company products in Mexico is constantly mounting and new agencies are being established even in many smaller towns which until recently were believed to have but few possibilities in the way of affording a market for automobiles. There are at this time approximately 50 dealers of the Ford Motor Company in Mexico.

Prior to the opening of the branch here the Mexican business was handled by the Houston office of the company. Besides Mr. Lajous, the staff of the branch here will consist of W. W. Townsend, a manager of the wholesale department, O. C. Schulz, chief traveling salesman, and J. C. Weller, manager of the Lincoln department.

Much Winter Storage to Be Stopped by New Enactment

MILWAUKEE, July 18.—Automobile owners and dealers of Wisconsin will pay an added tax of thousands of dollars as a result of measures passed by the state legislature this year according to Bart Ruddle, Milwaukee, secretary of the Milwaukee Automotive Dealers association and secretary of the Wisconsin Automobile Dealers association.

Dealers will be forced to discontinue storing cars during the winter for spring delivery, in many cases, because they cannot absorb the personal property tax.

Farmers and others had previously waited until the tax assessor checked them up on May 1 or later and then wanted automobile delivery and the situation was cared for by the dealer who stored cars against such an emergency demand.

Big distributors who store many cars now will have to pay the personal property tax which has previously been offset against their income tax. According to Mr. Ruddle between three and five thousand cars have been stored in this manner in Milwaukee and vicinity during peak years. In dollars and cents Mr. Ruddle estimates the annual additional tax on Wisconsin dealers and distributors at $200,000.

Ford Roadster Is Sent to Cleveland By Air



Top view shows Ford roadster being loaded in Maiden Dearborn II before it left Detroit. Bottom left pictures the car being assembled on special platform provided for that purpose at the landing field in Cleveland. Lower right is the assembled roadster being driven from the platform under its own power. Seated in the car left to right are W. R. Hopkins, city manager of Cleveland, and W. B. Mayo, chief engineer of the Ford Motor Company.

SIMULTANEOUSLY with the opening of Cleveland's municipal airport which is a stopping point in the Chicago-New York U. S. night air mail service just inaugurated, Henry Ford's new air freight line between Detroit and Cleveland went into operation.

Piloted by LeRoy Manning, the 400 hp. Stout metal airplane, "Maiden Dearborn 2," left the Ford airport at Dearborn at 6 p. m. carrying the complete parts for a Ford roadster, arriving at Cleveland before dusk. This was intended as a testimonial of Mr. Ford's to Cleveland to show the practicability of the air freight service. The roadster in knocked down form was unloaded from the plane immediately it landed and assembled in record time by mechanics from the local Ford assembly plant before thousands of spectators who thronged the field all day.

Upon completion, the car was driven under its own power from the specially constructed platform by William B. Mayo, chief Ford engineer, who carried with him as passenger W. R. Hopkins, Cleveland's city manager. Included in the 1,412 pounds of freight transported in the plane was the regular Ford mail directed to the New York branch, the mail later being transferred to the night mail plane going East.

Extending the freight air lines to Cleveland marks the second stop in the development of the Ford airways which will eventually link all assembly plants with the Detroit factories. Two Ford planes have been in continuous use between Chicago and Detroit for more than two months and during this period there have been no accidents of any kind or serious deviation from schedule.

Airplanes from several parts of the country attended the opening of Cleveland's municipal field and besides six privately owned Detroit planes a number of pursuit ships and bombers were present. Among several of the prominent personages in automotive and aeronautical circles attending the demonstrations were Major General Mason N. Patrick, chief of the army air services; Harvey Firestone, tire manufacturer; William B. Stout, George B. Wilkins and George W. Hopkins, president Detroit Flying Club.

Automobiles in Canada Pass 600,000 Mark First Time

WASHINGTON, July 18.—Automobiles in Canada have passed the 600,000 mark for the first time in history, according ot an announcement just made here by the Department of Commerce.

Motor vehicles registered in Canada January 1 numbered 652,121, compared with 593,323 on January 1, 1924.

Ontario was the leading automobile owner among the provinces with 308,693 cars to its credit. The prairie provinces of Manitoba, Saskatchewan and Alberta combined accounted for 166,234 automobiles. More than 60 per cent of the cars in that area are owned in rural districts.

NEW MOON DEALER

ST. LOUIS, July 18.—The Moon Motor Car Company announces the appointment of A. L. Bendure Motor Company of Arkansas City, Kans., as Moon and Diana dealers. This company formerly handled the Maxwell and Chrysler cars in this territory and previous to that A. L. Bendure, head of the company, was connected with the Ford Motor Company.

Chrysler Speeds Production To Handle Heavy Demands

DETROIT, July 18.—With upwards of 40,000 orders on their books for Chrysler sixes and fours, production at the two Chrysler plants here have been speeded up to 750 cars a day.

Of this number, 500 are of the different Chrysler four models and 250 of the different six offerings. According to J. E. Fields, vice-president in charge of sales, plans have been made to produce 16,000 cars during July.

To maintain this rate of production, several hundred thousand dollars worth of the latest and improved machinery has been installed. Other improvements tending to speed up the output have also been installed.

Inability to obtain bodies for closed cars has proved the biggest setback so far. Dealers who could sell as many as 100 cars in a few days have been able to get but one-tenth of this number. The increased production is expected to do away with this difficulty.

UPTOWN STUTZ OPENS

CHICAGO, July 18.—Formal opening of the Uptown Stutz Company at 5051 Broadway is announced by Joseph Melin and George W. Peak. Mr. Melin is proprietor of the Melin Motor Sales at 3020 Lawrence Ave., where he handles Stutz and Flint cars. Mr. Peak is the Stutz dealer in Evanston. In the spacious show-room at 5051 Broadway, a special showing of the new Stutz models was made all this week.

Passenger Car Production Slows in U. S. and Canada

First Five Months of 1925 Show Decrease of 55,167 Compared to Same Period in 1924

WASHINGTON, July 18.—Production of passenger cars in the United States and Canada for the first five months of 1925, says the July issue of The Federal Reserve Board Bulletin just made public here, totaled 1,571,891 as compared with 1,627,058 for the first five months of 1924 and 1,526,601 for the first five months of 1923. The Bulletin makes the observation that "production and distribution of automobiles although not as great as in April continued large during May."

The May, 1925, production figure is given as 382,714 as compared with 391,302 for April and 332,151 for March.

"Although production," continues the Bulletin, "in both April and May of this year exceeded that of any previous month on record, the output for the first five months did not equal the corresponding total for 1924. Production of trucks has been well maintained and during the first five months of this year exceeded totals for the corresponding period of any previous year.

"Shipments of automobiles from factories in May were also less than during April, but fairly large as compared with previous months. Shipments by boat were particularly heavy. Sales by dealers to users of General Motors Corporation cars during May exceeded division sales to users. Both figures were slightly smaller than in April, but much larger than a year ago.

"Sales of cars by wholesalers in the Middle West, reporting to the Federal Reserve Bank of Chicago, were larger than in May, 1924, while retail sales were slightly smaller. Stocks of new cars on May 31 were smaller than on April 30 and considerably less than a year before. A few reductions have been announced in prices of automobiles in recent weeks, but no general decline in prices has occurred."

Miami Ford Dealer Sells 400 Cars in One Month

MIAMI, Fla., July 18.—The S. A. Ryan Motor Company has established what is believed to be a national sales record. Orders for 400 Ford cars were taken by the Ryan organization during the month of June, but owing to factory production and transportation difficulties, only 343 could be delivered.

Notwithstanding that the Ford factories in all parts of the country are working to capacity they have been unable to meet the demands of the dealers in many sections.

The Ryan Company also sold 20 Lincoln cars of various models during June; and the month's business totaled more than $750,000, according to a statement of Mr. Ryan.

Between Gyps and Gypsies—What?

PEORIA, Ill., July 18.—Gypsy bands working through this section have made prey of automobile dealers, members drawing the merchant's interest with fortune telling while others of the band worked the cash register. In one local garage, a gypsy woman so successfully "good-lucked" a roll of bills in the hands of the owner, that it passed from him entirely. In Earlville, Ia., a short distance away, evidently the same band worked, securing $40.

French Excited Over Ford's Move to Produce in Paris

PARIS, July 9. (By Mail).—French automobile makers are volubly excited about the purchase and equipment by the Societe Anonyme Francaise des Automobiles Ford, of a large plant near Paris for immediate production of 300 Ford cars and trucks a day. Ford heretofore, has operated his factory at Bordeaux merely to assemble parts shipped from the United States.

French manufacturers are more concerned over Ford's plans for sales abroad than in France. Last year they shipped but 47,000 cars and trucks to foreign buyers. The figures for the first four months of 1925 indicate a total for the year in excess of 50,000. They estimate that Ford will produce about 90,000 cars a year and see in this threatening total a plan to compete with them outside.

Citroen and Renault, makers of two popular priced French cars, are confident of their ability to compete with Ford in France.

SEATTLE GETS WHITE TROPHY

SEATTLE, Wash., July 18.—Sixty-five members of the branch of the White Company officially received President White's sales trophy plaque during the past week when G. A. Urquhart, vice-president of the company banqueted them at the Olympic Hotel. The trophy came to Seattle as a result of this branch having sold a higher percentage of White trucks in excess of its quota than any other branch in the Pacific Coast region.

CHRYSLER PLANS N. Y. FIGHT

NEW YORK, July 18.—Chrysler Motor Corp. will carry to a finish its fight to issue fire and theft insurance with the cars it sells in New York state, where James A. Beha, state superintendent of insurance, has declared it illegal. "The objections of the insurance commissioner have been turned over to our legal advisers and a test case will be instituted," said Guy Nunemaker, secretarfy to President Chrysler. "We believe that our insurance plan is legal and that the move against it is rank discrimination."

Present Six Months Seen Best in Industry's History

New Models and New Makes Give Greater Impetus, Assuring Good Business Rest of Year

DETROIT, July 18.—With but a short time left before the introduction of new models, those in close touch with the automotive industry in this area are expecting them to give greater impetus to sales and to make the present six months the best in the history of the industry.

This is borne out in the number of orders that have been placed for the new models and also the new passenger cars that have been introduced in the past month. Ajax, Diana, and the Chrysler four, the new passenger cars to be offered the public, have met with an unusually larger number of sales and orders.

With the coming of the new models, the field is being divided into two classes, one that favors new models and those who believe in periodical changes. The action of Studebaker in announcing no yearly models has added another line to those who have discontinued the bringing out of yearly models.

Quite recently, one of the high officials in the motor car industry here said that America being a prosperous country, its inhabitants demanded a change. This, he said, was also shown in the demand for new shoes, new hats and clothes and other wearables. Those who believe in no yearly models say that while the public does like something new, that the price of a pair of shoes does not compare with the capital invested in motor cars and therefore the periodical change is the best.

But whether the no yearly models followers gain additional supporters, it is certain that the introduction of the new models which will be made in the next few months will assure the industry of more and continued business for the remainder of the year.

Missouri Registrations Near 1924 Total During First Half

ST. LOUIS, July 18.—There were a total of 532,528 motor vehicles licensed in the state of Missouri up to July 4 as against 544,635 for the entire year of 1924, according to a report filed recently by Oscar G. Steininger, commissioner of automobiles. Of the vehicles licensed this year 486,146 were automobiles and 49,382 were trucks.

License fees have brought to the state road fund $6,380,507 so far this year as against $4,540,000 for the entire year in 1924. The increase in fees of course was in a large measure due to the 50 per cent increase in license cost voted last November.

St. Louis had a total of 122,068 motor vehicles licensed in 1924 and 110,592 so far this year.

Hanch Will Explain Time Payments to Ohio N. A. D. A.

Financial Authority Sees Danger in Material Reduction of Automobile Credit Terms

CEDAR POINT, SANDUSKY, O., July 18.—Tendencies to reduce automobile time-payment credit terms which have had a sporadic outcropping in the industry in the last two years, had their parallel forty years ago in the milling machinery business and with the same adverse results, according to C. C. Hanch of Chicago, general manager of the National Association of Finance Companies, who will be one of the feature speakers here of the first annual convention and outing of the Ohio Council, N. A. D. A., August 6-7. Between 1,000 and 1,500 automobile dealers, their sales managers, salesmen and service managers are expected to attend.

Mr. Hanch has had a long and responsible connection with the automobile industry. From 1896 to 1914 he was credit manager and treasurer of the Nordyke & Marmon Company at Indianapolis, a period during which they were the world's largest manufacturers of flour milling machinery and among the largest producers of fine passenger automobiles. From 1915 to 1918 he was treasurer of the Studebaker Corporation of America, from June 1918 to February 1919, chief of the automotive products section, War Industries Board, and during 1919 and 1920 he was general manager of the Maxwell Motor Corporation. Since 1920 he has been engaged in consulting and research work for automobile manufacturers, has been a director of the National Automobile Chamber of Commerce for many years.

"Intensive competition in the milling machinery business led to the institution of too liberal credits forty years ago," Mr. Hanch declares, "and was the primary cause of the later demoralization of that industry. Only in the last ten years has it recovered from the devastating effects of ill-considered sales policies.

Our association of industrial bankers who are financing probably 80 per cent of all the automobile time-payment sales in the country in laying down its policy demanding a third down on the purchase price of an automobile and completion of the transaction in twelve months, took the steps we believed necessary for a healthy and permanent business development.

"Judicious credit has made automobile ownership possible for millions of persons who could not have owned cars if compelled to pay cash. It is very important for dealers to realize the great work that legitimate credit has done for them and not expect that time-payment sales can be made to people whose credit for any article of merchandise might be questioned."

Lorraine-Dietrich Wins Twenty-four Hour Stock Car Race



Two Lorraine-Dietrich six-cylinder models are shown above, the one to the right being the winner of the Rudge-Whitworth Cup twenty-four hour race held recently at Le Mans, France. The winning car was driven by DeCourcelles and Rossignol. It had a piston displacement of 212 cubic inches. Second place was captured by a 179-cubic-inch Sunbeam. The Lorraine-Dietrich traveled 1,388.1 miles in the twenty-four hours, or an average of 57.83 miles per hour.

25 Years Ago In the Automobile Industry
As Recorded In MOTOR AGE

(From MOTOR AGE of July 26, 1900)

Turning Out Many Wintons

Reports from Cleveland are to the effect that the Winton Motor Carriage Co., owing to its recent increased facilities, is turning carriages upon the market in greater quantities than ever before and can now guarantee delivery of both single and double seated carriages within thirty days from receipt of order. This company is at present engaged in broadening its field still more and hopes soon to be equipped so as to produce a quantity sufficient to give immediate delivery.

The Automobile in Philadelphia

Philadelphia, July 23.—Automobiles are becoming more and more plentiful here with each succeeding week. This can readily be explained by quoting a local dealer's statement to the effect that during last week alone he delivered no less than ten vehicles to their owners, all of whom are Philadelphians. He further stated that he is still far behind in his deliveries.

The Lafayette Hotel and several of the larger department stores having already enlisted the automobile in their respective services, other local caravansaries are preparing to swing into line. A certain large hotel has already placed an order for six passenger buses to run to and from the various railroad stations in the city.

Locomobile Newport Branch

The Locomobile Co. of America has just opened extensive and finely equipped headquarters at No. 110 Bellevue avenue, Newport, to take advantage of the demand for motor vehicles. E. S. Jaffray, Mr. Peekham and other representatives of the company are in charge.

A New Automobile Club

NEW YORK, July 23.—Westchester, the home of many wealthy New Yorkers, has a big automobile boom. On Saturday night, at the residence of Howard Willetts, White Plains, a number of automobilers met to form a club that will work in harmony with the Automobile Club of New York. One of the main objects of the members will be to provide supply stations along the Albany post road, the Boston post road and the new macadamized boulevards which are being built through the Bronx and Hudson River valleys, and the other cross country roads leading to the Ardsley Casino, Westchester Country Club and the Knollwood Country Club.

Most of the prospective members are millionaires. The charter members are Paul G. Thebaud, Howard Willetts, Trenon L. Park, Oliver Harriman, Jr., Eugene Reynal, Nathaniel Reynal, William K. Vanderbilt, Jr., William E. Iselin and William Rockefeller, Jr.

Diana Eight Is Received Enthusiastically by Public

Vice-President Rengers Sees Big Year Following Tour of Metropolitan Centers

ST. LOUIS, July 18.—Frederick H. Rengers, vice president and general sales manager of the Diana Motor Company, who has just returned to St. Louis after an extensive trip through the metropolitan centers, says that the reception accorded the new Diana light eight- inline car manufactured by the Moon Motor Car Company, is little short of being marvellous. In a statement given out today at the Moon plant Rengers said:

"The genuine enthusiasm and the sincere interest shown by the public and by our entire distributor organization for the new Diana light eight both before and since the new car was officially introduced June 25, bespeaks a fine future for the new Diana eight. We have designed, created, and are now producing in our modern plant in St. Louis, this light eight automobile upon the desire and demand of the American public for an eight cylinder car of power and beauty plus lightness and serviceability and with an emphasis upon economy in operation.

"The enthusiasm being shown for the new Diana eight is being steadily reflected in ever-increasing sales. Monday of this week we received a total of 22 long distance calls from our distributors all over the country from coast to coast and from Minneapolis to New Orleans, wanting to know the shipping dates on their Diana orders. At the present time we have approximately 1,500 unfilled orders on hand and the production department was given orders today to speed up production, particularly on Diana closed models, on which the demand has been so great during the past week that the large stock of Diana closed bodies which had been considered entirely adequate for present needs, is exhausted. Numerous long distance telephone conversations with our body plant have elicited the information that production there will be stepped up so we expect immediate relief from this quarter."

NEW DURANT DEALERS

NEW YORK, July 18.—New dealers added to the organization of the Durant Motors, Inc., are as follows:

E. E. Whitten, Gunertsville, Ala.; College Motor Co., Sulphur Springs, Ark.; O. L. Andrews, Wheeler, Ark., Charles H. Wingate, Laurel, Del.; Mitchell County Motor Co., Camilla, Ga.; W. E. Bradley, Baxley, Ga.; T. H. Ennis Motor Co., Milledgeville, Ga.; Christopher Brothers, Reddick, Ill.; Dempster Garage, Evanston, Ill.; H. C. Gauker, New Castle, Ind.; Maurer Sales Co., Spencer, Ia.; L. W. Sanford, Westfield, Ia.; Strackbein & Hein, Lowden, Ia.; Joseph Roser, Brownell, Kans.; State Line Garage, Kanorado, Kans.; Hill Brothers, Germantown, Ky.; T. G. Wade & Co., Halethorpe, Md.; Richards Motor Car Co., Grand Rapids, Mich.; Paul J. Skaiem, Northfield, Minn.; George H. Gray, Pipestone, Minn.

Embryo Ministers Build Cars

DETROIT, July 18.—Under the supervision of a special supervisor chosen by the Ford organization, fifty students of the Yale theological school have entered the River Rouge plant of the Ford Motor Company as employes. It is part of an experiment by Yale University authorities who believe that a period of experience in a modern manufacturing plant will add to the future ministers' knowledge of present-day life and will help to give their words weight in future sermons.

The students have began their industrial experience as production men and at the regular wage rate. During the period of their stay which will end the latter part of September they will be given a chance to study the problems of management. Round table discussions to be held weekly will give them a chance to exchange observations and information.

At the end of their period, each will be called upon to report embodying their impressions. The reports will be entered in a prize contest which will be decided by five judges who are Henry Ford, James J. Davis, secretary of labor, Dr. Raymound B. Fosdick of New York, and Professors Jerome Davis and Edgar S. Furniss of Yale.

Jeff Carter Motor Co., Qutman, Miss.; Cunningham Motor Co., Ionia, Mo.; Riley & Money, Allen, Neb.; Grant Motor Co., Silver City, N. M.; Washington Motor Sales, Washintgon, O.; DeVoll Brothers, Caldwell, O.; McCalmant Motor Co., Lawton, Okla.; Roemer Motor Co., Union City, Okla.; Wexford Garage, Wexford, Pa.; M. & H. Motor Co., Wilkes-Barre, Leon A. Wylen, Philadelphia; Dorneyville Auto Co., Allentown, Pa.; Keagy & Sipe, Hanover, Pa.; Daniel H. Mattern, Selinsgrove, Pa.; Darnell Motor Co., Beaufort, S. C.; Oliver Springs Garage, Oliver Springs, Tenn.; Doan & Howard, Wallins Creek, Tenn.

Liberty Garage, Schulenberg, Tex.; J. B. McIntyre, Sweetwater, Tex.; DeGarmo & Son, Colorado, Tex.; Cunningham & Ward, Bridgeport, Tex.; Ganado Electric Co., Ganado, Tex.; J. T. Moore, Balmorhea, Tex.; Dante Motor Corp., Dante, Va.; Sneed Buick Co., Covington, Va.; D. W. Carson, Allegheny, Va.; J. L. McQuain, Walkersville, W. Va.; J. B. Maxson, Weston, W. Va.; Sturm Motor Sales, Grafton, W. Va.; Heishman's Garage, Vordensville, W. Va.; H. F. Krueger, Milwaukee; Bancroft Garage, Bancroft, Wis.

VESTA MAKES NEW LINE

CHICAGO, July 18.—The Vesta Battery Corporation has announced the "EAU" line of radio A batteries, designed and intended exclusively for radio use. The new product will have oversize positive plates with heavy type separators. They will be supplied in the 75, 100 and 125 ampere hour capacities and will be supplied vacuum sealed if desired.

Stutz' Unfilled Orders Are Heaviest in Firm's History

June Business 20 Per Cent Greater Than May With Sales Still Ahead of Supply

INDIANAPOLIS, July 18.—A report issued this week by Fredrick E. Moskovics, president of the Stutz Motor Car Company, covering company business for April, May and June, the first quarter during which Mr. Moskovics has been directing the concern, shows a remarkable production, sales and distribution gain with company affairs at July 1 foreshadowing a constant advance in production and sales.

At the end of June the Stutz factory had a larger number of unfilled orders on hand than at any similar period in the history of the company. This is in line with the proportion of retail sales to factory production which has been noted for the past quarter when actual sales in the territory constantly kept ahead of the factory production.

The June business showed a 20 per cent increase over May and an increase of distributor connections 30 per cent larger than in the preceding year. The forecast for July, August and September production shows that an even greater advance will be made in these months than in the first quarter.

The Stutz merchandising department records show that more than 40 new distributors and dealers have been added in recent months, and new dealer and distributing connections are being added each week. The latest distributor to join the Stutz organization is Arthur Shaffer of Syracuse, N. Y., and the following new dealer connections have been made recently: Corwin and La Porte, Lockport, N. Y., Graff Motor Company, Blacklick, Pa.

INDIANA TAX RECEIPTS UP

INDIANAPOLIS, July 18.—Gasoline tax collections for the state of Indiana for the second quarter of 1925 amounted to $1,812,026.97 showing an increase over last year's second quarter of $665,595.66 due in part to a 1-cent increase in the gasoline tax which went into effect in May. The tax is now 3-cents per gallon. The state highway department receives $1,148,077 of the first quarter gasoline taxes, while counties, cities and towns receive $574,038.95 for road work in their respective units. The total June gasoline tax amounted to $765,714 as against $451,-029.28 for June, 1924.

WILLS STE. CLAIRE DEALERS

MARYSVILLE, Mich., July 18.—Dealers who have taken on the Wills Sainte Claire line recently are:

Geo. H. Stewart, Washington, Pa.; Joseph Lazzari, Monongahela, Pa.; J. J. Baxter Motor Sales Co., Charleroi, Pa.; Keoughan Bros., Cohoes, N. Y.; John G. Wier, Titusville, Pa.; The Amsterdam Wills Sainte Claire Co., Amsterdam, N. Y.

Manufacturers Seek Return of Replacement Parts Business

Committee Being Formed by N. A. C. C. Head to Investigated Conditions

NEW YORK, July 18.—Motor car manufacturers, acting through the National Automobile Chamber of Commerce, are seeking means of winning back some of the business they have lost to independent makers of replacement parts. Col. Charles Clifton, president of the chamber, has been directed to form a committee to go into the matter thoroughly.

The manufacturers have recognized for a long time that much of the replacement parts business goes to independent garages and repair shops not affiliated with the sale of any car and that independent markers of parts suitable for use in various passenger cars have done a good business for years in the replacement market, selling not only through the garages and service stations but also through jobber to passenger car dealers as well.

Just what policies the committee will consider as best for the car manufacturers cannot now be forecast, but the prevailing sentiment is that the competition should be met with better merchandising methods. The N. A. C. C. members believe that only parts bought through the car factory should be used for replacement by their dealers, but it is recognized that the independents have made heavy inroads through quick service and low prices.

The manufacturers realize that by no means all of the parts made by independent factories are inferior in quality, and that quality being equal, the agency which provides the quickest service and best price will get the business. In the decision to form the parts committee the N. A. C. C. members took due cognizance of these facts.

The disposition now is to accept the situation on a purely competitive basis and through appropriate action to increase the share of the car factory in this profitable end of the business.

One manufacturer, acting independently, has just decided to absorb freight charges on replacement parts, enabling dealers to quote factory list prices on the items.

GOOD TRUCK AND BUS DEMAND

SPRINGFIELD, O., July 18.—One of the busiest plants in Springfield is that of the Springfield works of the International Harvester Co. It is keeping up its schedule of 50 light high speed trucks daily, Superintendent Karl Schreiber announces. The motor bus business is also decidedly active, good sized orders being booked from points in the United States and also foreign countries.

Motor Pilgrimages to Mecca Seen

WASHINGTON, July 18.—Pilgrimages to Mecca in automobiles by the hundreds of thousands is predicted in the near future to the automotive division of the Department of Commerce as a result of the penetration by American automobiles of the interior of the Arabian peninsula. It is stated that this peninsula has seldom been crossed by a white man is one of the least known parts of the world.

Ibn Saoud, the leader of the Wahabi, who are practically supreme throughout Arabia and who recently purchased three small American cars, is credited with the conquest of the Arabian peninsula.

While it would be extremely difficult and dangerous for a white person to make this trip, it is pointed out that the journey is the entering wedge, and the Arabs will probably purchase more automobiles. Such will not only be useful for the transportation of food and merchandise but specially for the transportation of pilgrims, which will again flock to Mecca by the hundreds of thousands as soon as they regain confidence in the order established there.

Railroad Will Construct New Underground Garage

CHICAGO, July 18.—One of Chicago's first underground garages will be built shortly by the Chicago & North Western Railway in the city block between Randolph and Washington Streets and Canal and Clinton Streets, President Fred W. Sargent of the company, has announced.

The garage will have a storage capacity of 250 cars. It will be started at once and will be ready for occupancy by August 1.

The garage will aid in affording much needed relief from the parking congestion in the loop district. Mr. Sargent said the garage would be largely for use by patrons of the road, who wish to store their cars while on vacations but that it will be open to the public as well.

BUSES REPLACE TRAMS

KLAMATH FALLS, Ore., July 18.—W. E. Young has just obtained the franchise for operating buses in Klamath Falls, replacing the entire street car operations there, and has placed an order for buses with the Mack Truck Company, which will consist of one 29-passenger and two 25-passenger buses. Klamath Falls is the second city in Oregon to replace the street railway system with buses. The Astoria Transit Company was granted a similar franchise by the city of Astoria last year and placed in operation six street car type of buses a year ago last June.

Economic Phases of Motor Transportation to Be Studied

World Chamber of Commerce Convention in Brussels Appoints Body to Make Survey

BRUSSELS, July 9.—(By mail.)—Creation of a special committee charged with studying, from the economic point of view, the best methods by which the motor vehicle can fulfill its object as a means of transportation and with studying from the same point of view the relations between motor transportation and other means of transport—such was the net result of the meetings of the transportation section of the International Chamber of Commerce congress which has just come to a close in this city.

The initiative in this move was taken by the American section of the International Chamber of Commerce, and it was principally due to the efforts of Roy D. Chapin, chairman of the highway transport committee, that the question of highway economics was brought up for discussion.

At the close of the Transport Session Mr. Chapin entertained about 100 delegates to lunch at the Palace Hotel, Brussels, and at the close of this meal the film "The Highway to Happiness," was shown on the scene, not with any idea of proving, as Mr. Chapin explained, that things were done better in the United States, but to give an illustration of how some difficulties had been met and overcome.

American delegates were numerous at the Congress and the automotive industry was well represented at the transport session. In addition to Mr. Chapin, among those present were W. O. Rutherford, president of the Rubber Association of the United States, John N. Willys, M. L. Hemingway, general manager of Motor and Accessory Manufacturers' Association; Stephen D. Briggs, of the Maxwell and Chrysler Corporations, and Mr. Henderson, continental representative of the Chrysler Corporation.

NEW CLEVELAND DEALERS

CLEVELAND, O., July 18.—New dealers have been announced by the Cleveland Automobile Company as follows:

Chand-Cleveland Motor Company of Fresno, Cal., Love Motor Company of St. Petersburg, Fla., Medford Motor Mart of Medford, Mass.; Harland A. McPhetres, Inc., of Lynn, Mass., and the Blanks Garage, Inc., of Roxbury, Mass.

PIERCE-ARROW TO EXPAND

CHICAGO, July 18.—M. E. Forbes, president of the Pierce-Arrow Motor Car Company was a recent visitor at the Chicago branch headquarters. He declared that the Buffalo plant of the company is materially increasing its capacity for the 1926 output on automobiles, trucks and busses.

Along Automobile Row

SEATTLE, WASH.—The Sutherland Company, Inc. distributors for general tires throughout the Northwest, have recently opened new quarters at 128 Westlake Avenue North.

NEW LEXINGTON, OHIO.—A. Edgar Hammond, C. W. Morris, O. N. Spring, W. R. Donnelly and J. W. Hillare are the incorporators of the newly incorporated $75,000 Perry County Buick Co. The new concern is located at New Lexington and will conduct a general auto sales agency.

LOS ANGELES.—The California Stutz Company, Inc., announces the appointment of Harlan Fengler, famed speed king, as the Stutz dealer in Hollywood, Culver City and Beverly Hills, with his sales and service building at 6415 Selma avenue, Hollywood.

ROCKINGHAM, N. C.—Hudson-Essex Sales Company, Inc., has been chartered with an authorized capital stock of $25,000 and $3,100 subscribed by R. B. Naper, E. S. Naper and H. S. Boggan, all of Rockingham.

MILWAUKEE.—Howard Peterson, Forence E. Peterson, Ethel N. Roberts and Bryan Roberts have organized the Service Motor Sales unit at Union Grove, Wis., with capital stock of $25,000. The company will sell motor cars and offer motor car service.

CHICAGO.—The United Truck Company of Chicago has been named northern Illinois distributor for the Gotfredson trucks, according to an announcement by R. B. Gotfredson, general manager of the motor truck division. This makes the fourth branch to be opened in the United States, the others being in Detroit, Cleveland, and Los Angeles. A complete sales and service staff will be maintained for Gotfredson buyers.

GALION, OHIO.—The Pattinson-Hubbard Motor Co. has been chartered with an authorized capital of $10,000 to deal in autos, parts and accessories.

DES MOINES, IA.—P. L. Holt of the Oklahoma City, Okla., branch of the Ford Motor company, has been transferred to the Des Moines branch to succeed F. S. Reinhardt, as assistant manager.

NEW ORLEANS.—The Romain Motor Car Company, temporarily located at 618 Baronne street, is the new dealer for Pierce-Arrow in New Orleans. This company will handle the new Series 80 as well as other units of the Pierce-Arrow line, including the truck and bus.

COLUMBUS, OHIO.—A year lease has been obtained on the storeroom at 839-43 N. High St., by the newly incorporated Stanton Motors Co. Organization of the concern took place with the election of A. T. Stanton, president, S. Stanton, vice president, and P. L. Brothers, secretary and treasurer. The new company was formed to act as distributor for Chrysler motor cars, succeeding the Dobson Auto Sales Co.

MILWAUKEE.—A change in the corporate name of the King Motor Supply Co. of Milwaukee has been officially made and hereafter the organization will be known as the Replacement Parts Corporation. No change in the management has been announced and C. B. Clugston, Chicago, continues as president.

DETROIT.—Distribution of Auburn motor cars in the Detroit territory has been taken over by Hurley-Barnett, Inc., 5513 Woodward Avenue. The active conduct of the business will be handled by Steve Hurley.

LOVINGTON, ILL.—Marshall Whitaker, Overland dealer, is planning the erection of a new garage and salesroom here.

KENNETT, Mo.—Pickard-Wilson, local dealers for the Dodge Brothers automobiles and Graham Brothers trucks, are this week moving into their new quarters on Kennett street.

SEATTLE, WASH.—N. F. Sutton, Ford dealer, has recently moved into his new garage building at 12th Avenue and Yesler Way. Mr Sutton has been identified with the automobile business in Seattle for many years, having formerly been associated with the Nash organization.

FORT MADISON, IA.—M. L. Ulrich has taken the Rickenbacker car agency for this community and is established at 611 Second street.

TOLEDO, OHIO.—At a recent meeting of stockholders at the office of the company in Toledo, it was decided to increase the capital stock of the Toledo Yellow Drive It Yourself Co. from the original $10,000 to $100,000. C. F. Wall is president and L. L. D. Chapman, secretary of the company.

DURHAM, N. C.—The Swift Motor Company is a new concern here. It will handle Essex and Hudson cars and do a general garage business. Proprietors are J. Frank Swift, formerly connected with the Holt Motor Company of Greensboro, N. C., and H. J. Mangum, formerly with the Banner Motor Company of this city.

OAKLAND, CAL.—Improvement in general business conditions for the first half of 1925 has compelled the Pierce-Arrow Pacific Sales Company to move into new and larger quarters at 2850 Broadway, Oakland. Arrangements also have been made for the establishment of a complete service department for the mainland side of San Francisco Bay.

WARREN, OHIO.—The Park Auto Wrecking Co. has been chartered with an authorized capital of $10,000 to buy and sell new and used autos, parts and accessories.

SALT LAKE CITY.—The R. T. Mitchell Company, Ogden, Studebaker dealers, have opened a branch store in Salt Lake City. George Stevenson, attached to the company at Ogden, will be in charge.

PORTLAND, ORE.—Kirk Thompson has been appointed general manager of the Covey Motor Car Company. Mr. Thompson has been associated with the Covey Company for the past eight years in Cadillac sales and service departments.

KIRKSVILLE, MO.—H. E. Tucker of the H. E. Tucker Motor Company of Kirksville, has opened a service station and sales office of Dodge Brothers automobiles here.

STEWARDSON, ILL.—The Wilson Auto Company has purchased the brick garage operated by the Yakey & Ulmer Company and will take it over to be used as a Ford salesroom. The Yakey lease expires April 1, 1926, when the full change will be made.

NEW YORK.—Mortimer J. Roberts, who with his brother Montague Roberts will be remembered as winners in the Brighton Beach twenty-four hour race, Vanderbilt cup, Briarcliff and Fairmont Park races, is back in New York as engineer with the Red Seal Refining Company, in charge of its recording instrument division.

CHICAGO.—The U. S. Armature Service, largest rewinders of armatures for the automobile trade in the United States, has moved into larger quarters at 11-17 S. Desplaines Street, where the facilities are greater in all departments.

RALEIGH, N. C.—Ransom Saunders of Smithfield, N. C., has obtained the contract for the Ford agency in this city heretofore held by C. H. Rawls of the Rawls Motor Company.

WELLSVILLE, UTAH.—The Peach Motor Co. of Burley, Ida., has opened a Ford agency here. It will be called the Monte Cristo Motor Co. and will handle batteries and tires. Chas. Height will be manager. Mr. Height has been the company's sales manager for some years.

CHILLICOTHE, MO.—Joe Shirley has accepted the position of Lincoln representative for the Burt Gill Motor Company of this city and the McVey Motor Company of Trenton.

DALLAS, TEX.—The Perry Motor Company, Dodge distributors and dealers has closed a lease for a three-story building at Pacific and Pearl Streets which will be the future sales and display rooms of the company. The lease was taken for ten years at a cost of $190,000.

PORTLAND, ORE.—S. V. W. Peters, vice-president of the Portland Motor Car Co., Hudson and Essex distributors for this territory announces the appointment of Condit & Conser as dealers in Multnomah County.

GALESBURG, ILL.—Ben Park, who has been with the Pattee Plow Co. of Monmouth a number of years, has purchased the Declo Enameling Co., 571 East Main street, formerly operated by his brother, Roy Park and Claude Craver.

AKRON O.—The R. J. Schmunk Co., of Cleveland, distributor for Hudson-Essex motor cars, has appointed the C. E. Maloy Motor Company, dealer for its line in Akron. Workman Motor Sales Co., 36 N. Summitt Street, is the new dealer in Akron for Star and Durant motor cars. The company also handles the Rickenbacker.

MEMPHIS.—The Mack International Motor Truck Co., has taken a lease on a large new building to get more space than their present place. The truck company is doing much bus line equipment in the Delta section.

BOSTON.—George M. Leghorn, owners of Leghorn Motors, former distributor of Gardner cars for New England now under Connell & McKone has reconsidered his decision to handle the line at retail in Boston and he has announced his retirement from the automobile business.

OAKLAND, CAL.—The Western Auto Supply Company has a new store and warehouse at Twenty-fourth street and Broadway, Oakland, a four story building remodeled to suit the needs of the company, and all of which will be occupied by the one firm. This is the 126th store to be opened by the Western Auto Supply, putting it in the position of the largest retail automotive accessory concern in the United States.

CHICAGO.—E. V. Wills, formerly assistant service manager of Westinghouse Automotive Division and more recently connected with Barter-Oppenheim, Newark, N. J., has entered the employed of the Eisemenn Magneto Corporation. Mr. Wills has been assigned to the branch office at Chicago and will act as service traveler in the middle western states.

DALLAS, TEX.—The Patton Overland Company of Greenville, Texas has been appointed agents for the Willys-Knight and Overland cars in the Greenville district according to announcements of the Dallas branch of the company.

BURLINGTON, IA.—The Warming Motor Company has completed negotiations with the Barton Motor Company by which it takes over the later's Ford and Lincoln franchise for this territory, the Barton shop, equipment, parts stock and appoints J. G. Turner as sales manager. The Warming Company, now handling the Paige-Jewett and Willys-Knight cars will drop these to handle the Ford exclusively.

PORTLAND, ORE.—The Therkelsen Motor Car Company, Portland, Oregon, distributors for Rickenbacker cars, have moved into new quarters at Fifteenth and Burnside Streets, which will double the size of their former quarters.

OGDEN, UTAH.—C. W. Trounson, manager of the Ogden Auto Service Company, has purchased the stock in that company and will continue the business as an individual hereafter.

With the Associations

Bus Service to Unite

SPRINGFIELD, Ill., July 18.—All bus service companies in Illinois will be united in the Illinois Motor Transportation Association which will have its first semi-annual meeting in the state arsenal here July 23-25. The association has established general headquarters at 505½ East Monroe Street, under James E. Simpson, secretary-treasurer. An exhibit of motor buses and accessories will be a feature with practically all the larger manufacturers participating.

Harry G. Wright, DeKalb, president of the Northern Illinois Service Company, is president of the association; H. E. Barber, Marion, head of the Egytian Transportation System, vice-president; Mr. Simpson of the Red Line Company, East St. Louis, secretary-treasurer and Altoe Nelson, Aurora, in charge of the state office here assistant secretary.

The association has taken cognizance of the belief that freedom in the industry from steadily mounting costs of transportation requires an alignment of the two basic factors—the operators of the vehicles and the manufacturers and its programs will stress this point.

Gasoline Dealers Organize

VANCOUVER, B. C., July 18.—Retail gasoline and oil dealers, meeting under the auspices of the Retail Merchants' Association, are organizing an independent gasoline and oil dealers' division of the automotive section of the R. M. A. This is a new movement and one likely to have a far-reaching effect in the distribution and sale of oil and gasoline in Greater Vancouver.

Carolina Tradesmen Meet

GREENSBORO, N. C., July 18.—Directors of the Carolina Automotive Trades Association, meeting in Greensboro, considered problems of their business and how to solve them through cooperation. Kelly A. Grice of Charlotte, president of the organization, presided at the meeting.

Freight rates held a prominent place in the discussions, especially relating to oil. Dealers were of the opinion that they had about all the overhead they could carry and they want to protect themselves against further inroads.

Formal application for a charter was signed by the directors. The association was organized last May 12.

In connection with the meeting of the directors, dealers in gasoline, tires and all accessories from Greensboro, High Point, Burlington, Winston-Salem and Gibsonville, held a meeting to discuss shop efficiency.

Following the two meetings the visitors were the guests of the Greensboro dealers at a luncheon.

Directors of the association are: Kelly A. Grice, Charlotte, president; George Taylor, Washington; Arthur Ruffin, Wilson; James B. Hughes, Wilmington; Henry Allen, Raleigh; J. C. McDonald, Charlotte; W. H. Arey, Shelby; F. C. McArthur, Asheville; E. K. Snyder, Winston-Salem.

St. Louis Committees Named

ST. LOUIS, July 18.—Frank C. McDonald, president of the St. Louis Automobile Dealers' Association has announced a list of committees to serve the organization during the year.

The committees follow (in each case the first named is chairman):

Used Car—George M. Berry, J. T. Salisbury, J. N. Kellerman and E. C. Meissner.

Constitution and By-Laws—R. C. Frampton, W. H. Vesper, Phil Brockman.

Gasoline Tax—Phil Brockman, J. T. Salisbury and R. E. Lee.

Arbitration—E. A. Hatfield, George Weber, H. C. Merry, William Walsingham and A. S. Johnson.

Legislative—E. L. Kuhs, Phil Brockman, H. W. Kardell, J. James MacGregor and W. L. Johnson.

Dealers Thwart Frauds

ST. LOUIS, July 18.—Fraudulent advertising schemes are costing automobile dealers in the city of St. Louis around $100,000 per year, according to a recent estimate of Robert E. Lee, manager of the St. Louis Automobile Dealers' Association. The association maintains a service for dealers which would relieve them of the task of refusing subscriptions to every charitable program that comes along if they would use it.

The system consists merely of a sign hung in the dealer establishment stating that the dealer is bound to make no contribution to any advertising or charitable fund until approved by the Advertising Censor Committee of the St. Louis Automobile Dealers' Association.

At a recent meeting of the board of directors of the organization the value of this service was discussed and it was decided to have a large sign printed and neatly framed to be hung in dealer establishments directing solicitors to the advertising censor committee.

Atlanta Headquarters Moved

ATLANTA, July 18.—C. V. Hohenstein, executive secretary of the Atlanta Automobile Association, membership of which includes practically all the dealers and jobbers in Atlanta identified with all the branches of the automotive industry, announces the recent removal of the general offices of the association from the Gould Building, where they were located for years, to larger quarters at 1308 and 1309 Citizens & Southern Bank Bldg.

At present the association legislative committee is unusually active in connection with the regular summer meeting of the Georgia State Legislature, now in session, pushing legislation favorable to the industry, and combatting legislation that would have an unfavorable effect on the business if allowed to get onto the state's statute books.

The association is strongly supporting a bill seeking a bond issue of $70,000,000 for road building and maintenance in Georgia.

Shops Close Saturday Afternoons

ST. LOUIS, July 18.—A recent decision of the Service Managers' Bureau of the St. Louis Automobile Dealers' Association that Saturday afternoons are unprofitable to a large majority of dealers' repair shops has resulted in a campaign by the association for the closing of repair shops on Saturday afternoons to remain closed until Monday morning.

A letter of notification sent out by R. E. Lee, manager of the Dealers' Association, states that the board of directors after consulting with a considerable number of service managers was convinced that Saturday afternoon business was unprofitable and that closing would result in no financial loss to the dealers.

Last week was the first since the board passed the resolution and a number of shops closed. It is expected that most of the establishments will fall into line and that in a short time all dealer repair shops in St. Louis will be closed on Saturday afternoons to remain closed until Monday morning.

Ohio Association Meets

COLUMBUS, O., July 18.—The newly elected board of directors of the Ohio Automobile Association, composed of 81 clubs in Ohio, met in Columbus recently, for the purpose of organization, following the annual convention in Cedar Point, O., in June.

Charles C. Janes, who has been secretary of the association for the last five years was re-elected to that position for a term of three years. This is the first time that a term of longer than one year has been given the secretary, but owing to the fine record made by Mr. Janes he was complimented by the longer term.

During the time that he has been an official of the association, Mr. Janes contributed in a large measure to the growth of the association. Mr. Janes was elected secretary of the A. A. A. for the second time recently.

The trustees adopted a resolution requesting Secretary of State Thad H. Brown to call a meeting in Columbus of all deputy registrars of automobiles in order to iron out the difficulties contained in the new law which becomes effective July 20. Under the new law there is much "red tape" to be followed and many deputy registrars refuse to continue the service, even if permitted to charge a fee of 15 cents per registration as is allowed under the new law. Wesley S. Thurstin, Jr., of Findlay, recently elected president, presided at the meeting.

Maudslay Motors Brings Out Safety Coach in 3 Models

Chassis Designed for Safe High Speed Travel, Developing Up to 40 M. P. H.

LONDON, July 8.—(By mail.)—A safety coach chassis in three different models has just been brought out here by the Maudslay Motor Company of Coventry. The chassis throughout have been designed to furnish maximum amount of safety under high speeds, the coaches being intended for operation at speeds up to 40 m.p.h.

The M. L. 2 model has a 180 in. wheel base and is intended for open coaches seating 22 passengers. The M. L. 3, with a wheel base of 198 in., is built to carry a single-deck bus body holding 37 persons and the M. L. 4 with a wheel base of 200 in., is suitable for saloon buses seating 30 passengers.

The M. L. 3 model, due to its forward type of construction, has an unusually long body somewhat over 25 ft. being available back of the dash. A low center of gravity is aimed at throughout. The clearness of the back axle is 11 in. and the tread is 69 in. between the centers of the rear wheels and 72 in. at the front. The rear springs which are 54 in. long and 3 in. wide are practically flat under load, while the similar front spring has a length of 40 in.

No radical changes from other Maudslay models have been made in the power plant. A number of minor refinements have been made however, such as the inclusion of an oil filter. The rated speed of the engines is 2,000 r.p.m. at which speed the M. L. 2 engine develops 60 b.h.p. and M. L. 3 and M. L. 4 engines 70 b.h.p.

The foot brake on all the models operates on the transmission but with it is combined the Servo device for operating the Perrot type front brake. The engine propeller shaft and gear box have all been brought into line by inclining the subframe and the low built chassis makes it possible to enter the coach with but a single step.

June Hupp Sales Greatest in History of Corporation

DETROIT, July 11.—Due in part to the continued large demand for the Hupmobile Eight, June was the largest month in the entire history of the Hupp Motor Car Corporation in sales volume in dollars, and the second largest in number of cars manufactured, the company has announced.

In making this record, Hupmobile reports that the June shipments of eight cylinder cars increased 77 per cent over those for May. More than $700,000 in unfilled orders for eight cylinder cars was carried over from June 30 while $2,000,000 in unfilled orders for four cylinder models was also carried over.

July 1 showed the trend toward the Hupmobile Eight when additional orders totaling upwards of $1,000,000 were received.

Total shipments of all models for June exceeded those for May by 61 per cent, and of June, 1924, by 92 per cent. June, 1923, was beaten by approximately 36 per cent.

According to O. C. Hutchinson, general sales manager, more than 10,000 Hupp Eights will have been shipped before the end of August at the present rate. The stocks of cars on hand by dealers and in transit by the end of June represented less than a three weeks' supply.

Coming Motor Events

Automobile Shows

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition.

Dallas, Tex. ..... Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis. ..... Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal. ..... Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich. ..... Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla. ..... Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal. ..... Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La. ..... Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va. ..... Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt. ..... Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn. ..... Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago ..... Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City ..... Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina ..... Oct. 3-13
Pan-American Road Congress.

London, England ..... Oct. 8-17
Olympia Passenger Car Show.

London, England ..... Oct. 29-Nov. 7
Annual Truck Show.

Races

Altoona, Pa. ..... Sept. 7

Charlotte, N. C. ..... Oct. 24

Fresno, CaCl. ..... Sept. 30

Laurel, Md. ..... Oct. 10
A. A. A. Race, Baltimore-Washington Speedway.

Los Angeles, Cal. ..... Nov. 26

Monza, Italy ..... Sept. 6
Italian Grand Prix Race.

Paris Montlhery track ..... July 26
French Grand Prix.

Syracuse, N. Y. ..... Sept. 19

Salem, N. H. ..... Oct. 12

Conventions

Buenos Aires, Argentine ..... Oct. 3-13
Pan-American Road Congress.

Cleveland ..... Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland ..... Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia. ..... Nov. 12-13
Automotive Merchants' Association Convention.

Everett, Wash. ..... Aug. 3-4
Annual state convention Washington Automotive Trades Association.

Montreal, Que. ..... Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia ..... September
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa. ..... Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis ..... Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Eaglesmere Park, Pa. ..... Sept. 14-17
General meeting of the Automotive Electric Association.

'elie Holds Second of Its Series of Sales Meetings

ecent Months All Show Increases in Business Over 1924, Hadden Says

MOLINE, July 18.—Sceond of a series distributors' sales meetings recently nounced by C. W. Hadden, general les manager of the Velie Motors Corration took place at the factory here st week. Distributors attending repreted Iowa and Illinios territories. Last ek distributors from various parts of e United States were present at a nilar meeting.

Mr. Hadden pointed out that sales for e last nine months have exceeded those the corresponding period in the preding year in every month except one. les for March 1925, he said, were the rgest for any March for four years. ly sales increased 12 per cent over the me month in 1924 and a larger increase expected for June when that month's ports are all in.

Mr. Hadden spoke of the export sales having increased 50 per cent during te first five months of 1925 over the me period a year ago. These sales ve been under direction of L. F. Murly, assistant sales manager, formerly th General Motors Export Corporation.

In Iowa during the last six months lie sales have made increases ranging m 36 to 170 per cent; this latter record longing to Joe O'Leary of Iowa City. alter Saner, Davenport distributor, dised of 125 cars during the first six nths of the year. The sales record of hnson & Phillips of Freeport, Ill., Garky Brothers of Mount Morris, Ill., and arles E. Moore of Ottawa, Ill., were o complimented by Mr. Hadden.

armers Urged to Sell Accessories at Roadside

JEFFERSON CITY, Mo., July 11.—Jwell Mayes, secretary of the Missouri te board of agriculture, is urging f mers to cash in on highway traffic, b establishing roadside markets—not oly for farm produce, but for automobe accessories. The suggestion is emblied in the following paragraphs, der the head of "The Farmer's Adverting," in the Missouri Clip-Sheet for Jly—issued by the Department of Agric ture:

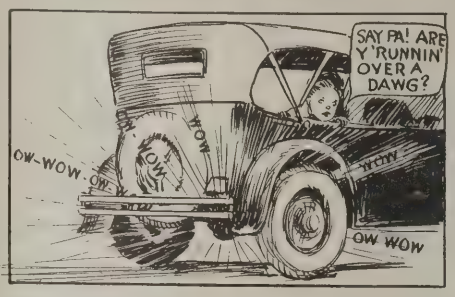
"Without discrediting or minimizing ay other means of farm market development, it must be admitted that the farmer ishelping himself and will continue to increase his income through advertising products of his farm.

"The roadside marketing of farm products has already begun in Missouri, al will mightily increase with development and finishing of the state highways. Radside bulletin boards are helpful.

The Missouri State Board of Agriculte passes the word along to its farmer friends that they will do well to give thought to advantageous locations for operating wayside marketing, wood lots suitable for small tourists camps, and to spots adapted to farmer-owned oil stations with emergency car supplies."

SQUEEKS and RATTLES

GNASHING OF TEETH



What's your new mechanic doing?
He's working on axle adjustments.
Is he good at it?
I leave that to my foreman, but he says every job turned out is a howling success.

EFFICIENCY

It seems to us these efficiency engineer people are carrying things too far. One of them was working for a contractor. He wanted some bricks carried, so he said, "Here, now, Murphy, what about carrying some more bricks?"

"I ain't feeling well, guv'nor," said Murphy. "I'm trembling all over."

"Well, then, lend a hand with the sieve."—The Furrow.

A green apple a day buys the doctor's coupe.

HE KNEW HIM

Newrich: "I don't suppose you're used to driving men like me, are you?"

New Chauffeur: "Oh, yes, I drove the police patrol for three years."—The Furrow.

SAVED

All eyes were strained at the daring aviator in the clouds. Then a shout of alarm went up. "The parachute! It won't open! He's falling!"

"Don't worry," admonished the birdman's best friend. "He's got on rubber heels."—American Legion Weekly.

A NERVOUS GUY



"Why do you jump at the sound of a motor car?"

"Well, some time ago my chauffeur eloped with my wife, and every time I hear a horn I think he's bringing her back!"

ASHLAND MFG. PURCHASED

FOSTORIA, O., July 18.—The Fostoria Pressed Steel Co. has purchased the business of the Ashland Mfg. Co., of Ashland, O., manufacturers of the Eureka line of pumps, jacks and wrenches. The business will be moved to Fostoria, where the Fostoria Pressed Steel Company will continue the manufacture and sale of Eureka pumps, jacks and wrenches, in addition to their present line of Fostoria Fenders. A separate building has been acquired for the manufacture of the Eureka line.

CATALOGS 24 PAGES

WASHINGTON, July 18.—Automobile manufacturers and dealers who use catalogs in their sales literature must string them out to twenty-four pages, says the Post Office Department, if they want to get advantage of the 1 cent per 2 ounce rate. Twenty-four pages make a catalog, the department rules, and catalogs less than this number must bear a rate of 1½ cents per 2 ounces.

CALIFORNIA RECEIVES GRAHAM

STOCKTON, Cal., July 18.—The automotive industry in California received another healthy boost when the truck plant of Graham Brothers, a division of Dodge Brothers, Inc., was opened here recently. More than 250 Dodge dealers, through whom the Graham product is marketed, attended the opening, and the Stockton Chamber of Commerce acted as host both to Graham Brothers and to the visiting dealers from every county in the state. Graham Brothers' trucks stood first in the 1½-ton field in California for the first quarter of 1925, and in the combined 1 and 1½-ton division, were exceeded only by the Ford for the same period. A drive-away of 150 trucks featured the opening day. Production basis is 10 trucks per day and Graham Brothers have 30 acres in their plant site to be used for future expansion.

G. M. UNIT ON 55-HOUR WEEK

BRISTOL, Conn., July 15.—The New Department Manufacturing Co., a unit of General Motors Corp., is operating on a 55-hour week plan in all departments except the coaster brake plant. Heretofore the company has worked on a 9-hour day schedule. There will be no vacation period this year owing to increasing business.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
------	5-p	Phaeton	$1,575
3100	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3470	5-p	Sp. Sedan	2,100
------	5-p	Brougham	2,050
		"ST 8"	
------	5-p	Sp. Phaeton	1,995
-------	4-p	Coupe	2,450
-------	5-p	Brougham	2,450
------	5-p	Sedan	2,595
AUBURN "4"			
-------	5-p	Touring	$795
		"6-66"	
------	6-p	Roadster	1,495
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
		"8-88"	
------	6-p	Roadster	1,975
------	4-p	Sport Roadster	1,975
------	4-p	Club Roadster	2,075
-------	5-p	Sport Brougham	2,250
------	5-p	Sedan	2,350
BUICK "Standard"			
2750	2-p	Roadster	$1,150
2920	5-p	Touring	1,175
2960	2-p	Coupe	1,375
3075	4-p	Coupe	1,565
3185	5-p	Dbl. Srv. Sedan	1,475
3245	5-p	Sedan	1,665
3050	5-p	Coach	1,295
		"Master" (120 in. W. B.)	
3285	2-p	Roadster	1,365
3465	5-p	Touring	1,395
3850	5-p	Sedan	2,225
3560	5-p	Coach	1,495
		(128 in. W. B.)	
3485	3-p	Sp. Roadster	1,750
3550	5-p	Sp. Touring	1,800
3610	7-p	Touring	1,625
3745	3-p	Country Club	2,075
3770	4-p	Coupe	2,125
3905	5-p	Brougham Sedan	2,350
4030	7-p	Limousine	2,525
3995	7-p	Sedan	2,425
3850	7-p	Town Car	2,925
CADILLAC "V-63 Standard Line"			
4190	2-p	Roadster	$3,185
4280	7-p	Touring	3,185
4200	4-p	Phaeton	3,185
4240	5-p	Coach	3,185
4610	7-p	Sedan	3,885
4525	5-p	Landau	3,835
4655	7-p	Std. Imperial	4,010
		"Custom Built" (132 in.)	
4260	2-p	Coupe	3,975
		(138 in.)	
4400	5-p	Coupe	4,350
4490	5-p	Sedan	4,550
4590	7-p	Suburban	4,650
4655	7-p	Imp. Suburban	4,950
CASE J. I. C.			
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3428	5-p	Sedan 4 d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET "Superior" (Series K)			
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	715
2110	5-p	Coach	735
2220	5-p	Sedan	825
CHRYSLER "Four" (109 in. W. B.)			
2390	5-p	Touring	$895
2440	2-p	Club Coupe	995
2590	5-p	Coach	1,045
2680	5-p	Std. Sedan	1,095
"Six" (112¾ in. W. B.)			
2805	4-p	Roadster	$1,625
2730	5-p	Touring	1,395
2785	5-p	Phaeton	1,495
2895	5-p	Coach	1,545
2935	4-p	Coupe	1,895
2995	5-p	Brougham	1,965
3060	5-p	Sedan	1,825
3085	5-p	Imperial Sedan	2,065
3090	5-p	Crown Sedan	2,195
(118¾ in. W. B.)			
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3040	5-p	Sedan	1,495
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
2990	5-p	Brougham	1,545
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM "V-6"			
4600	7-p	Touring	$6,300
4500	4-p	Sp. Touring	5,800
4700	4-p	Coupe	7,150
5000	6-p	Limousine	7,650
DAGMAR "6-70"			
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS "90"			
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
-------	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
------	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
-------	5-p	Phaeton	1,895
3245	5-p	Std. Sedan	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
-------	5-p	Brougham	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	885
2695	5-p	Spec. Touring	985
2708	2-p	Coupe "B"	995
2823	2-p	Spec. Coupe "B"	1,095
2995	5-p	"B" Sedan	1,095
3077	5-p	Spec. "B" Sedan	1,195
3020	5-p	Sedan A	1,245
3107	5-p	Spec. "A" Sedan	1,330
2723	5-p	Coach	1,095
2823	5-p	Spec. Coach	1,195
DORRIS "6-80"			
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG Straight "8"			
3920	2-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
-------	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT "D"			
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT A-22			
-------	2-p	Sp. Roadster	900
2225	5-p	Touring	810
-------	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
-------	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
-------	5-p	Spec. Sedan	1,280
2430	5-p	Coach	1,050
-------	5-p	Spec. Coach	1,100
ELCAR "4-55"			
2560	5-p	Touring	$1,095
2779	5-p	Coach	1,195
2930	5-p	Sedan	1,395
		"6-65"	
-------	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
-------	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
-------	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
-------	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	850
FLINT "55"			
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD Without Starter and Dem. Rims			
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
With Starter and Dem. Rims			
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN "11-A"			
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	5-p	Cabriolet	4,400
GARDNER "Series 5"			
2680	5-p	Coupe	$1,275
2895	5-p	Sedan	1,475
3070	5-p	Sp. Sedan	1,595
		"6"	
3070	5-p	Touring	1,395
3200	5-p	Brougham	1,595
-------	4-p	Cabriolet	1,845
3310	5-p	Sedan	1,795
3320	5-p	Sport Sedan	1,895
		"8"	
3350	5-p	Touring	1,995
-------	4-p	Cabriolet	2,245
3510	5-p	Brougham	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	Sedan	2,495
GRAY "O"			
1750	5-p	Touring	$630
1880	3-p	Coupe	845
2020	5-p	Sedan	895
2130	5-p	Royal Sedan	975
HAYNES "60"			
3295	5-p	Touring	$1,600
3650	5-p	Brougham	2,200
3765	5-p	Sedan	2,300

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ D-1			
3360	5-p	Sedan	$1,695
HUDSON "Super Six"			
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,250
3425	4-p	Brougham 4 d.	1,595
3675	7-p	Sedan	1,795
HUPMOBILE "R"			
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT "23-25"			
3025	4-p	Roadster	$1,630
2835	5-p	Touring	1,205
3015	5-p	De Luxe Touring	1,320
2835	2-p	Bus. Coupe	1,340
3025	5-p	Sedan	1,530
3305	5-p	De Luxe Sedan	1,780
3000	5-p	Coach	1,260
JORDAN Series "A"			
3330	2-p	Playboy Road.	$2,575
3340	5-p	Touring	2,575
3450	3-p	Friendly "8"	2,875
3625	5-p	Brougham	2,875
3520	4-p	Victoria	2,775
3525	5-p	Sedan	2,975
3470	7-p	Sedan	3,325
3800	7-p	Suburban Sedan	3,375
KISSEL "55"			
3130	2-p	Speedster	$1,895
-------	2-p	Sp'dster De Luxe	2,185
-------	4-p	Speedster	1,995
-------	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
-------	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
-------	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
-------	7-p	Touring	1,785
-------	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
-------	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	1,995
-------	5-p	Broug. Sed. DeL.	2,685
-------	5-p	Brougham 2 d	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
-------	5-p	Victoria De Luxe	2,685
		"75"	
-------	2-p	Speedster	2,195
-------	2-p	Speedster De L.	2,485
-------	4-p	Speedster	2,295
-------	4-p	Speedster De L.	2,585
-------	2-p	Speedster De L.	2,585
-------	2-p	Enc. Sp'd'r DeL.	2,985
-------	4-p	Tourster	2,195
-------	4-p	Tourster De L.	2,385
-------	5-p	Phaeton	1,985
-------	5-p	Phaeton De Luxe	2,185
-------	7-p	Touring	2,085
-------	7-p	Touring De Luxe	2,285
-------	4-p	Coupe	2,485
-------	4-p	Coupe De Luxe	2,885
-------	5-p	Sedan	2,395
-------	5-p	Broug. Sed. DeL.	2,985
-------	5-p	Brougham 2 d.	2,195
-------	7-p	Sedan De Luxe	3,485
-------	7-p	Berl. Sed. De L.	3,585
-------	7-p	Victoria	2,585
-------	7-p	Victoria De Luxe	2,985
LEXINGTON "Concord"			
-------	5-p	Touring	$1,595
-------	5-p	Touring (Enc.)	1,695
-------	5-p	Spec. Touring	1,795
-------	5-p	Sedan	2,185
-------	5-p	Spec. Sedan	2,445
"Minute Man"			
-------	2-p	Roadster	2,145
-------	5-p	Touring	2,095
-------	7-p	Touring	2,195
-------	5-p	Lark Touring	2,345
-------	5-p	Cal. Touring	2,495
-------	7-p	Cal. Touring	2,495
-------	5-p	Royal Coach	2,495
-------	5-p	Brougham	2,595
-------	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	$4,000
-------	------	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

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THE NEW IMPROVED
JUNIOR AND MIDWAY
Westinghouse Air Springs



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AND MORE PROFITS FOR DEALERS!

There are three new things the trade should know about the Midway and Junior Westinghouse Air Spring.

1. New in design including mechanical improvements. Perfect in action, self-lubricating, long lived and fool proof.

2. Installed with new no-cut brackets, integral and interchangeable with standard car brackets, easier and quicker to install.

3. A new wholesale policy—selling direct to dealers at a large margin of profit. The dealer does the installation profitably.

You can make real money selling and installing Westinghouse Junior and Midway Air Springs. They are made for practically every type of car. Juniors for cars up to 3000 lbs.—Midway 3000 lbs. to 4000 lbs. Easily and quickly installed, last longer than the car and make the car last longer.

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Westinghouse Air Springs are made for every type and size of car, truck and bus.

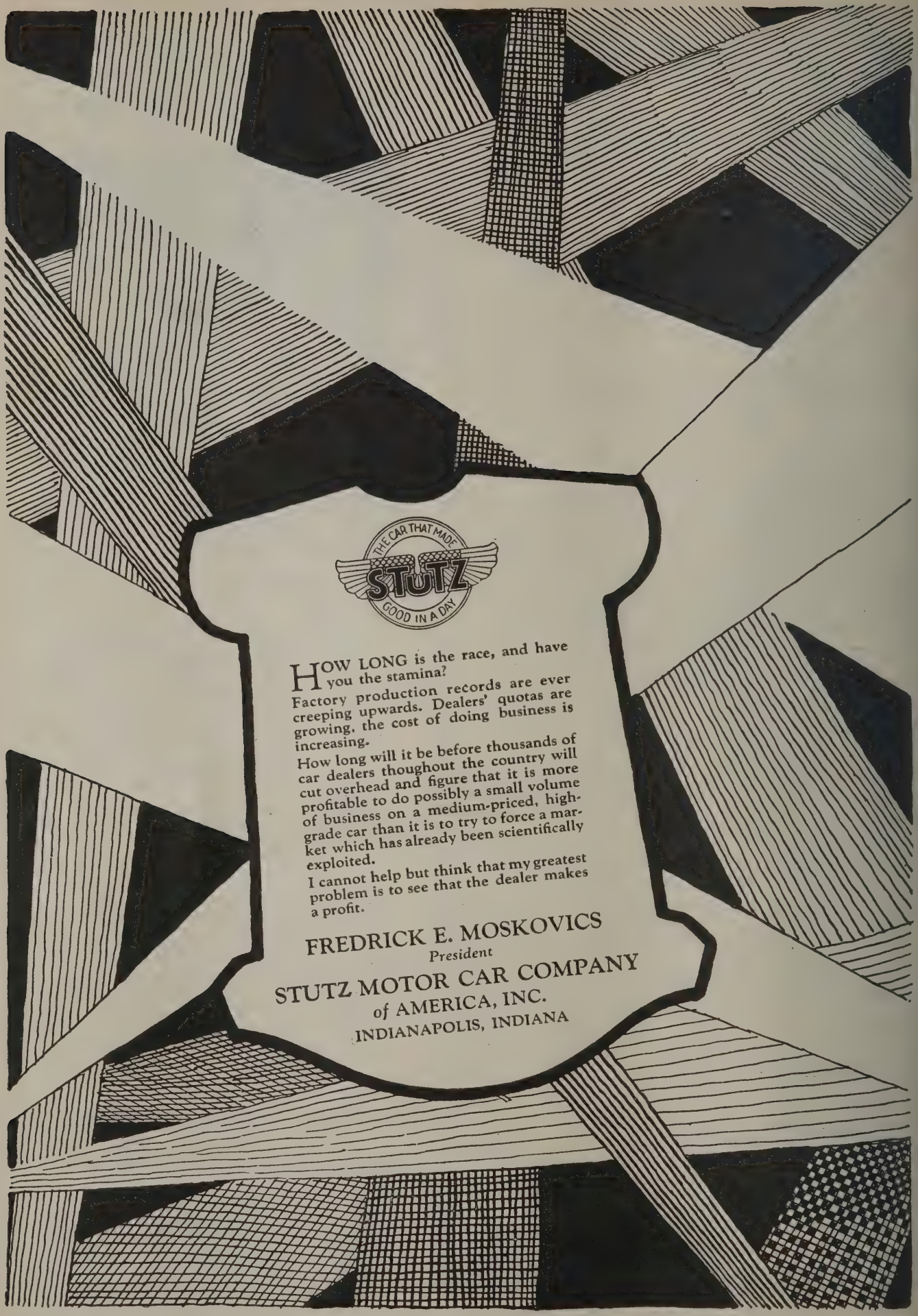
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Atlanta

Chicago
Cleveland
San Francisco



HOW LONG is the race, and have you the stamina?

Factory production records are ever creeping upwards. Dealers' quotas are growing, the cost of doing business is increasing.

How long will it be before thousands of car dealers thoughout the country will cut overhead and figure that it is more profitable to do possibly a small volume of business on a medium-priced, high-grade car than it is to try to force a market which has already been scientifically exploited.

I cannot help but think that my greatest problem is to see that the dealer makes a profit.

FREDRICK E. MOSKOVICS
President
STUTZ MOTOR CAR COMPANY
of AMERICA, INC.
INDIANAPOLIS, INDIANA

MOTOR AGE

Vol. XLVIII | July 30, 1925 | No. 5

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

AUTOMOBILE sales volume continues ahead of same period last year. Regular seasonal declines ratio appears unchanged but new models and price changes keep buying interest at peak. Page 32.

Wisconsin insurance commissioner opposes Chrysler policies and threatens action if company persists in plan. Page 33.

Dealers report stocks of old-style models unusually low, putting them in excellent position to receive new types. Page 33.

Fisher announces purchase of Fleetwood Metal Body Company. No change in policy planned. Page 33.

Michigan registrations this year expected to reach 955,000. Page 32.

Tire dealers advised by national association to buy only for 40-day turnover as result of mounting rubber prices. Page 32.

Registrations in Louisiana are expected to reach 200,000, or about 21,000 more than in 1924. Page 32.

Output of automobiles in Canada during 1924 decreases about 10 per cent, government report says. Closed car production rises above 1923 figure, but open models bring average down. Page 42.

Antoine Ascari, dealer at Milan, Italy, wins European Grand Prix at Spa, Belgium, with straight-eight supercharged Alfa Romeo car. Page 34.

Extra dividend of $6.50 per share on the common stock is declared by Nash Motors Co. Net income for quarter is nearly $3,000,000 greater than in same three months last year. Page 38.

Dodge Brothers begins program of expansion at factory which will enlarge output from 1,100 cars as at present, to 1,500 automobiles daily. Page 43.

World-wide survey of air transportation possibilities and advantages from economic standpoint will be carried out by Department of Commerce and the American Engineering Council. Page 43.

Parts, accessory and service business during first six months of 1925 runs substantially ahead of same period of 1924, M. & A. M. A. figures show. Page 35.

Delegation of American rubber manufacturers urges Secretary of State Kellogg to make representations to Great Britain regarding the restriction of raw rubber output. Page 35.

Chevrolet expects production, at present rate, to equal entire 1924 total by first of August. Page 42.

Ruinously low prices for used cars cause California dealers in new and rebuilt automobiles much concern. Page 38.

In Next Week's Issue—Accurate Diagnosis Makes Repairing Easier



The Junior Eight Special, a Miller-built racing car in which the drive was applied to the front wheels only. The excellent performance of this car at Indianapolis this year caused much favorable comment and showed especially well the apparent desirability of pull over push in propelling a race car around curves at high speed.

Driving All Wheels Of A Car

Making Every One an Independent Tractor and Brake. What Multiple Drive Design Vehicle Offers in Performance and Economy of Operation.

By B. M. IKERT

IN analyzing present day motor car design a point is reached where the future would seem to hold much for the multiple drive car.

Briefly, such a vehicle is one wherein the engine power and brake is applied equally to all, instead of the rear wheels only, as in the conventional car of today. A multiple-drive car may have four, six, eight or in fact any number of wheels.

The performance of the Miller-built "Junior Eight" front wheel drive car which finished second in the recent 500-mile Indianapolis race upset a good many theories about such cars being unmanageable, tricky to steer, and so on.

It is true the power in this car was not applied to all four wheels, but during the race it was clearly demonstrated that applying the power to the front wheels need not interfere with steering.

Many have claimed that the front wheels cannot be driven and steered at high speed. We have only to recall the "Junior Eight" averaged about 100 miles per hour for the 500 miles and "held the track" fully as good or better than the rear wheel driven cars to discount this claim.

At the conclusion of the race many comments were made as to the possibilities of adapting front wheel drive to passenger cars and motor vehicles in general. One newspaper said after the race: "The front wheel drive car developed by Harry Miller proved itself in the most gruelling test that can be given to a mechanical design, and its success here presages what may be a new development in passenger car design."

In the belief that there was something to say at this time on the subject of driving and braking on all wheels, a representative of MOTOR AGE interviewed Mr. P. J. F. Batenburg, Consulting Engineer, who has done considerable work on the development of multiple-drive automotive vehicle design.

Consequently what follows are largely the thoughts of Mr. Batenburg as presented to the author in this interview.

While it is entirely possible to adapt front wheel drive to motor cars, it is not very probable. The job still would be but half done, many claim, as it now is in driving the rear wheels only.

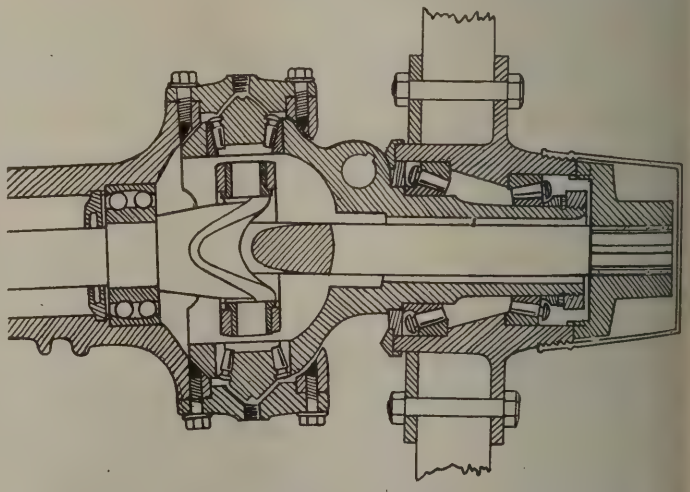
Advantage of Pull Over Push

It would have the advantages, to a certain extent, of pull over push when it comes to moving a load. This might well be illustrated in a workman turning around and pulling a wheelbarrow over a curb when it cannot be pushed over.

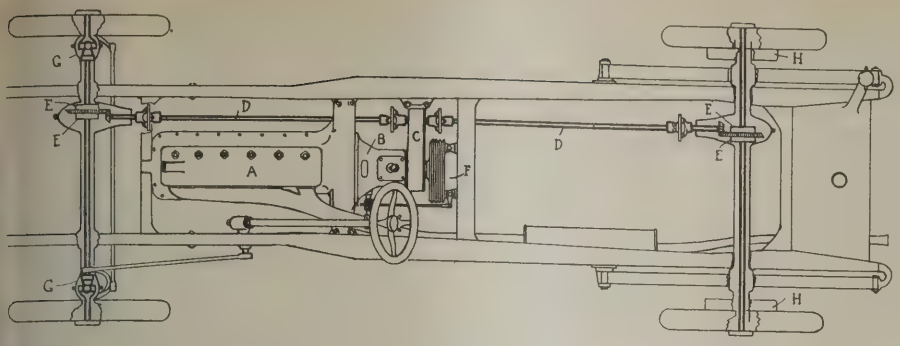
In aircraft practice the tractor (puller) type of plane has superseded the pusher to the almost total exclusion of the latter type. The item of stability, speed and maneuverability has been improved in the plane by the adoption of the tractor type wherein the propeller, the pulling power, is placed at the front of the plane.

It may be of interest to know that a car in which all four wheels were driven was bought in 1912 by Mr. Matthew Worth Pinkerton of the firm of A. E. Pinkerton & Company, detective agency which operated over the United States. Mr. Pinkerton desired a car which could negotiate any sort of road and under all conditions. Mr. Batenburg related the following experience Mr. Pinkerton had with the car:

It seems that in some particularly bad going where there was no road to speak of, the left front wheel steering arm broke. The tie rod was removed and for 60 miles, including the down-town section of Chicago, the car was steered with the right hand wheel only. The left wheel, which, of course, was driven by the engine, automatically followed the direction of travel of the other front wheel. Since the wheel had power applied to it, less resistance was encountered, which with the caster of the axle made it possible for the wheel to function practically the same as though the tie rod and steering arm had been in place.



Sectional view of the Batenburg patented combination driving and steering axle as used on a multiple drive car. That it is possible to safely and efficiently combine steering and driving was demonstrated in the front-wheel drive car which finished second in this year's 500-mile Indianapolis race.



chematic diagram of a multiple drive car as laid out by Mr. Batenburg. Due to absence f differentials and substituting for these the driving and braking devices shown at E, each heel becomes an individual tractor and brake. In the above diagram A is the engine; , clutch and transmission; C, sub-transmission; D, drive shafts (interchangeable); E, riving and braking devices (all parts interchangeable); F, multiple brake, operating on l wheels; G, driving and steering axle; H, rear wheel brakes, to hold car on hill, etc.

In a conventionally designed motor car the front axle is ragged along by the springs. This means, then, that very time the front wheels drop into a chuck hole or ncounter an obstruction they are dragged out, rather nan rolled out, as they would be if power were applied) them.

At this point it is well to mention that multiple-drive ehicles have generally been looked upon as "stunt" cars,) perform in places only where the going is bad or where dverse road conditions exist.

It is true during the war trucks in which all wheels were riven performed admirably under the most terrible conitions, and this fact, no doubt, has given rise to the general mpression that driving front and rear wheels of a motor ehicle is applicable to trucks only.

This is not so. It is reasonable to believe if a motor ehicle in which all the wheels are driven possesses advanages under adverse conditions it also will possess these nder more favorable conditions, even if it meant but the se of a smaller power plant with resultant economy.

As less resistance is encountered in a multiple-drive car, aturally less power is required to propel the vehicle. In ear wheel driven cars the entire load is lifted and pushed rom the rear, because the front axle is not a live axle. In multiple drive car the load is more equally distributed n both axles, which are alive and offer a combination of imultaneous lift, push and pull, with a natural tendency) climb.

Every Wheel Independent Tractor

Multiple driving and braking means that every wheel ; entirely independent of the others and a multiple-drive ar could be moved under its own power even if any three f the four wheels were off the ground.

Unlike a vehicle fitted with an ordinary differential or ompensating gear a multiple drive car does not get stalled hen one of the wheels becomes mired, nor will any of ie wheels spin on ice or slippery surface.

In a car fitted with a conventional differential gear, pinning of the wheels in mud or on ice takes place because iere is little or no resistance to the drive and because of ie differential mechanism affecting both wheels. Hence ie wheel on firm ground offers more resistance and conseuently the mired or free wheel is spun by the engine nce the planetary gears of the differential simply run ound the side gear of the axle shaft on the stationary heel.

Differential gears are not found therefore in a multiple ive car. The mere fact of driving front and rear wheels a car does not constitute a multiple-drive car, according Mr. Batenburg's viewpoint, so long as differentials are sed in front and rear axles, as well as at the center of the two propeller shafts. Such vehicles have been built in the past, and while they offer the advantage of driving the front wheels also, each wheel is not independently driven or braked independently from the others.

In a multiple-drive car each wheel is an independent tractor and brake obtaining traction as traction is available and braking as resistance is obtainable. That is, the wheel or wheels which are on a firm or dry surface take the drive from the engine and in braking the same wheels which have resistance are the ones on which the braking takes place. This means, then, that the brake is not applied to a wheel which does not revolve, as for instance when a rear wheel of a conventional rear-wheel-driven car skids, with the application of the brake. Skidding after all is merely a matter of wheels not traveling the required distance and when a brake is applied under such conditions nothing is accomplished since proper braking can only be had on a revolving wheel. When wheels cease to revolve on a moving car they become uncontrollable sleds.

Climbing and Pushing

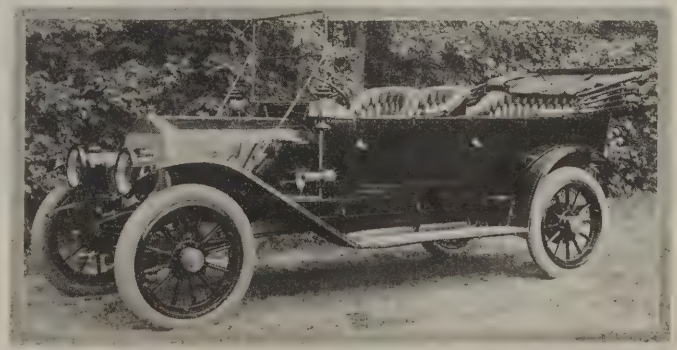
In crossing a ditch there is an enormous advantage in a multiple-drive car, for the front wheels will always climb while the rear wheels push.

Making every wheel an individual tractor and carrier as well, greater traction is obtained in a more efficient manner. The rear-wheel-driven car imparts a long leverage to the front axle, variable with the wheelbase. The front axle being dead is dragged along, meeting with resistance and digging bluntly into the resisting object instead of climbing over it as does the axle in a multiple-drive car.

So far as complication is concerned, multiple-drive offers no particular obstacles and there is no problem in multiple drive construction which is not satisfactorily solved in the conventional rear-wheel drive type of motor car. That is to say, there is nothing freakish about the design of the multiple-drive vehicle.

That the above is true will readily be appreciated by referring to the plan view of a multiple-drive chassis as shown on these pages. Reference to the illustration shows the disposition of the various units in practically the same manner as with a rear wheel driven car. Frame, axles, springs, engine, steering gear, transmission, gasoline tank, etc., are laid out exactly the same as in a conventional car.

The essential difference lies in the use of a driving and



This is a four-wheel drive car built in 1912 for Mr. Pinkerton, famous detective, who at the time stated he wanted a car which could go everywhere and anywhere under all sorts of conditions.

steering axle at the front, the use of a sub-transmission and the placing of the propeller shafts to one side of the center line of the chassis. In addition there is the use of a single multiple brake which operates on all wheels and applies the braking effort in the reverse manner that traction is obtained.

Many of the parts of a multiple-drive car such as illustrated are interchangeable, thereby lowering the production cost and adding materially to the serviceability and maintenance facilities of such a vehicle. Thus the two propeller shafts and flexible joints are interchangeable as well as the driving gears of the axle, together with the driving and braking devices.

Excepting for the fact that the front axle of a multiple-drive vehicle, as shown, is steerable and has, therefore, a different layout at the axle ends, the two axles, front and rear, are interchangeable so far as the housings and axle tubes are concerned. From a production cost standpoint the additional cost of a multiple-drive vehicle will run from 4 to 6 per cent more than for a rear wheel driven vehicle of the same capacity. This additional cost is manifested in a few additional parts necessary to make a live axle out of a dead axle.

The extra power required to drive the additional live axle is insignificant compared to the power conserved. As traction is more easily obtainable there naturally is less strain on the driving mechanism, consequently less wear and tear, smoother operation and more dependability. Since every wheel is an independent tractor and brake in itself there is less chance for skidding and consequently greater safety and easier control.

Having no dead axles, loads can be more equally distributed, which means greater load capacity in less space and less damage to roads. The effect of the power applied to each wheel particularly in starting the accelerating and the load carried by such a wheel should not be underestimated in motor vehicle design and the study of the effect of this energy applied should be of interest to highway engineers interested in road cost and maintenance.

Every person associated in any way with motor vehicles knows that the rear tires of the conventionally designed motor car wear out before the front tires. Hence there will be less tire wear on a multiple drive and brake motor car because the loads are more equally distributed and there is less driving and braking strain per wheel.

From what has been said in the preceding paragraphs it becomes apparent that a multiple-drive vehicle makes possible acceleration and decelleration on all wheels, whereas in the present day design of motor cars it is possible only to decellerate on four wheels since front wheel brakes have come into such prominent use. The advocates of multiple-drive therefore claim that if it is logical to decellerate on four wheels it also is equally logical to accelerate on four wheels. Braking could then be done in the reverse manner than traction is obtained and since there is but one good sized brake located on the end of the transmission it will readily be seen that perfect equalization can be had. To hold the car on a hill a pair of ordinary external band brakes are fitted to the rear wheels only.

By having but one large service brake which could be cooled properly with flanges or by other means, the maintenance and service work necessary is practically nothing.

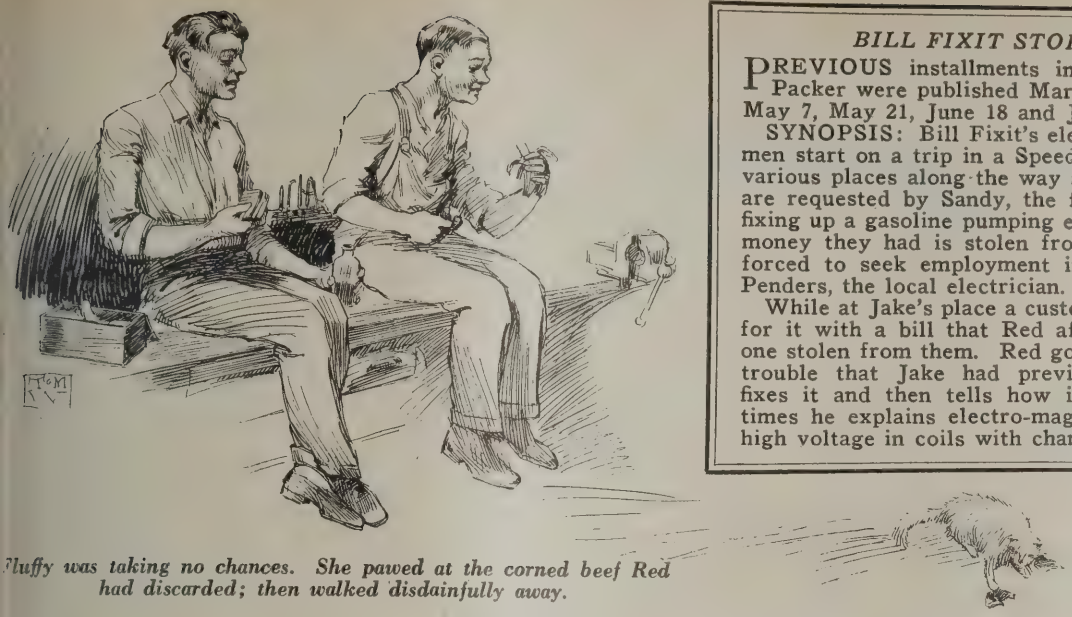
Sell the Car, Then Sell Accessories—This is the Way They Do It in the Establishment of a Kansas City Ford Dealer



A successful plan for the sale of accessories for Ford cars has been put into operation by the E. L. James Motor Co., Ford dealer in Kansas City, Mo. After a prospect has been sold a car he is taken into a quiet, luxuriously furnished room to sign the necessary papers. In this room, which is hung with lavender velour draperies, are displayed accessories for Ford cars.

While the car buyer is arranging for the purchase of his vehicle he sits at a desk facing many things for his machine which he should have and many things he would like to have. He sees a motometer, a spot light, a fire extinguisher, bumpers, rear vision mirror, skid chains, steering wheel, vacuum bucket etc.

About the time he has finished writing the check to cover the initial payment he looks up and begins to ask for recommendations on the various accessories. These recommendations are of course readily forthcoming.



Fluffy was taking no chances. She pawed at the corned beef Red had discarded; then walked disdainfully away.

BILL FIXIT STORY NO. 8

PREVIOUS installments in this series by A. H. Packer were published March 19, April 2, April 16, May 7, May 21, June 18 and July 9, 1925.

SYNOPSIS: Bill Fixit's electrical trouble shooting men start on a trip in a Speedway car. They stop at various places along the way and at the Welsh mines are requested by Sandy, the foreman, to help out in fixing up a gasoline pumping engine. While there the money they had is stolen from the car, so they are forced to seek employment in Coal City with Jake Penders, the local electrician.

While at Jake's place a customer buys a tire, paying for it with a bill that Red afterwards recognizes as one stolen from them. Red goes after a job of wiring trouble that Jake had previously fallen down on, fixes it and then tells how it was done. At other times he explains electro-magnets and production of high voltage in coils with change in magnetism.

Ignition Condensers—

When Is a Plumbing Job Like an Ignition System? The Red Head Tells the Answer to This One.

By A. H. PACKER

THE Red Head opened his lunch box and ate one sandwich slowly and thoughtfully. At the second one he decided a little investigation was in order. Removing the inspection cover he discovered a piece of ancient corned beef, picked it gingerly from the under layer and tossed it to Fluffy.

But Fluffy was taking no chances either. She sniffed in haughty manner, gave it a poke with one white paw and walked disdainfully away.

Jake watched with interest the comedy being enacted before his eyes.

"Gettin' tired of that Polock grub they hand you at the boarding house?" Jake hazarded.

"It's not so good," said Red. "Valvy gets by all right, but he has a hollow leg. I'd rather cook my own grub if we only had some place where we could."

"You might live upstairs over the garage," Jake said, half joking. Then added: "That's not such a bad idea either; if you run the gas and water pipes up there we can rig up a stove and a sink and you would be all set to do the dishes or take in washing when work here gets slack."

The boys talked it over and decided to take Jake up on his proposition, so a few days later Valvy started fitting pipe to carry the water to the upstairs kitchen. It was new work but Valvy liked it for a change and two days later things were in readiness for the amateurs to start housekeeping.

Red tried the faucet over the sink; the water flowed, but what was that rumbling knock as the faucet was turned off? Jake heard the hammering of the water in the pipe and came running up to see if a blacksmith shop had been opened on the second floor without his knowledge.

The faucet was a new one, so that could not be the trouble, but every time the water was turned off there was a hammering knock which jarred the whole building and seemed to threaten to crack the pipe itself.

"I see it all now," said Red. "There's no condenser."

"Condenser?" asked Jake. "Are you kidding or what? I never heard of condensers except in ignition or else in a power house where they use a different kind to change the old used steam back into water again. But with nothing but cold water up here, you will not need to worry about any steam."

"It's just my way of thinkin' I guess," said Red. "You see this faucet here is at the upper end of this pipe (Fig. 1) and Valvy in connecting up didn't allow any pipe to extend past the faucet so there would be an air cushion to stop the rushing column of water (Fig. 2). Without a cushion of some sort there is that awful jarring action and a tendency for the water to force its way past the rubber ball in the faucet.

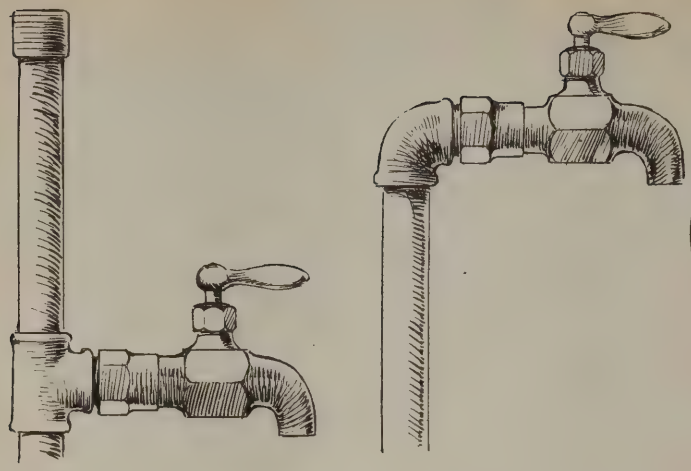
"This experience we are having with this piping is similar to the experience we would have if we tried to operate an ignition system without a condenser, which is a sort of electrical shock absorber, for the current when it flows in a magnetic circuit such as a coil around an iron core has a sort of momentum or inertia so that it does not want to stop when it gets to flowing.

Current Jumps the Gap

"For that reason in a simple ignition system (Fig. 3) the current will arc at the points, for when they start to open the current jumps the gap, just as the weight of the column of water tried to keep flowing when the faucet closed and raised an awful rumpus when it was unable to.

"You will remember that the last time we talked about ignition principles we found that the voltage generated in the secondary winding was produced by a change in magnetism and that the faster the change the greater the voltage. That's just where we get into trouble if we have no condenser, for the fact that the points arc shows that the current in the primary or magnetizing winding does not die out quickly. Then with slow drop in the primary current, there is a SLOW change in magnetism and a LOW voltage.

"That's why if a condenser is open or disconnected that the points burn so badly, and the spark is so thin and weak that it has no heat and usually fails to fire the gas



Right: Fig. 1—With no air cushion, the solid column of water stops with difficulty when the faucet is turned off, like an interrupter without a condenser. Left: Fig. 2—With the pipe extended above the faucet to form an air cushion, there is a shock absorber effect which compares to the action of a condenser in stopping the primary coil current when the interrupter points open.

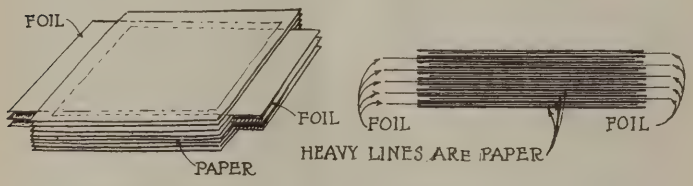


Fig. 5—Method of making a stacked condenser. One set of tinfoil sheets makes no connection with the other set.

in the cylinder. With a condenser in use (Fig. 4) there is a rush of current to charge the condenser, and this gives the points time to separate and break the current. Then the condenser charge rushes back in the form of a slight current, going the reverse way through the coil, which again helps to break down the magnetism and give a good sparking voltage."

Valvy had been listening in on the conversation and decided to butt in. "I took a condenser apart the other day. It was out of a Ford coil. There was just a lot of tinfoil and paper in it and I never did find a connection from one terminal to the other."

"Good reason," said Red. "That's because there is no connection."

"No connection?" Valvy wanted to know. "Then how does it work?"

Like Spring On the Car

"In our water pipe there would not have been a connection at the upper end of the air chamber (Fig. 2) either, and yet there would have been a cushioning effect. In the same way the insulation in the condenser acts like an elastic medium and takes the shock. We can also compare the condenser to the spring on a car. When the car hits a bump, the spring deflects, but the car does not travel through the spring and hit the axle, unless the spring breaks.

"In similar fashion the current does not travel through the condenser; it merely strains the insulation as the leaves of the spring were strained, and if the current ever does go right through, we say the condenser is shorted. This sometimes does happen and when it does the car stops for you get no ignition with a punctured or shorted condenser any more than you get spring action with a broken spring."

"And how are condensers made and tested?" Valvy wanted to know.

"One thing at a time," said Jake. "Suppose Red tells us how they are made first."

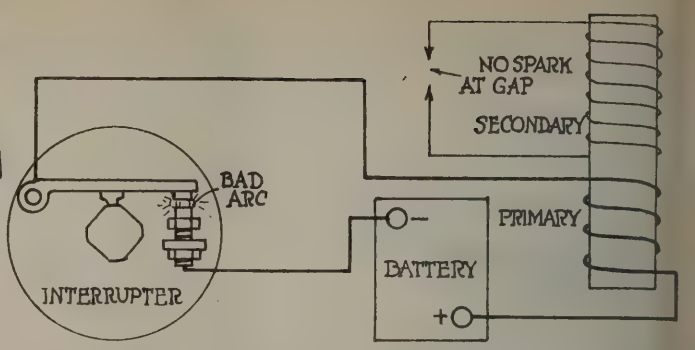


Fig. 3—A simple ignition system with the condenser omitted. The points would arc badly and there would be no spark at the gap.

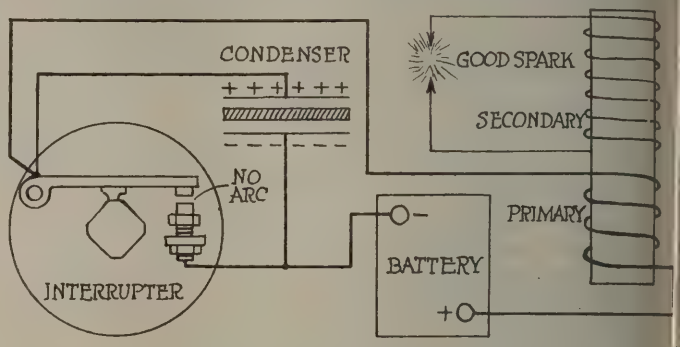


Fig. 4—With a condenser across the points, the rush of current through the coil is diverted to the condenser which it charges. This permits the points to open with little or no arcing, and the quick stopping of primary current produces a good spark at the gap.

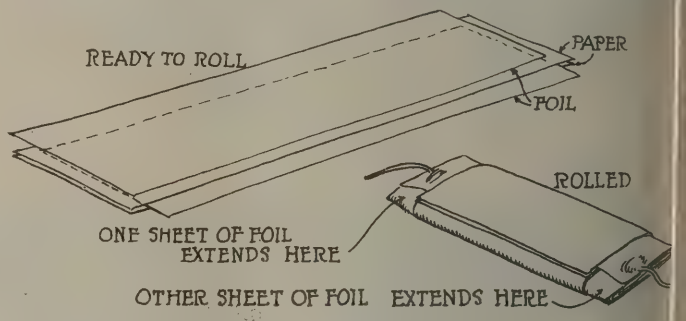


Fig. 6—The rolled condenser is easier to make and when finished looks like a small bolt of cloth. The two strips of foil in this type do not touch each other.

"Just as you say," said Red. "The ignition condensers are made two ways; some are stacked but most of them are rolled. In a stacked condenser, alternate layers of paper and tinfoil are used, but one piece of foil extends out over one edge of the paper, while the next piece extends out in the other direction (Fig. 5). When the job is finished the edges at one side are all soldered or sweated together in contact with one terminal while the same is true at the other side. If you had gloves on and the meshed the fingers of one hand with the fingers of the other, you would have the fingers of the two hands interlocked, but not touching due to the gloves. In similar fashion the two sets of tinfoil leaves mesh together but the paper keeps the two sets apart. In most condensers thin paper is used, two or three sheets being used in each layer of insulation. This is better than one thick piece of paper, for if any defects exist, they are not likely to lineup in the different layers.

"In the rolled condensers (Fig. 6) the idea is the same but long strips of paper and foil are used, there being two strips of foil, and as with the other type, one strip extends out from one side while the other extends in the opposite direction. Ford condensers for example are made in this way.

(*Continued on page* 39)

Getting the Car Ready to Paint

Problem Is Quite Complicated as It Involves Not Only Complete Removal of Dissimilar Materials, But Production of Surface Which Must Permanently Hold and Not Affect Applied Finish. Deoxidine Process Explained

By B. M. IKERT

IN preparing the body of a car for painting more things have to be taken into consideration than merely the matter of getting off the old finish. Simple as it may seem the problem is quite complicated, involving as it does not only a complete removal of many dissimilar materials, but the production of a surface which will permanently hold and have no effect on the applied finish.

In order to accomplish the above, whatever cleaner or process of cleaning is used must have the ability to dissolve rust, remove oil and solder solutions as well as other rust stimulators and to eliminate alkali. On top of this the cleaner or cleaning process must leave a surface which is clean and free from any tendency to change after the finishing materials have been applied.



This illustration, made from a photo taken in the Nash plant, shows the application of Deoxidine. The process has been in use in production work for some time, but is readily adaptable to the small paint shop.

Many shops doing automobile refinishing find the use of the Deoxidine process a big help in preparing cars for finishing. This process has been in use in production shops since 1914 and is especially desirable in conjunction with the pyroxylin finishes where it is absolutely necessary to remove the last traces of oil and to counteract any paint shedding property of the solvent or alkali materials that have been used to remove the old paint coats and which are not removed with a sand blast or some of the solvent cleaners generally used in the refinishing shops.

It must be remembered that in cleaning the surface with high test gasoline or benzine, any oils present on the surface are diluted in the solvent, but upon the evaporation of the cleaner these same oils are still present on the surface.

In the case of Deoxidine, the oil is not merely moved around from one spot to another but is completely removed in the washing operation, it is stated.

In addition to removing the oil, Deoxidine is said to counteract the rusting action of soldering acid and hand marks, even though these rust stimulators be invisible at the time the surface is cleaned, so that the process affords an adequate protection against the development of rust under the new finish, as it prevents the development of defects in the painted finish.

Briefly, the Deoxidine Process consists of the following steps:—

1. Applying the Deoxidine.
2. Allowing time for the Deoxidine to act and to drain.
3. Scrubbing the work with steel wool.
4. Washing the work with cold water.
5. Drying the work with cloths.
6. Air or oven-drying the work.
7. Final dry-wiping before priming.

Each step is simple and can be easily learned by unskilled labor in a short time. Although simple, each step must be carefully performed according to the detailed description given below by the maker:

Step No. 1—Applying the Deoxidine. Apply the Deoxidine to the work with a brush. Do not brush the Deoxidine out like paint but flow it on like varnish, being sure that the entire surface is generously covered. Much of the Deoxidine will drip from the body. Economies can be effected by catching these drips as they are suitable for use again. The most practical receptacles for catching the drips are long throughs placed under the bodies. These should be constructed of wood, and be free from leaks.

Step No. 2—Allow Time for Deoxidine to Act.—Do not let the applied Deoxidine dry as it will be very difficult to remove. In the refinishing shops, after the Deoxidine has been applied to the entire body, the operator may immediately proceed to Step 3, as sufficient time will have elapsed for the Deoxidine to have accomplished the object of Step No. 2.

In most refinishing shops the Deoxidine Process will be carried out by one man and it will be found that in some cases, particularly on exceptionally heavy rust, that Deoxidine cannot be applied to the entire body before it dries on the parts where first applied, so that the process will be somewhat modified in that sections of the body will have the Deoxidine applied and before it dries will be washed off, as described in the subsequent steps.

Step No. 3—Scrubbing the Work with Steel Wool. While the Deoxidine is still wet on the surface, the panels should be hastily scrubbed with steel wool to bring the Deoxidine into intimate contact with the steel. On spots where heavy rust occurs or where soldering acid is known to



Applying Deoxidine to open bodies. One operator is applying it with a brush, the material being held in the can in the operator's hand.

exist, the scrubbing should be more thorough and, if necessary to the complete removal of rust, an extra application of Deoxidine should be made to these spots.

It would be advisable for the workmen to wear rubber gloves in this operation to protect the hands against splinters from the steel wool.

Step No. 4—Washing with Cold Water. While the Deoxidine is still wet on the surface, the body should be washed down with a liberal supply of cold water. Hot water should not be used at this stage as it sometimes causes the "setting up" of the Deoxidine which makes its removal difficult.

Usually a sponge and a hose are used in applying water to the surface although an open barrel and a sponge are entirely satisfactory. In any case, a liberal quantity of water should be brushed over the entire surface so that all traces of the cleaning materials and the waste product are removed.

Great care should be taken to thoroughly wash out behind the mouldings and in all crevices. A high pressure stream of water from a small nozzle, or a high pressure stream produced by partly closing the end of the hose, will suffice to remove from behind moulding and from crevices any of the product of the cleaning, and any waste materials that have lodged there. It is at this point that paint troubles usually develop and too much care cannot be exercised in thoroughly washing in the vicinity of the mouldings.

Care should also be taken that no brass or copper nozzles, or brass or copper fittings, touch the cleaned steel panel for they produce peculiar markings in the finish which are invisible until after the paint has been applied.

Step No. 5—Drying the Work with Cloths. After the work has been thoroughly washed as described, it should be dried as quickly as possible to avoid discoloration. This is accomplished by wiping with clean cotton cloths.

All of the moisture should be blown from behind mouldings and from crevices with a jet of air and that moisture which has been blown to the surface should be wiped up with clean cloths.

In the large production shops, in order to save time in drying, it is usual to blow a jet of steam over the panels before wiping the surface so that in absorbing the heat from the steam the panels will dry quickly. After the work has been thoroughly dried with cloths it is, in some cases, found advisable to actually heat the mouldings with a torch to expel any moisture that has remained there and it is considered good practice to dry the bodies in a heated oven for twenty or thirty minutes before applying the primer. This drying operation in an oven constitutes the Sixth Step.

Step No. 7—Final Dry-Wiping Before Priming. After the work has been dried in the oven or in the air, it is inspected for any white deposits which may have been caused by water runs and if any have occurred they are removed by sanding with fine sand paper, used dry.

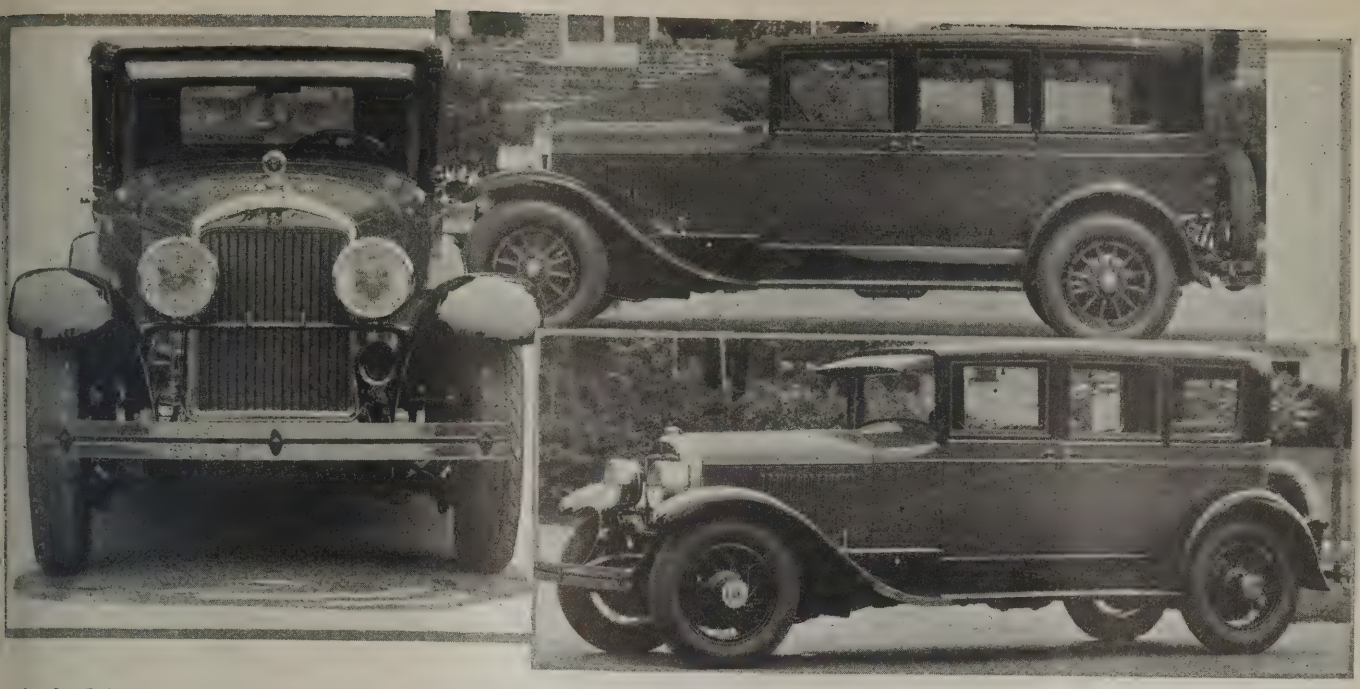
Great care should be exercised not to touch the work with the bare hands as perspiration at this stage may deposit on the surface chemicals that will produce rust.

All dust is now removed by wiping with clean, dry rags, or with a tack rag, and the primer should be immediately applied.

An article dealing with safety precautions necessary with pyroxylin finishes will appear in the next issue of MOTOR AGE.



Window display of Sterling P. Forrest, Jr., Sacramento, Cal., Chevrolet distributor.



At the left is shown a front view of the Cadillac 5-passenger sedan while the same model is shown at the right. Above is the 7-passenger sedan

Radically Different Car Is Found in New Cadillac Offering

While Product Bears Signs of Company's Past Practice Effect of Changes Presents Vastly Different Design

By W. L. CARVER

WITH the compensated crankshaft which has featured models of the last 2 years and the bore nd stroke dimensions which have been haracteristic since the original anouncement of the eight cylinder V-type ngine serving as the foundation, the dillac Motor Car Company now is proucing an entirely new car. While the ew product bears the earmarks of dillac construction, many new features ve been incorporated as the result of a ogram of simplification and the utilition of recent engineering developents. The complete chassis weighs 250 s. less than its predecessor and of this mount, 130 lbs. have been removed from te engine. Semi-elliptic rear springs ith ball-jointed rear shackles have reaced the former platform type. Two nit electrical equipment has supplanted te single unit generator and starter hich have been used for more than 10 ars. One timing chain is used instead d two and the generator and fan are lit driven. As the result of this arrangent, the valve actuating mechanism has en simplified and the intake manifold stem has been improved materially. Te starting motor is placed vertically ar the back of the crankcase and drives t flywheel through a system of crown aring.

Along with this program of mechanical revision which has resulted in a lighter car of more power and greater flexibility of performance, bodies have been improved by co-operation between the Cadillac engineers and the Fisher Body organization. Previous body lines have been followed but detailed refinements have resulted in a slight reduction in weight. In some instances doors have been made wider. The instrument board has been rearranged and its appearance enhanced by walnut panels. Bodies are divided into two classes which correspond to the two wheelbases in which the line is built. The standard line which is built on chassis of 132 in. wheelbase embraces the following body types with prices as indicated.

Five Passenger Brougham	**$2,995**
Two Passenger Coupe	**3,045**
Four Passenger Victoria	**3,095**
Five Passenger Sedan	**3,195**
Seven Passenger Imperial	**3,435**
Seven Passenger Sedan	**3,295**

Supplementing this standard line is the Cutom line which is built on a chassis of 138 in. wheelbase with the exception of the roadster priced at $3,250 which is on the 132 in. chassis. The balance of the Custom line with prices is made up as follows:

Roadster	**$3,250**
Seven Passenger Touring	**3,250**
Phaeton	**3,250**
Five Passenger Coupe	**4,000**
Five Passenger Sedan	**4,150**
Seven Passenger Suburban	**4,285**
Seven Passenger Imperial	**4,485**

Duco finish in three color schemes, blue, Waverly gray and Arizona gray is applied to the standard line. In the custom line, any color scheme is available upon 60 days notice although these bodies are produced regularly with Duco finish in six color schemes, all of which are in regular production. In addition to this range of finishes, the appearance of the entire line has been modified by new lines at the hood and radiator. While the curve over the top has been retained, the radii between this surface and the sides have been shortened and the latter slope outward toward the bottom. The new combination blends with present day body lines to better advantage and the appearance is further modified by the addition of vertical shutters in the nickle radiator shell. Drum type nickle head lamps and elliptical crowned fenders round out the distinctive appearance of the new models. Wood wheels with heavy spokes and low pressure tires of 33x6.75 dimensions are standard equipment although wire wheels are optional at additional cost.

Closed bodies are equipped uniformly with the Fisher one-piece ventilating windshield, an adjustable rear view mirror and an automatic windshield cleaner. The custom line is fitted with bumpers at the front and bumperettes at the rear in addition to a motometer and spring covers. To prevent drumming, the tops of all closed cars are constructed of 2 in. wide wood slats covered with padding and leather fabric. A variety of accessory equipment including such items as robe rails, smoking and vanity set is offered in the closed models. Windows in the standard line are operated by segment and pinion type mechanism while those in the custom line are operated by cable lifts. In the standard cars, the upholstery is mohair velvet while custom cars are trimmed to the buyer's specifications. The brougham being a two-door job has a door opening of 37 in.

While the new engine has a typical Cadillac appearance, closer inspection reveals a number of striking departures from previous practice. The crankshaft is substantially the same as that used for the past 2 years, although a trifle shorter, the decrease having been made at the outer ends as the result of better understanding of the benefits of the compensating counter weights which remove unbalanced loads from the bearings. For the same reason, connecting rod length has been reduced from 12 1/2 in. to 11 in. between centers. In view of the stroke of 5 1/8 in. it will be seen that the new length is still more than twice that of the stroke. The shorter rod brings about a substantial reduction in overall width of the engine and a material reduction in weight and has no effect on the smoothness and flexibility of operation as all inertia forces are opposed and then balanced out by the compensating weights on the crankshaft. In order to improve bearing conditions at the piston, the pins have been placed 9/16 in. farther down from the top, creating somewhat of a cross head effect with equal bearing value above and below the pin.

Two Unit Electrical Systems

With substitution of a two unit electrical systems for the former combined starter-generator unit, a great number of changes making for greater simplicity and accessibility and better operation followed. The new generator is flange mounted at the top of the timing case and driven at about twice crankshaft speed by a heavy rubber V-belt from a pulley mounted on the front end of the camshaft. The fan is mounted on the forward end of the generator shaft and has six blades with a dia. of 21 in. The first result of this change is the elimination of the friction clutch at the fan and of greater importance, the elimination of one chain from the timing train. Along with this, the complicated chain adjusting assembly at the front end of the camshaft has been dropped.

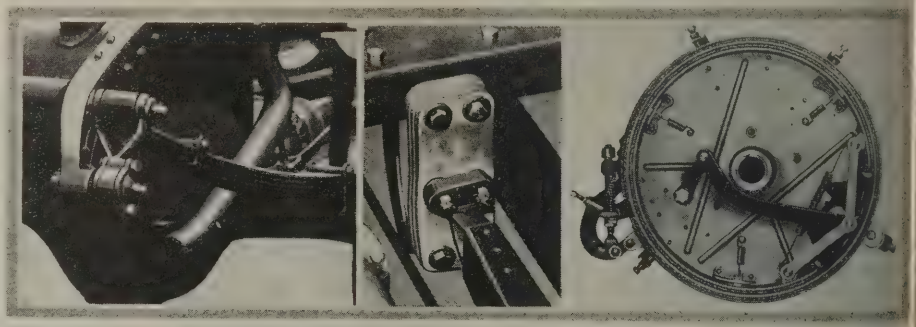
In the new layout a single Morse chain is used to drive the camshaft and its tension is regulated by a spring actuated idler which is located in the right half of the timing case. Chain of the plain pin type is used instead of the former split pin type but the quietness has been improved by using a chain of finer pitch. Another product of this revision is the substitution of a simple pressed steel timing gear cover of 3/16 in. thickness for the complicated aluminum casting assembly. With the elimination of the universal shaft which extended the full length of the trough between the cylinder blocks to drive the generator it has been possible to clean up this portion of the engine. The carbureter has been dropped to eliminate tortuous bends in the intake passage and improve the heating conditions in the incoming gas stream. This change in conjunction with the adoption of dome type combustion chambers which induce turbulence has increased power output and improved the flexibility of performance. The overflow passage for the carbureter now passes down through the crankcase instead of being piped around the end of the cylinder.

In conjunction with the change of carbureter location, the branch intake manifolds for each of the cylinder blocks have been removed from the cylinder blocks and now are cast separately and enamelled on both inner and outer surfaces. Because of the additional room in the trough, roller tappets operating directly on the cams have replaced the former tappet levers. These tappets are drilled and subsequently hot-formed so that they are not only extremely light but have substantial sections and great strength at points of high stress. The tappet is restrained from rotation which would throw the roll out of line by a lateral plug which moves in a broached slot. This feature is utilized to simplify tappet adjustment. The adjusting screw is threaded into the top end of the tappet which is split and equipped with a lateral clamping screw. Therefore during tappet adjustment, it is not necessary to restrain any part or manipulate a lock nut. The adjusting screw is set to the proper clearance and then is in no way affected by the locking action.

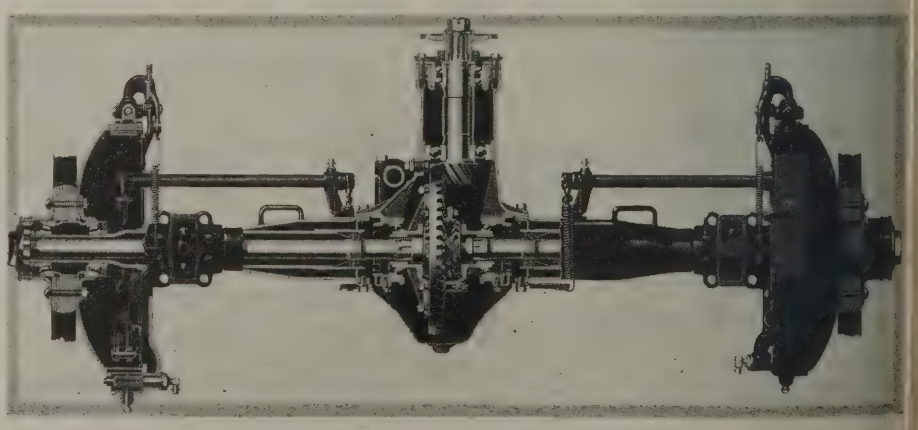
Striking Change at Front

The space between the blocks is remarkably clean. The carbureter is in the plane of the center crankshaft bearing while the generator is clear of the front valve housing covers. The distributer head which is Delco, as are the generator and starting motor, is driven by helical gears from the rear end of the camshaft and therefore is outside of the trough. Consequently nothing interferes with valve adjustment or access to the various parts of the carbureter. The ignition head is fitted with two four lobed cams and two breaker arms which permit correct operation at higher speeds.

At the front end another set of striking changes is visible. Where the cross shaft formerly drove two water pumps, one at each side of the block, one of these, that at the right side has been eliminated and has been replaced by the oil pump which is transferred from the front end of the crankshaft. The water pump on the left side has been made much larger and has a capacity greater than both of the pre-



At the left is shown the rear end of the Cadillac frame. The shackle has a ball mounting at the lower end; Center, fabric connection of torque arm; Right, toggle arrangemen of emergency brake



Cross section of Cadillac rear axle showing the new bearing arrangement and concave brake drums which clear low pressure tires

vious pumps combined. A single connection joins the pump with the lower tank of the radiator. The outlet connection which is rubber hose extends back along the left side and the stream is divided so that half goes up through the left block and the other half is lead through the crankcase by means of a cast-in copper pipe to an elbow which connects with the lower portion of the right cylinder block. Each block is connected to the top tank of the radiator by a rubber hose although it is not necessary to break the hose connections in service work as flanged elbows equipped with gaskets are bolted to the top of each cylinder head.

Vertical shutters thermostatically operated have been installed in front of the radiator core, which is cellular, in place of the former fin and tube construction. These shutters with their thermostatic control replace the heat control system installed in the water lines. The radiator shell is stamped from nickle instead of being plated brass or steel. The carrier bars for the shutters and the bearing pins at the ends of these parts have been given a rust proof treatment.

Over-Running Clutch

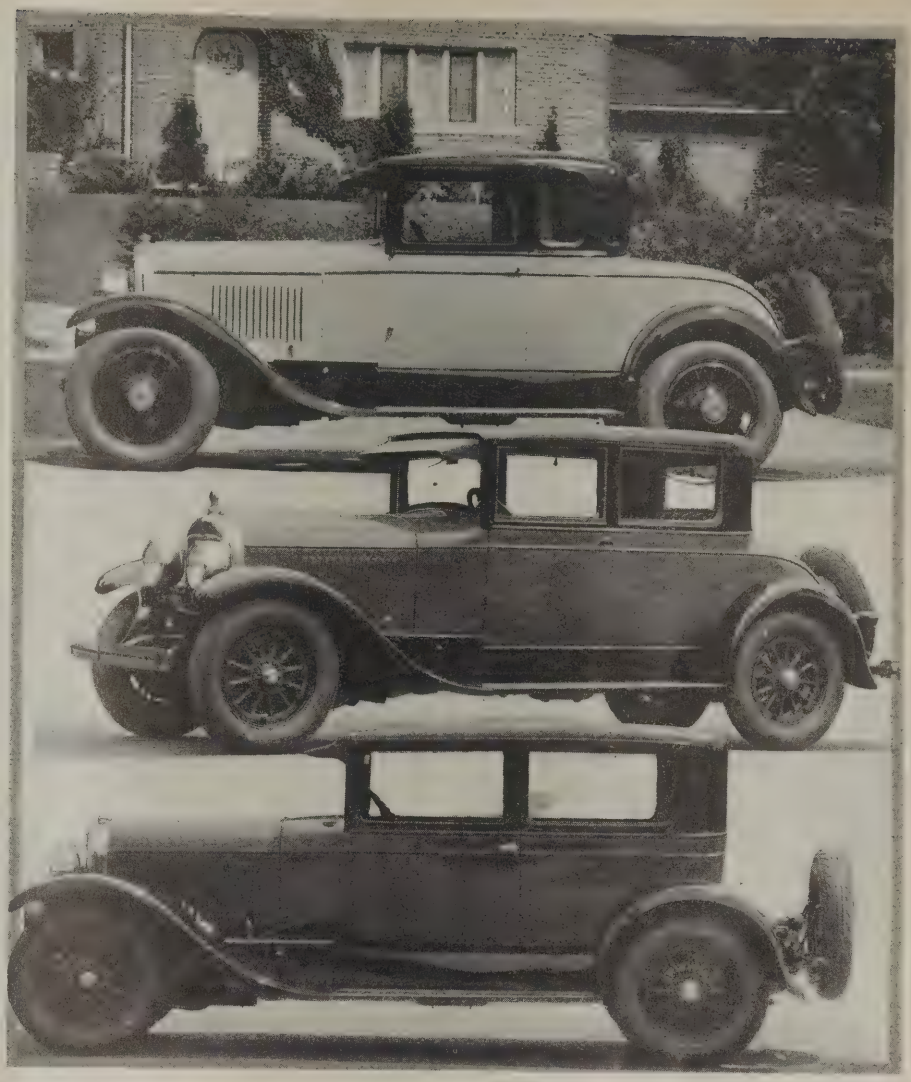
The starting motor is mounted vertically on the flywheel housing. A spur pinion at the lower end of the starter shaft is engaged with crown gear teeth cut on the back of the steel flywheel ring by the usual foot pedal on the toe boards. The first portion of the pedal travel advances the pinion into mesh with the flywheel gear while the last portion depresses the ignition switch. An over-running clutch interposed between the pinion and the starter shaft allows the pinion to overrun as the engine starts and complete disengagement occurs when the starter pedal is released.

The former pressure pump for the fuel line which was operated at the front end of the camshaft by an eccentric and strap has been placed just abead of the left cylinder block and its plunger is operated directly by an additional cam which is located ahead of those for No. 1 cylinder.

The oil level gage has been placed on the right side of the crankcase instead of in the trough between the cylinders and the screw type filler cap which closes tightly, extends diagonally from the right side of the timing gear case.

Within the crankcase, six bearings support the camshaft instead of the former five and all of these are pressure lubricated. Incidentally, the tappets are slotted with lateral holes into which pins may be inserted so that these parts may be held up out of the way to allow the withdrawal of the camshaft while the engine is in place in the chassis. The rear crankshaft bearing has been shortened while the front has been lengthened although the center bearing remains unchanged. The dia. of all three continues at 2 3/8 in. Main bearing caps are of deep section aluminum alloy eliminating the former auxiliary steel plates. Instead of through bolts, studs are used to secure the main bearing caps.

One of the outstanding features of the new engine design is the crankcase ventilating system which prevents the water



Top, Cadillac standard 2-passenger coupe, Center—Custom 5-passenger coupe and below the 5-passenger Brougham

and sulphur products of combustion from descending into the oil reservoir.

This feature is based on the fact that the two plane compensated crankshaft acts as the impeller of a centrifugal pump and given the correct conditions of air circulation, will build up a pressure greater than atmospheric in adjacent air spaces. Therefore the design is arranged so the breather just back of the water line elbow on the left side of the engine serves as an air intake. The breather opening on the right side has been closed and the oil filler is closed by a screw cap. Following these holes have been drilled in the skirts of the pistons and those engage with holes drilled in the inner sides of the cylinder walls at the bottom of the stroke. The holes in the cylinder walls are the outlets of the air pump system.

As the pistons are fitted with relief holes at the lower ring grooves the products of combustion will seep through at this point. They are forced down by the pressure of combustion above and opposed by pressure greater than atmospheric which is produced by the crankshaft's rotation. At this stage, it must be remembered that these products are membered that these products are vapors rather than liquids. Due to the pressure below, the only path for these vapors is out through the vent holes in the cylinder walls. These holes communicate with the valve housings which are closed by plates. The final outlet from each side is at a hole drilled well up in the rear wall of the valve housing enclosure. From this point elbows and lengths of metallic hose conduct the vapors down below the body of the car.

Special Valve Stem Lubrication

With this system, the valve gear housings are not vented with the crankcase as is usual but have only small drilled drain holes which allow any surplus accumulation of oil to drain back into the crankcase proper. Due to this arrangement, special provisions are made for the lubrication of the valve stems. Small semicircular grooves are cut in the piston lands between the second and third ring grooves from the top. Naturally oil collects in these grooves and as they pass small holes which are drilled in the cylinder walls to communicate with the valve gear chambers, is blown through in a spray.

As mentioned previously, the oil pump

(Continued on Page 36)

Several Mechanical Changes and Body Refinements in Buick Models

Company Announces Price Reduction on All Cars in Both Special Six and Master Six Lines—Engine Size Increased

By LESLIE S. GILLETTE

RETAINING the essential features which have characterized the Buick cars of late, the 1926 Standard and Master Six models, in addition to marked improvements in general appearance, embody several important refinements, making for more durable and economical operation, superior performance and increased driving comfort.

Concurrent with the introduction of the new series, The Buick Motor Company has reduced prices on all models, ranging from $25 to $370 on the Standard Six, and from $100 to $430 on the Master Six, with the exception of the Master No. 47 sedan which has been cut $730.

Sixteen body models in new color schemes and having mouldings extending from the improved design radiator entirely around the body, which on the closed models accentuates the popular double belt effect, comprise the new line. The prices are announced as:

STANDARD SIX

No. 24	2-pass. Roadster	$1125
" 25	5-pass. Touring	1150
" 20	5-pass. Sedan 2-d	1195
" 26	2-pass. Coupe	1195
" 28	4-pass. Coupe	1275
" 27	5-pass. Sedan 4-d	1295

MASTER SIX, 120 IN. W. B.

No. 44	2-pass. Roadster	1250
" 45	5-pass. Touring	1295
" 40	5-pass. Sedan 2-d	1395
" 47	5-pass. Sedan 4-d	1495

MASTER SIX, 128 IN. W. B.

No. 54	4 pass. Sp. Roadster	1495
" 55	5-pass. Sp. Touring	1525
" 54C	3-5 Pass. Country C. Coupe	1765
" 48	4-pass. Coupe	1795
" 51	5-pass. Brougham Sedan	1925
" 50	7-pass. Sedan	1995

As compared with the previous models, the price differential now existing between the regular touring and the four-door sedan is $145 instead of $490 on the Standard Six chassis, $200 instead of $830 on the 120 in. Master Six chassis and $400 instead of $6125 on 128 in. Master Six chassis.

Chief among the mechanical changes on the engine and chassis of both models are the increasing of the cylinder bores by ⅛ in., so that the Standard Six now measures 3⅛ in. in diameter and the Master Six 3½ in., the fitting of an oil filter, air cleaner and gasoline strainer, and the adoption of an improved Delco two-unit electrical system in place of the former single unit type.

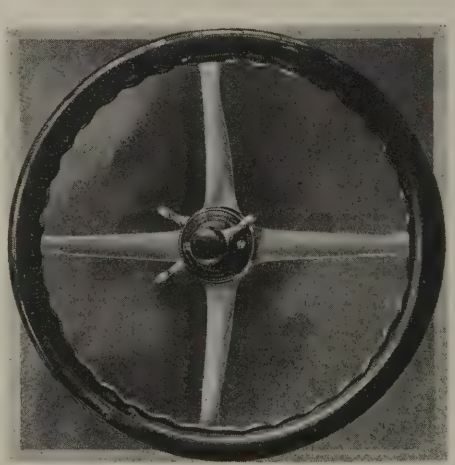
To give ample capacity for the increased power of the engine, the clutch, while retaining the basic principles of the previous type, has been entirely redesigned. The transmission case has been made more rigid and all gear teeth increased in width, while several changes affecting the axle sizes, bearing dimensions and spring seats are made on the rear axles. In addition to slight refinements in the four-wheel braking system to provide more effective braking with lighter pedal pressure, larger section tires, 31 by 5.25 in. on the Standard Six and 33 by 6.00 in. on the Master Six chassis are provided.

In harmony with the improvements made in the appearance of the bodies, the radiator shell while maintaining the characteristic Buick design, has been rounded out in the front by ½ in., allowing the use of larger radius at the corners. Greater length has been emphasized at the front of all cars by pressing the bead into the shroud and finishing it in the same color. Formerly a strip of aluminum beading marked the joining of the hood with the cowling. The Duco finish is in new attractive colors with suitable striping and black moulding. On the Master Six chassis, two of the closed models and both sport cars are in two-tone effect, the latter two being offered with two color options at no additional cost.

With the exception of both sport models on the Master Six chassis, all open cars are now provided with permanent tops having a strip extending along the inside edge which allows closer fitting of the side curtains and the installation of winter enclosures, the latter being available at extra cost.

Straighter roof lines and smaller radii used at the rear corners identify the Fisher closed cars. On the Master Six models, the height of the roofs has been lowered by 1⅜ in. although there has been no reduction in the amount of headroom. In addition to the "VV" type windshields having an improved rubber water seal and increased width of the rear windows, all bodies on both chassis are fitted with the remote type of door latch control, the operating handle being located several inches below the glass and in approximately the center of the door. The door pull fittings are integral with the garnish mouldings while exterior bar type handles of new design and more easily operated are employed. A special feature on the coupes and roadster models is the spring hinges which open the rear deck when the key is turned, the latter also fitting the transmission lock and on the closed models, the doors.

Headlamps of new type allowing raising or lowering of the light beams for general or traffic driving and controlled by a lever at the center of the steering wheel, are provided on the new cars.



Details of the steering wheel now used on the Buick models

Enlarged Cylinder Bores

Bulbs employing two filaments, each being of the same candlepower, special lenses and reflectors are used in the new lamps. Although the bulbs are so designed that they cannot be assembled in the wrong manner in the headlamps, a regular standard bulb providing only "bright" light may be used if bulbs of the two-filament type are not available for replacement. To eliminate the necessity of left and right headlamps and to simplify adjustments, the lamps are mounted at the center of their base on the reinforced channel extending across the front of the car. An outside focusing device and improvements in the door mounting are included in the new lamps.

Enlarging the cylinder bores by ⅛ in. and improved carburetion has increased the horsepower from 51 to 60 at 2800 r.p.m. on the Standard Six engines and from 65 to 76 also at 2800 r.p.m. on the Master Six, while the maximum torque of the smaller engine is now 14 ft. lbs. instead of 120 and on the larger powerplant is 179 ft. lbs. instead of 160.

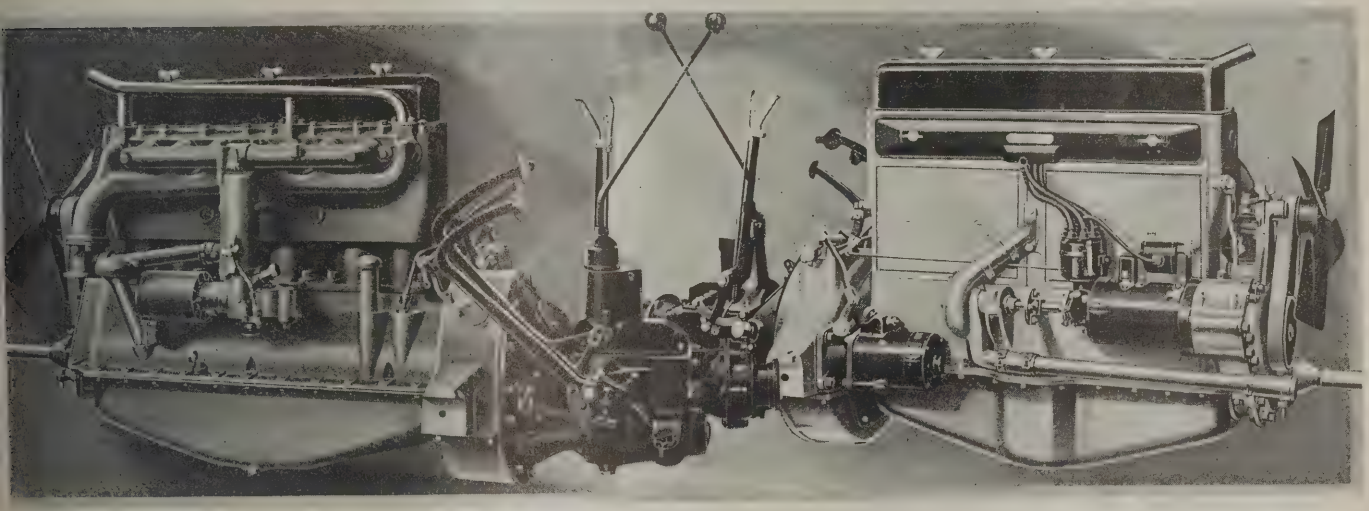
As the water pump no longer has to drive the former single unit type electrical system, a smaller case-hardened shaft, ground to reduce wear, is used while one packing gland only is now necessary. Driven through two universal joints from the end of the generator the pump is mounted on a rigid bracket integral with the upper half of the crankcase.

Providing oil grooves to the outside diameter of the valve lifters which feed lubricant through an oil hole in the wall of the lifter, increasing the width of the valve rollers from ⅜ in. to $\frac{7}{16}$ in., using

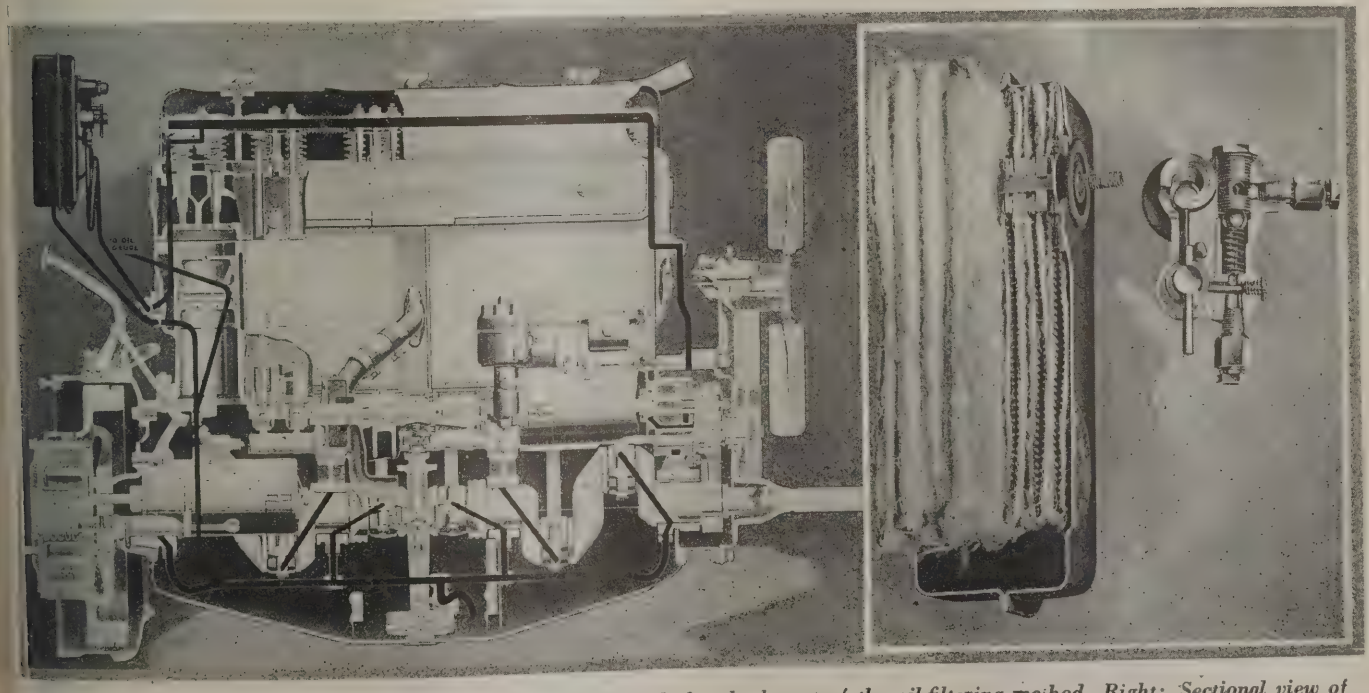
Some Views Showing Buick Changes



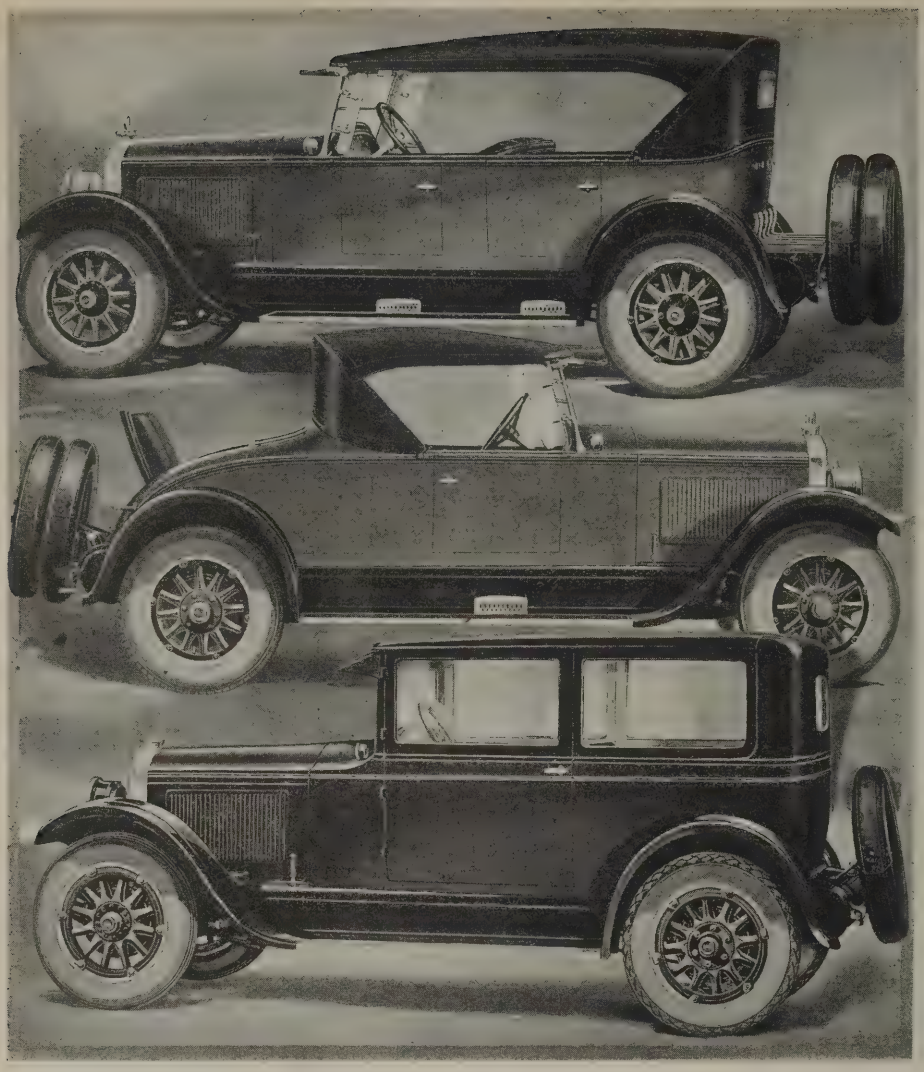
Buick Master Six Country Club model showing theaccommodations provided for passengers in the rear



At the left is shown the left side of Buick engine with air cleaner; right: Right side of Buick engine showing double-unit electrical system



Cross section of the Buick engine showing the oiling system and also the layout of the oil-filtering method. Right: Sectional view of oil filtering device



Buick Master Six Models. Top to bottom: 4-passenger Sport Touring; 2-passenger Sport Roadster, and 2-door Sedan

a small radius on the corner of the roller, adding four solid coils at the bottom of the valve springs and case-hardening the rocker arm shafts, has insured longer life of the valve mechanism. Made of 25 per cent heavier stock so as to provide greater rigidity and thereby prevent oil leaks, the push rod covers are provided with copper-asbestos washers under the cover screws as a further guard against possible oil leakage. To provide sufficient cooling for the larger engines, the fan on the Standard Six has been increased in diameter from 16 in. to 17 in. and on the Master model the fan blades are considerably wider, while to provide better ventilation, the engine side pans have been made deeper at the rear. In line with these changes, the diameter of the exhaust pipes on both models are increased in diameter, the pipe of the smaller engine now being 2 in. and the larger 2¼ in., while the inner tube of the mufflers are made in one piece and with one seam for greater strength.

Virtually everything has been done to prevent foreign matter entering the engines from any source and several thousands of miles are claimed to be added to the life of the engines by the fitting of an oil filter, air cleaner and gasoline strainer. Mounted on the dash above the right side of the engine, the oil filter consists of filtering cloths and metal screens carried inside a metal case and at car speeds over 20 m.h.p. all the oil in the crankcase is cleaned every 5 min. Taken from the oil system at the rear of the engine, the lubricant passes through the filter to the rocker arm bearings. The possible clogging of the filter will in no way interfere with the regular oiling system as a by-pass will automatically direct the oil to the rocker arm bearings under this condition. A pet cock is provided to show when the oil flow indicates the interior of the filter should be replaced with a new filtering cartridge, the latter being obtainable at nominal cost. A centrifugal type air cleaner having no wearing parts and fitted with a small detachable dust container is connected directly with the carbureter. Provided with a detachable glass bowl making the water and dirt accumulation plainly visible, the fuel passes through a metallic screen in the gasoline strainer which is placed directly below the vacuum tank, between it and the carbureter. To provide more positive lubrication and to assist in the filtration, the Standard Six oil pump has been changed to provide increased pressure. Pipes from the main bearings are enlarged in diameter from ⅜ in. to ½ in. and the relief valve altered to the same design as that on the Master model.

Coinciding with the design of the smaller engine, the upper half of the crankcase on the Master Six has been changed from aluminum to cast iron and a separate detachable flywheel housing having the engine arms cast integral is employed on the new model. This design allows more rigid support for the crankshaft and makes for easier servicing.

On both models, new calibration of the carbureters and several changes in the dimensions of the interior passages, valves and jets have been made while minor alterations are incorporated in the heat damper and dash pot plunger. To allow better installation of the air cleaner, the heat outlet from the carbureter is now located in the lower part of the riser body making it unnecessary to disturb the heat pipe when removing the carbureter from the riser. On the larger engine, the diameter of the intake manifold has been increased from 1⅝ in. to 1 7/16 in.

Starters Interchangeable

Supplanting the single-unit type generator-starter which has been a Buick feature for over 10 years, the new models are equipped with a specially developed two-unit Delco electrical system. Starters on both models are interchangeable as are the generators, the former being located in an accessible position on the right side of the engine and the latter being driven by the timing gears and mounted on the same side as the starter.

The starting motor, known by model designation No. 316 is of the positive mechanical type. Pressing down on the starter pedal which is mounted on the top of the flywheel housing, pushes the gears into mesh with the teeth on the flywheel before the current in introduced. After the gears are in mesh, a contact is formed with the switch on the starting motor, this completing the circuit and providing a fast cranking of the engine and a quick break-away torque. An over-running clutch in the starting gear assembly allows the motor to run ahead when the engine starts. Cut on a steel ring which is shrunk on the flywheel and secured by dowel pins, the teeth on the starter flywheel gear are chamfered for easy and silent engagement. To allow for easy service work in the event of the starter teeth being damaged, it is possible to pry the old ring gear off the flywheel after the dowel pins have been drilled out. Incorporating simplified leverages, the starting pinion can in an emergency be pulled back out of mesh with the flywheel in the event of a jam, by pulling backwards on the starter pedal.

Smaller and lighter in weight than used on previous models, the generator carries the ignition distributor directly over the rear armature bearing. The weatherproof distributor coil and the cut-out relay are also carried on the top of the generator. Brush mountings have been improved to eliminate squeaks and the commutator and brushes have been designed so as to have much longer life.

The model designation of the generator is No. 317 while the combination switch on the Standard Six is known as No. 1259 and the Master Switch No. 1288.

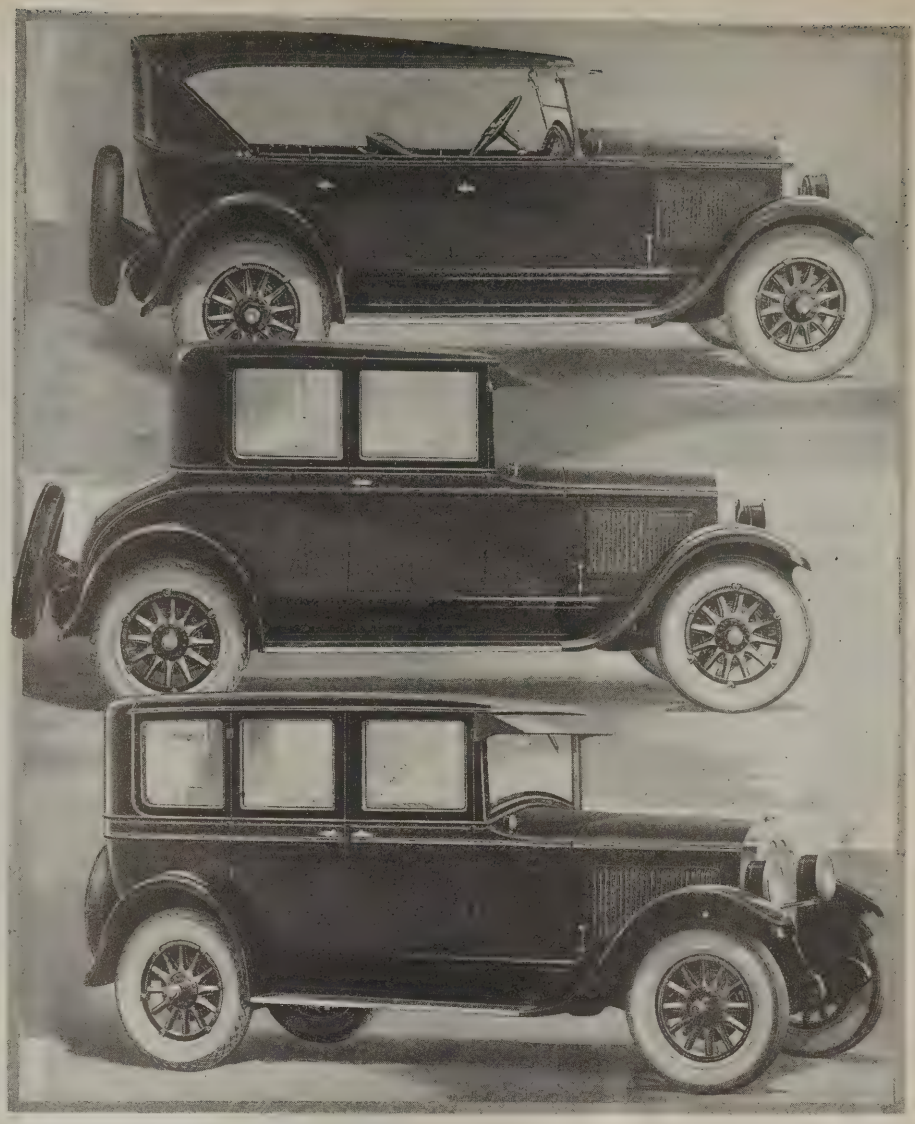
Clutch Redesigned

The multiple dry-disk clutch has been entirely redesigned insuring better balance, smoother operation and longer life and is carried in a special flange on the flywheel itself. In place of a bronze bushing, a New Departure ball bearing packed in grease and sealed, and located in the rear end of the crankshaft now carries the forward end of the clutch shaft, helping in the alignment and fitting of the clutch shaft. Driven through the teeth cut in the outer diameter which mesh with teeth cut in a special flange on the flywheel, the drive disks provide over 200 per cent more wearing surface at this point than on previous models. The driven disks being made from special high-carbon steel have the teeth cut on the inner diameter and working with the teeth on the clutch hub give considerably more wearing surface than before. Clutches on both models employ ten facings developed of special material and having larger outside diameter and wider face to give longer life. On the smaller car, these facings are ⅛ in. thick and on the larger edition 5/32 in. thick. Made of heat treated high carbon steel, the clutch hub is splined for both the clutch shaft and for the driven disks. The rear clutch plate and release spring carrier are now made of one piece to prevent oil leakage into the clutch.

Bolted to the flywheel housing, the transmission case has been made more rigid and the hand inspection hole reduced in size to increase the strength of the unit. By using different steel and heat treatment, the transmission gears are increased in hardness and toughness, and by widening the face of the gears. Strength and longer wearing surface has been added. An oil baffle cast in the transmission case cover, eliminates the possibility of oil leaking past the control lever opening. Offsetting the hand brake lever forward and raising the control lever ball to a more accessible position, allows the right forward seat on the two-door sedans to be folded all the way forward. For easier operation, the clutch pedal is 1 in. longer than previously.

Considerable difference exists in the changes which have been made on the rear axles of the two cars. The axle shafts on the three-quarter floating Standard Six axle have been increased in diameter for strength, while the inner ends of these shafts are splined instead of square to insure a better fit between the shaft and differential side gear. To reduce the tendency to whip at high speed, the long portion of the pinion shaft has been increased in diameter, while the size and capacity of the bearings carrying this shaft have also correspondingly been increased.

New Departure, single row type, replace the former double row bearings carrying the rear wheels on the Master Six full floating rear axles. On the 120 in. wheelbase chassis only, the differential bearings have been increased in size, corresponding with those employed on the 128 in. chassis. The pinion bearing is also larger. Although the dimensions of the axle shafts remain unchanged, additional strength has been secured by forming the shafts of manganese instead of carbon steel previously employed.



Three of the Buick Standard Six Models. Top to bottom: 5-passenger touring; 4-passenger Coupe and 5-passenger Sedan

Common to both axles, the spring seats are changed to use a drop forged hardened steel thrust block providing two and one-half times more wearing surface on each side. Grit and dirt has been eliminated from this point by grinding the contact surfaces enabling a closer fit to be made and insuring longer life thereby. For convenience in raising the rear wheel from the ground, the jack rest construction has been altered to allow a greater purchase and eliminate the possibility of the jack slipping.

Four-wheel external contracting brakes are the same design and principle as used on the previous model except that the operating mechanism at the bands is reversed. This arrangement gives more effective braking with lighter pedal pressure and allows one long piece of brake lining to be used on each drum. Due to the fulcrum of the brake operating mechanism now being at the long end of the band, the latter moves in the same direction as the drum while the car is traveling ahead and the brake pedal is operated. This increases the efficiency of the brakes, as the rotation of the drum helps to set the brakes, making them easier to operate and reducing the tendency to squeak. With this design, the wear on the facings is the same at the brake anchor as at the ends of the band and filling in the space with brake lining under the anchor clips has added 41 sq. ins. of extra breaking surface. One brake lever pin instead of two is used in the operating brake lever at the brake end, while the adjustment for the band clearance is simplified. By using a nut at each end of the brake adjusting, each nut controls the clearance for its end of the band independently of the other end.

Shields fastened to the brake drum disks with screws, cover the inner edge of the brake drums and bands, preventing water and dirt thrown up from the wheels entering between the lining and the drum. Another shield performing similar duty is part of the band clips and covers the space be-

(Continued on Page 37)

MOTOR AGE'S PICTURE PAGES



BATTER UP. Captain Eddie V. Rickenbacker, American ace, and vice-president and director of sales of the Rickenbacker Motor Co., was photographed while watching a ball game in Buffalo surrounded by kids who were witnessing the game "free fer nothin'" as guests of the Buffalo Evening News. The interest on the faces of the spectators seems to indicate a crucial situation in the progress of the contest. This looks like a case where an Ace has become a King



AUTOMOTIVE "COPY." This miniature Hudson, used by the Richey Motors, Inc., Hudson and Essex dealers at Long Beach, Cal., for advertising purposes, was built in the company's own shops

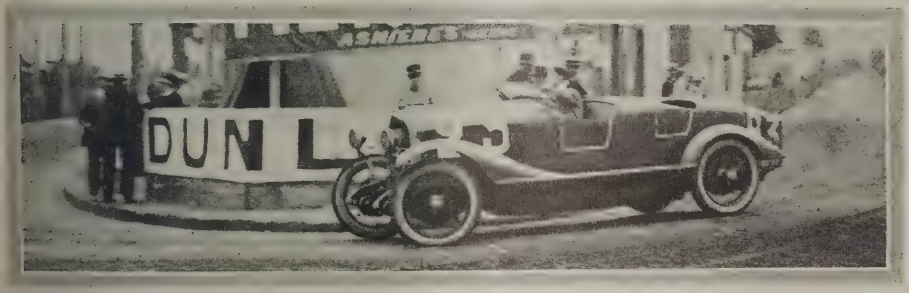


DE LUXE SERVICE. A fleet of eight Series 80 Pierce-Arrow Enclosed Drive Limousines is used by the 7700 Taxicab Co. of Wilmington, Del., for private taxicab and funeral work. Foss-Hughes Co. of Philadelphia, made the sale

OF AUTOMOTIVE INTEREST



READY FOR A SPIN. Miss Billie Dove, screen star, is shown beside a Studebaker Special Six Duplex-Phaeton in Hollywood



HAIRPIN TURN. It is located on the Le Mans, France, course and a car is shown negotiating it during the 24-hour race for the Rudge-Whitworth cup. The bystanders don't appear to be much concerned about it, but it is easily conceivable that such a turn could make one's hair stand on end



THE SPIRIT THAT WINS. Andy Crumshaw, Alliance (Ohio) newsdealer, born without legs and only one arm, is a successful automobile racer. He refused to become a public ward, acquired a news stand business and as a diversion has learned to drive automobiles in race meets. Special adjustments on the car make this possible. He is shown with his mechanic

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Chokes When Accelerating

Q.—A customer of mine came in the other day to have me overhaul his car. It is a Chevrolet Superior model that was new in 1923 and has the new model Holley carbureter. He says it has given trouble ever since he had it due to poor acceleration and using too much gasoline. When the throttle is quickly opened the engine seems to knock in two cylinders and kicks back, then takes hold and picks up to the speed indicated by the throttle opening. He says he gets 12 miles to a gallon of gasoline. Other Holley carbureters of the same type have been tried without improving the operation.

I ground the valves, adjusted bearings, lined brakes, cleaned out carbureter and checked gasoline level which stands at ½-inch below top of float chamber. Also examined vacuum tank, cleaned out gas line, checked exhaust valves, which close when piston is 1/16-inch down from top dead center. Checked valve clearance at .005 inches and timed ignition. I found the two front inlet valves had more clearance around the stems than the other two, but did not put in new valves. Also cut off inlet manifold and raised carbureter 6 inches and checked for air leak. Compression is good but after trying car on the road there was no improvement. Then gave valves a clearance of .020 inches and acceleration was better but not right. Henry Hier, Rushville, Ind.

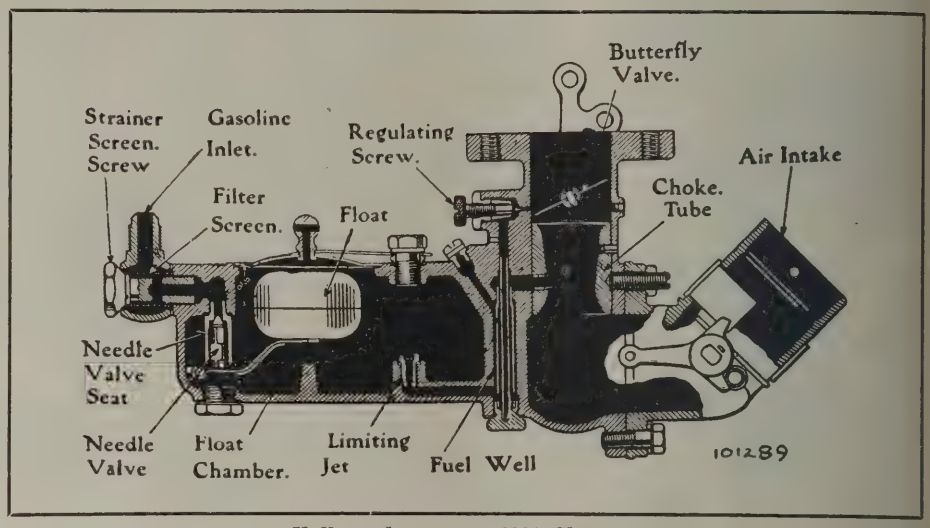
We are showing an illustration of the Holley carbureter for reference. Would recommend that you remove the cover of the float chamber and see that the gasoline level is lower than at present. The recommended level is 9/16 from the top of float chamber and you can increase this distance by bending the float down. A local Chevrolet service man recommends in some cases having the level as much as 3/4 inches below the top of float chamber.

The reason for this is that with a high level for the gasoline the carbureter loads up and then when an attempt is made to accelerate it chokes and will not pick up properly. We also believe that improved operation could be obtained by using a manifold which combines a hot spot. If the clearance around the valve stems is excessive improved operation might be obtained by reaming out and putting in oversize valves or by using a valve packing of some sort.

THE CAMSHAFT BEARING SLIPPED

We have just read your question on page 23 of the May 7, 1925, issue of MOTOR AGE about a so-called valve knock in a Jewett engine. Wish to say we have experienced the same difficulty in a Jewett belonging to one of the officials of our company. We found this knock to be due to the fact that the rear camshaft bearing had slipped forward sufficiently to allow the last push rod to come in contact with it causing a knock very similar to that of a tappet noise. By loosening the set screw that holds this bearing and driving it back into place our knock was eliminated. The Indian Territory Illuminating Oil Company, M. H. Snoddy, Garage Department, Bartlesville, Okla.

MOTOR AGE is very glad to have this letter which gives a very plausible reason for a condition of this sort.



Holly carbureter on 1923 Chevrolet

The Readers' Clearing House

THIS department is conducted to assist dealers and maintenance station executives in the solution of their problems.

All questions are answered direct by letter, so the name and address should be given in full. This saves waiting for the answer to be published, which sometimes occurs several weeks late, depending upon the space available.

Readers' names will not be published with articles, if a request to this effect is received with the letter.

Inquiries not of general interest will be answered by personal letter only. Emergency questions will be replied to by letter or telegram.

Also state whether a permanent file of MOTOR AGE is kept, for many times inquiries of an identical nature have been made and these are answered by reference to previous issues.

Addresses of business firms will not be published in this department but will be supplied by letter.

Technical questions answered by B. M. Ikert and A. H. Packer; Legal, by Wellington Gustin; Paint, by G. King Franklin; Architectural, by Tom Wilder; Tires, by a Practical Tire Man; General Business questions, by MOTOR AGE organization in conference.

Removing Crankshaft Play

Q—I have an easy way of taking out the end play in a Ford crankshaft. I first remove the small timing gears on the crankshaft and put a rear axle felt retaining steel washer on the shaft. I then put the gear back on and put a groove or a center punch mark around the front of the gear to keep it from slipping. I have found this method gives service for almost a year.

I have in mind one car having a cubic inch piston displacement of 250 inches which develops more power than a second car which has a piston displacement of 290 cubic inches.

Suppose these two cars have equal weight. Which one will have more pulling power when the car is running up hill at 15 miles per hour. I always thought the actual horse power was determined by the amount of fuel it uses or the total cubic inch piston displacement.—Oklahom Subscriber.

The piston displacement is not a measure of the power that the engine can develop for the piston displacement is figured on the basis of two revolutions of the engine, that is, allowing each cylinder to fire once. From this it can be seen that if one engine turns twice as fast as another it will have a chance to burn twice as much fuel assuming that the two engines are the same size. There are however, so many factors that enter into engine design and affect the power that there is no formula or measurement which will enable us to say which one will climb a hill better or which one will pull better. This can be determined by trying out the car and in the case of the engine it can be determined if a horse power and torque test is made.

Assuming that one engine is designed as well as another, the power will usually be proportional to the amount of fuel burned.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Floor Space Well Proportioned Is the Prime Feature of a Storage Garage

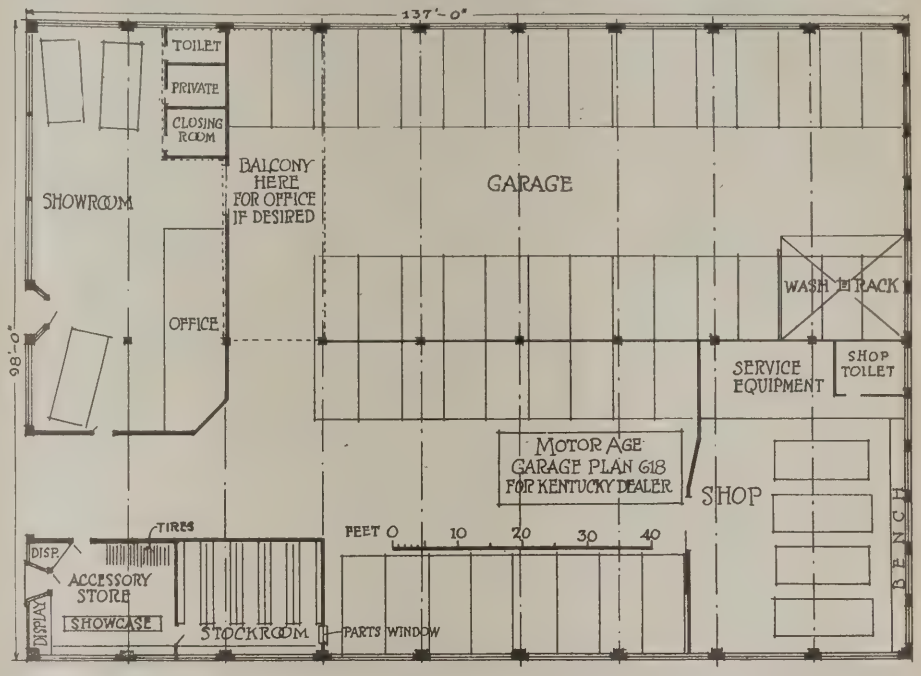
Q.—We are encosing a rough sketch of a plot of ground fronting 98 feet on the street and running back 137 feet to an alley, there being an alley on each side of this plot. The plot fronting 54 feet on the street has a two-story building running back 85 feet, and it was our first intention to build a garage upon this ground and try to save the wall that is already there as designated by the red line, but we cannot figure out how we can be able to store more than about 18 or 19 cars after making provisions for show room for new cars, stock room, office space, etc., and a shop and wash rack. Want shop to accommodate about four men.

If you can give us plan whereby we can get more storage space we would thank you to do so. You will note the sketch shows another piece of ground fronting 44 ft. on the street and running back 137 ft. to the alley and we believe that this ground may be bought at a reasonable figure.

After studying the proposition of building a garage on your 54-foot lot, we have come to the same conclusion that you have, namely, that not more than 18 or 19 cars could be stored with suitable provision for other departments. With this is mind we have gone ahead on the 98-foot layout since there is no alternative except to build two stories. Building a two-story building, however, on a 54-foot lot would not be satisfactory, as it would necessitate elevator communication and we are of the opinion that the cost of the elevator, the cost of maintenance and the inconvenience would not make up for the added cost of the land and the convenience of the building all on one floor. As to the difference in cost of the two buildings, there would be about the same difference as there is in the area, the larger one being a little less in proportion since there would be more unfinished storage space in proportion to the total area in this one than the smaller.

If built here the larger building would cost in the neighborhood of $2.50 to $3 per square foot and this would figure around $35,000. Of course, we do not know the condition of labor in your market, but the price with you should not be any greater than this. Your best course is to get some figures from local contractors and then you will know definitely. One contractor will often figure 50 per cent higher on the same job than another, so you can see our figures do not mean much.

In this plan we have devoted as much space as possible to storage and since you are featuring storage, it is probably advisable to make your entrance in the front of the building. If the alleys are ample in size and not congested, they might be used, one as an entrance and the other as an exit, making the doorways on opposite sides of the building, but we would hardly advise this in a storage garage as the accessibility of the entrance makes considerable difference to your customers.



Separate the small cars and store them on one side of the aisle to gain aisle width

We have shown the general office in the corner of the showroom, but if more office space is desired, or larger showroom space, a balcony might be used as suggested in the drawing. In this case, the front of the building including the showroom and office space will have to be built up higher in order to get the added headroom necessary for the balcony.

The windows along the side of the building should have their sills about 8 feet from the floor and extend from there to the point where the trusses meet the sidewalk or about 4 feet. With cars stored along the side walls, the lower part would be of no value in admitting light and the cost of the glass might just as well be saved. Skylights must be used to get light into the center part of the building. One will be absolutely necessary over the balcony, if it is used.

LEGAL QUESTIONS ANSWERED

By WELLINGTON GUSTIN

of the Chicago Bar

CAN COLLECT FOR STORAGE

Q—I have in my possession a Buick Six touring car that was towed in for some necessary repairs on August 20, 1924. The repairs were made and the owner notified that the car was finished, also that space was valuable and was renting for $5 per month. I have since sent him no less than four statements and to date have not heard from him. How long must I hold the car before I can sell same to cover, repair parts, labor and storage? The parts and labor came to $27.57 and the job was completed on August 3, 1924. The owner is a large real estate owner in a neighboring farm community, but the car is about a 1918 and has seen some hard knocks. Can he be made to pay the bill or will I have to sell the car to get my pay? How would you proceed?—Jesse Egly, Egly's Garage, Forrest, Ill.

Where the garagekeeper repairs a car and notifies the owner that same is ready for delivery and that he expects storage charges for keeping he may charge a reasonable rental for storage together with his charges. Now you have a lien on the car in question, which you may foreclose according to the statute, or hold, at your pleasure. You may start foreclosure proceedings at any time.

If the customer is worth a judgment it would appear a simple matter to bring suit for the amount of your claim, and then when judgment is obtained you may levy upon and sell enough property to fully satisfy your judgment and court costs.

The READERS CLEARING HOUSE

Clearing Up Electrical

EDITED BY A. H. PACKER

Ordinary Generator Not Suitable for C. P. Charging

Q.—Do you know if Thomas Edison is going to put a radio on the market? Also give address of some Edison office or factory.

Thomas A. Edison, Inc., is located at West Orange, N. J. with offices in both Chicago and New York, but we have no information as to whether this concern is going to put a radio on the market or not.

Q.—Why is it that a constant potential charging outfit can charge a battery in eight hours without damage?

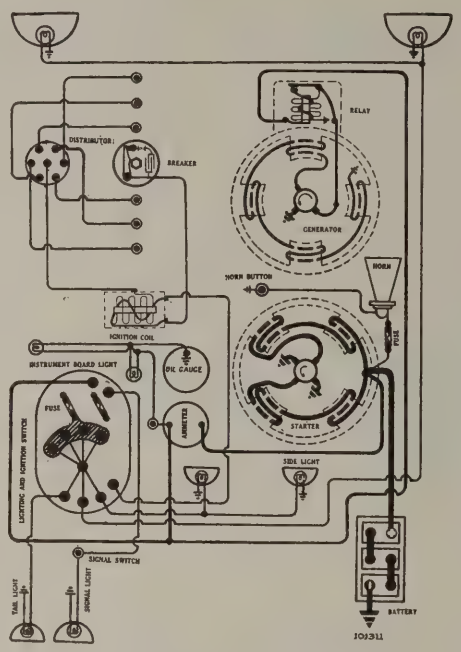
Damage in battery charging occurs only when a battery is overheated or when it is charged so fast that the electrolyte boils violently and disturbs the active material and loosens it from the plates. Therefore the charging rate can be very high if the battery does not gas or overheat. When a battery has been discharged and has not been allowed to stay in a discharged condition until hard sulphate has formed on the plates it can be charged at a rate of 50, 100, 150 amperes or even higher for a short time.

A battery while in a discharged condition and while receiving charging current will show a low voltage, approximately 6 while the same battery when fully charged and with charging current still flowing into it will show a voltage of about 7.5. For this reason if a generator can maintain a constant voltage of about 7.5 or slightly higher there will be a difference of 1.5 volts when operating a discharged battery and practically no difference in voltage when charging a fully charged battery. Therefore as the battery becomes charged and its voltage rises the charging current will be automatically reduced.

This does not mean of course that a constant potential system can be operated without any attention, for in nearly every case the battery will be to some slight extent sulphated, and may have to be disconnected for a time to prevent overheating. This does explain however, why the 8 hour charging is practicable for the heavy amperage which the battery can take at first materially cuts down the time required.

Q.—If I use a 32 volt dynamo and regulate the amperage according to the number of batteries connected and the amount the battery has in it from time to time and connect them in parallel the same as on a constant potential system what would be the difference between this and the constant potential systems which are being sold now?

The difference is in the design of the armature, brushes and other circuits of the generator which must carry the current. For example we might have a machine capable of giving out 25 amperes at 32 volts and another machine capable of giving out 100 amperes at 8 volts. The latter type would be known as a constant potential machine for its voltage is about



Present Rickenbacker electrical circuits

right for charging one battery. You could reduce the voltage of a 32-volt generator so as to charge the batteries in parallel but you would be limited to 25 amperes and accordingly would accomplish nothing.

If you tried to take more than 25 amperes from this machine you would find that the brushes would overheat and that the armature would overheat. This is due to the use of small brushes and small wires in the armature as compared with a constant potential type of machine.

Q.—Has any company got this constant potential type of machine patented?—H. L. Ludewig, Park Garage, Pittsville, Wis.

The general principle of building a generator to supply heavy current at low voltage is not new and we do not believe that there is any basic patent covering this. There may however be patents covering various systems of voltage control.

LAZY GENERATOR—TOO MUCH OIL

Q.—Why is it that a generator on a Ford car will not cut in and start to charge until you speed up the engine to very high speed after it has been standing for some time?—D. C. Slick, The East Granite City Garage, Granite City, Ill.

This condition usually occurs when too much oil has been put into the rear bearing of the generator. The oil gets on to the commutator and soaks into the brushes and forms an insulating film. It then requires either high speed or running for a time until the brushes heat up and the oil thins out so that current gets through readily. The remedy is to install a new set of brushes and then be very careful not to over oil the generator.

Two Ways of Recharging Magneto Magnets

Q.—I am looking for information in regard to a Ford magnet recharger which I purchased second hand. This charger has four quart jars which are filled with liquid and there is one positive and one negative plate in each jar. There are wires running from one-half of the negative plates and one of the positive plates to a 110 volt line and two wires lead from the other half of the plates to the car. The one coming direct from the plate goes to the magneto post which is located on top of the flywheel housing. Can you advise the nature of the liquid that is used in these jars.—Marker's garage, 730 N. Jefferson street, Muncie, Ind.

This is known as an electrolytic rectifier and uses a saturated solution of ammonium phosphate.

Q.—We sent the rectifier to an electrical service station and they returned it and said that could not repair it. Can you advise where this charger can be repaired as we cannot tell the make of it.

Devices of this sort have been used with alternating current for the purpose of changing it to direct and also to cut down the voltage. However if you have four or five good six-volt batteries in your shop at any one time you can recharge the magnets in the Ford magneto without bothering with either an alternating current or with a rectifier. From time to time we publish instructions as to how this should be done and we also have these instructions in typewritten form. We are accordingly mailing you a copy and believe that if you study them carefully you will find that the process of recharging is very simple. It can be done in 15 or 20 minutes if you have a compass and four or five batteries.

POOR CARBURETION SOOTS THE PLUGS

Q.—We have been having trouble with a 1916 model Franklin six and a 1924 model Ford. These cars get dry soot on the plugs. The Franklin misses on No. 1 and 5 in about 20 miles and the Ford behaves about the same way. We have checked up the electrical system and replaced practically all parts on the Ford and have put in new rings, but this did not overcome the condition.—Leonard Johnson, Walker Garage, Revere, Mo.

We do not believe this is a case of oil getting into the combustion chamber. It appears to be trouble with the carbuetion. Since 1916 the quality of the fuel has changed so that it would be advisable to install a new type manifold and carburetor which can be obtained through any authorized Franklin dealer. On the Ford car, we would recommend the installation of a hot spot manifold.

WIRING OF 1925 RICKENBACKER SIX

Q.—Supply wiring diagram of the 1924 and 1925 Rickenbacker six.—D. C. Slick, The East Granite City Garage, Granite City, Ill.

The wiring diagram is published at the top of this page in accordance with your request.

Trouble With Bill Fixit

EDITED BY A. H. PACKER

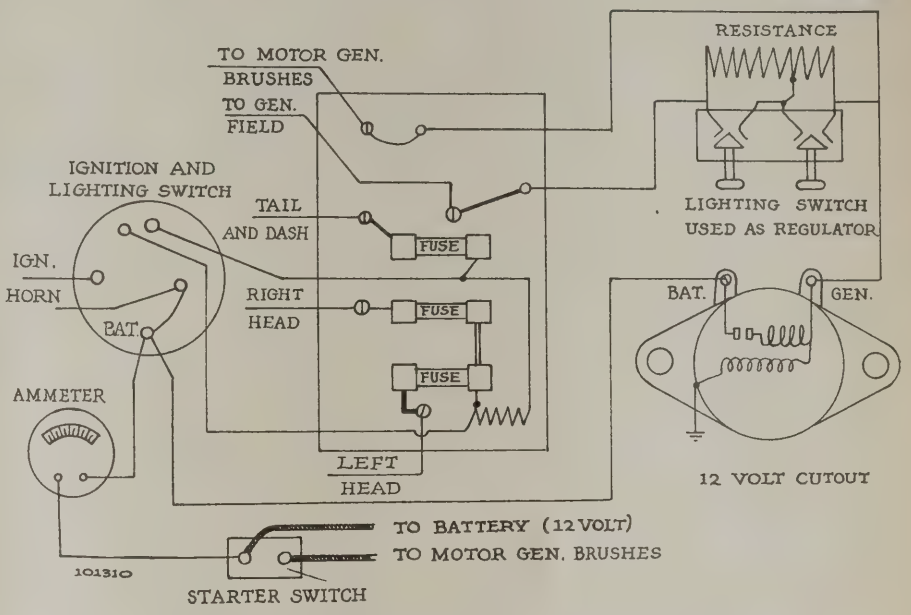
The READERS CLEARING HOUSE

Simple Wiring for 1918 Maxwell

Q.—Supply wiring diagram for installing simple regulating scheme on a 1918 or 1919 Maxwell as printed on page 26 of the June 18th, 1925 issue of MOTOR AGE.—D. C. Slick, The East Granite City Garage, Granite City, Ill.

At the time of writing the article to which you referred we had merely made a pencil sketch for the MOTOR AGE subscriber, Sidney Topness, of Taylors Falls, Minn. There is so much interest in this old electrical system however, that we have decided to publish the diagram in question. We are also sending you a copy by letter. In the diagram we have shown the old Maxwell fuse block and ignition switch. The ammeter, cutout switch and two gang lighting switch used for regulation have been added, and the diagram shows the method of wiring up these units.

The resistance on the back of the lighting switch which is used for a regulator might be the regulating resistance taken from the old system. If this is not in condition or is not available then iron wire could be used with twice as much wire in one coil as in the other. The operation of either button or of both buttons at the same time will give four different resistance values in the field circuit, so that the current may be controlled in proportion to the car speed. This system of regulation while simple and not likely to get out of order, of course requires some attention from the driver. If, with both buttons pulled out the charging current is still too high, then it means that more resistance wire or a greater length of wire should be used.



A standard cutout and switch replace the Maxwell regulator

Alarm Clock to Turn Off Show Room Lights

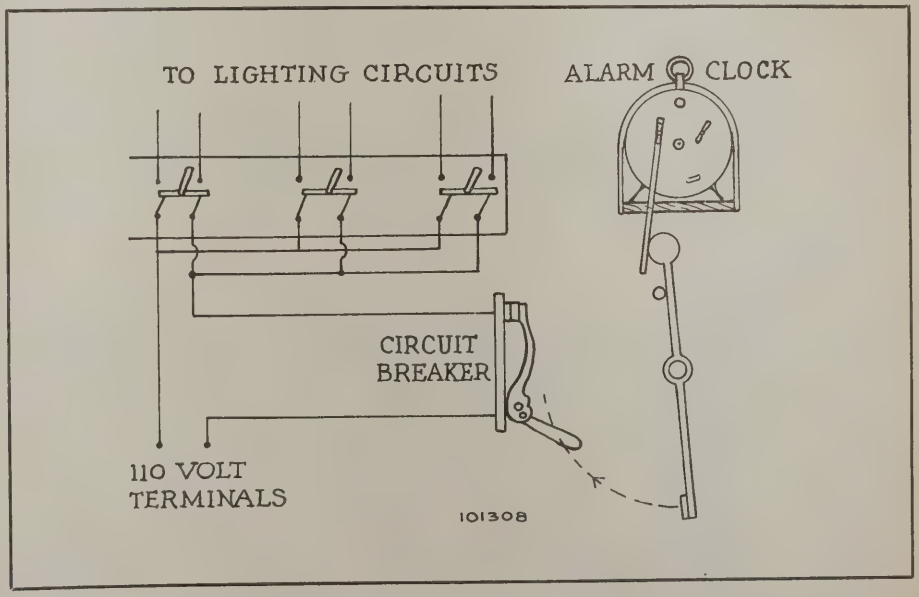
Q.—I would like to have some information on how to cut the salesroom lights off with an alarm clock. If there is some way this could be done. I would sure appreciate it. If this will be any benefit to you, there are about 12 switches all operating different lights but I figure on cutting the current off from the whole switch board at once. The current is 110 volts, 50 cycle A.C.—Long Beach Subscriber.

If the circuits in your salesroom are fused, we believe it would be advisable to either replace the fuse box with a circuit breaker or else install a circuit breaker in conjunction with the fuse box. The service department of the company which supplies your power can probably recommend a suitable circuit breaker.

Most of these devices are designed to open when a short circuit occurs and are operated by the heavy current flowing. The circuit breaker is then reset by means of a handle which is usually pulled down. On the other hand the circuit breaker may be operated by hand if the handle is pushed up. We have not shown 12 switches, but have indicated three and you would merely extend the circuit for your purpose.

We have also shown an alarm clock with the winding handle equipped with an extension. We have also shown a lever pivoted and with a weight at its upper end, it being very nearly balanced and a pin being used to keep the weight from swinging down. In operating the device the alarm clock would be wound up until the extension of the handle is in approximately the position shown. The operation of the clock permits the handle to unwind, so you would have to figure which way the handle is going to turn before you would lay out the whole apparatus.

If in the illustration shown the handle will unwind to the left or counter clockwise, it will push the weight over center, moving it to the right, and the lower end of the weight lever will swing up and strike the handle of the circuit breaker causing it to trip and shutting off the lights. It will be necessary to mount the alarm clock on a suitable shelf and hold it down by means of a metal strap so that the clock would not be tipped over when the alarm operates.



This shuts off the juice when the folks have gone home

The READERS' CLEARING HOUSE

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Some Suggestions When Installing a Fixed Price System

NOT long ago the owner of an automotive repair shop told us that flat rate was all right for the shop working on one make of car, but that you could not apply fixed prices for repair work in the shop catering to work on practically every make of car.

A statement such as the owner of this shop made might have been all right a few years ago before the flat rate system was as fully worked out as it now is.

Flat rate has proved many times that it will work in any kind of shop, even the small town dealer who has to make his living repairing automotive vehicles and who naturally cannot concentrate his work on any particular make of car is successfully using flat rate in many localities today.

If the small town dealer's competitor for example, does a job of regrinding valves, cleaning carbon and tuning engine for a fixed price of $10.50, such a dealer then must come mighty close to that figure. If the competitor requires four hours for the job, then he too must do the job somewhere around the scheduled four hours.

It obviously is wrong for the dealer to have a mechanic around who is a slow worker and likes to tinker around a car, thus handing in a time card with eight hours marked up for the job. The customer is the one who gets the wrong end of the deal in this case.

We have long maintained that the so much per hour rate of charging for automotive repair work is wrong, unless it is for operations on which it is difficult to place a flat price such as where parts are "frozen". Even then it is perfectly possible to have a fixed price under such conditions, because many service stations and shops in doing work on steering knuckles for example, have a definite price on such work when the parts are in normal shape and also a definite price when such parts are rusted or frozen and require considerable more time for the work.

To those contemplating the establishment of a flat rate system a few words of advice are given.

1. The first thing to do is to clean house. No one can apply the flat rate profitably where dirt and disorder prevail.
2. Keep records. Usually a lot of figures have to be handled before the flat rate system can be put into effect. Even though flat rate prices and time schedules are available such as in the MOTOR AGE Flat Rate Manual, time sheets and other records must be kept to check this system for revision to suit labor conditions and other local conditions.

Give Price of Parts

3. Price of parts. So far as possible the customer should be given the cost of the operation plus parts needed, if possible. Some companies have had their flat rate schedules worked out to include the price for labor and parts. It may be misleading to quote a customer a price on installing a new connecting rod when he is given the price of the labor only and later on gets quite a jar when his total bill includes a new rod.
4. The exact cost of a job is not always possible. Sometimes the work necessitates the complete tear down of an engine or other unit before an inspection can be made and the job properly diagnosed. However, there can be a definite price for the tear down and reassembly for which the customer pays in case he does not want whatever work is necessary. Most of the flat rate systems of today specify tear down and reassembly operation to which can easily be added any additional work necessary. This easily answers the frequently asked question about the impossibility of quoting a customer a flat price on a hidden operation such as ring gear and pinion work.
5. Prices will vary. Prices for certain operations on the same make of car will vary in different localities owing to the different costs of labor and working conditions. But even so many of the dealer service stations have the same price schedule on their operations from Bar Harbor, Maine to Coronado Beach, Calif.
6. Ability of average mechanic must be considered. Just what constitutes an average mechanic, we not know, but at any rate in establishing the time factor for any given operation the time must not be based on the ability of the fastest man in the shop, but rather on that of an average workman.



THINGS THAT HELP FLAT RATE
Tools, tools, tools. Always it becomes a question of having the right tool for the job. One of the things which makes flat rate efficient and profitable is having all the necessary tools and equipment to do specific things

MOTOR AGE'S FLAT RATE FORUM

No. 24

OLDSMOBILE MODEL 30 FLAT RATES FOR BEARINGS, CRANKCASE, CYLINDER HEAD, CRANKSHAFT, CAMSHAFT AND GEARS

Manufacturer's Official Designation		Time
M-2, 1	Install complete set of main bearings	4 hrs. 15 min.
M-2, 2	Install new crankshaft thrust washer	2 hrs. 00 min.
M-2, 3	Install new front main bearing	3 hrs. 15 min.
M-2, 4	Install new crankshaft rear bearing cap cork	1 hr. 45 min.
M-2, 5	Install either new rear or center main bearing	1 hr. 45 min.
M-2, 6	Install both new center and rear main bearing	2 hrs. 15 min.
M-4, 1	Install new flywheel	4 hrs. 00 min.
M-5, 1	Install new set of timing gears	3 hrs. 45 min.

EDITORIAL

Trade in the Quake Zone

RECENT earthquake damage in California is not expected by the trade of that section to seriously effect automotive sales. That sounds cheerful and reasonable. While local disasters in this country have always demoralized business temporarily and rendered the people momentarily stunned they have been followed usually by periods of constructive, unprecedented progress.

The disaster's challenge to American enterprise has always been squarely met, with the result that such visitations have only planted the seed of yet greater accomplishments—and yet greater cities. Chicago's fire in 1871 was only the signal for an upbuilding spirit such as Chicago had never known before. The building of a greater Galveston came directly on the heels of the Galveston flood of 25 years ago. San Francisco's earthquake and fire of 1906 touched the spring that put constructive effort in high speed.

What disaster does do is put the agencies of cooperation and determination on their mettle. It brings the people of a community into closer fellowship—and where such disasters have been in this county they have been followed by a better social and business status all around. No one need worry about the future of the automobile trade in Santa Barbara. Reconstruction will release a tremendous flood of money, giving profitable employment to many buyers, and reconstruction will put that city in a vastly improved position as a city and with respect to business opportunity.

Bus vs Private Ownership

JUDGING by occasional expressions in recent gatherings of bus operators there is a feeling in certain quarters of this industry that private automobile ownership competes most formidably with the bus. One bus operator declared not long ago that private automobile ownership is much more to be feared by the bus industry than the steam and electric lines.

There is not much danger of conflict between the bus industry and the automobile trade because we feel convinced that the great majority of bus operators do not share in the opinion above set forth and we have seen nothing within the automobile trade to indicate anything but a fraternal feeling on the part of automobile dealers toward the bus field.

The bus man whose ambitions for his industry contemplate a great abandonment of private automobiles because of carrying service that a bus might render is simply basing his analysis upon an illusion. Business for the bus is destined to grow and we can look for the annual number of persons carried by buses to reach constantly greater proportions. More and more passenger car owners will ride in buses as bus facilities develop and expand—but that does not mean passenger cars will be junked or that there will be less passenger car driving. The bus is a public convenience and as such it will be patronized by the general public.

On the other hand the passenger car is a private convenience which no public mode of transportation can replace.

Both fields of business are as distinctive as barbershops and safety razors. Their interests are more mutual than otherwise and for common welfare their futures will demand harmonious cooperation.

American Cars Abroad

ANYONE who frequently inspects foreign magazines and newspapers is bound to observe that lately there has been a steady growth of advertising space taken by American automobile manufacturers.

These insertions tell the story of more intensified campaigning by American producers to obtain bigger business abroad. This, no doubt, will be a record year in the exportation of automobiles from our country.

Popularity of the American product in other countries rises pleasingly upward. Not only do people of other lands find certain superiorities in the American products but, as stated by a well known student of merchandising who recently studied conditions related to the industry in various parts of the world, the foreign owner is learning that replacements are more easily and certainly procured in the United States than in any other country where automobiles are manufactured.

We hope, for the good of the industry, that our manufacturers will pursue this advantage abroad for all it is worth—and there is no doubt it could be made worth much in the enlargement of American automobile output.

Buyers in foreign countries are just like buyers in this country. When purchasing a car they want assurances that getting correctional service and replacements will not be a difficult matter. The stronger these assurances can be made the better. The quicker the service can be delivered the better.

Going and Coming

WIDE-AWAKE automobile merchants keep a sharp lookout for business with the vacation tourist. Some dealers go about this phase of the work in a systematic and more or less comprehensive manner.

If there is no chance to sell the vacationist a car there might be a chance to sell accessories or maintenance.

Now—how about that same vacationist as he returns from his trip?

A long, hard motor trip might mean needed repairs, adjustments or even a new car. The motorist who started off on a long trip with an old car might come home about ripe for another buy. These are good contacts which are capable of developing new leads. And isn't the modern idea to develop as many good contacts as possible? It is contact that often changes the owner from a "suspect" into a "prospect."

Sales Volume Greater Than a Year Ago

Normal Rate of Seasonal Decline Seen in Industry

New Models Hold Center of Interest With Prices Being Lowered in Several Instances

NEW YORK, July 29.—Sales in nearly all automobile lines are showing the normal ratio of decline from the brisk business during the height of the season, but cars, trucks, tires and accessories are all being disposed of at a higher rate than at this time a year ago, a condition eminently satisfactory to the industry.

Just now the center of interest is held by new models, and the price changes that accompany them. By August many changes will have been announced and the cars will be on sale, when an opportunity will be given for a better line on just how good late summer and fall business will be. Many prospective buyers customarily wait to see the new models before buying.

In several outstanding instances prices are being lowered, but this is a condition that the industry has come to expect with the introduction of new models. It is unlikely that the reduction will seriously affect earnings of the companies, as the factories are being run on a higher plane of economy than ever before, and as a good volume of business can justly be expected to follow the attractive prices now being established. Of course a price war would result unfavorably, but only the most pessimistic see any signs of such a condition.

The fact that most of the price cuts were withheld until the spring selling season had passed is a source of considerable satisfaction, as otherwise the business of dealers would have been badly disrupted. As the situation stands now, dealers in virtually all the leading lines are in exceptionally good condition, with stocks low and old models pretty well cleared from the floors.

The new cars for the most part represent only minor changes in chassis design, which means that no expensive alterations in plant equipment were required for their production. The greatest changes have been in the bodies, and a continuation of the tendency toward brighter colors, less height, and smoother streamline effects is noted. Even the most conservative factories are giving way to what has been demonstrated to be the prevailing taste of the motoring public.

BUCKWALTER PROMOTED

CANTON, O., July 25.—T. V. Buckwalter, who has been chief engineer for the Timken Roller Bearing Company was made vice-president in charge of engineering at the July meeting of the directors of the company.

FAGEOL TRUCK PRICES CHANGE

OAKLAND, Cal., July 25.—Price changes in their line of trucks have been announced by the Fageol Motors Company simultaneously with the bringing out of a new one and a half ton truck chassis. The price of the two-ton model has been increased from $3,300 to $3,750, while the 4 and 6 ton models have been cut $150 and $350, respectively, and now list at $4,950 for the four-ton and $5,450 for the six-ton model. The new one and a half-ton truck lists at $3,150.

Michigan Expects Registration of 955,000 Cars This Year

LANSING, Mich., July 25.—Approximately 955,000 motor vehicles will be operated this year under Michigan licenses according to estimates prepared by Charles J. DeLand, secretary of state.

In spite of the 100,000 increase over last year, the license revenue will not be more than $13,000,000, or $1,000,000 below legislative estimates. To date only $11,500,000 has been received, and comparisons with other years indicate that the total will not run much higher than $13,000,000.

The state so far has ordered 960,000 sets of license plates. The original order was for 950,000, but a sudden demand for plates in Detroit was responsible for the extra 10,000 which were delivered direct to the branch office there.

The loss in revenue from the weight tax, however, will more than be made up by the gasoline tax which so far has exceeded original expectations. It is probable its total will run close to $9,000,000 as compared to the original estimate of $6,500,000.

VELIE PLANS NO CHANGE

MOLINE, Ill., July 25.—The best information here is to the effect that there will be no change in Velie models announced on August 1. It is indicated, however, that on August 23 there will be some changes in design, not classified as model changes, announced. It is known that the same chassis and four wheel brake patterns will be followed with the principal change being in the body line of a four-door sedan which will be put out to take the place of the present coach model. Production continues along the usual rate with better than 50 cars a day being turned out.

EXTRA GOODYEAR DIVIDEND

TORONTO, July 25.—In addition to the regular quarterly dividends on the prior preference and preferred stock of the Goodyear Tire and Rubber Company of Canada, Ltd., for the second quarter of the year, an additional 1¾ per cent was declared to apply on the deferred dividends on the preferred, bringing arrears down to 5½ per cent.

Tire Dealers Advised to Buy Only for 40-day Turnover

National Association Counsels Against Taking Chance of Losing When Market Turns

NEW YORK, July 28.—"Buy only for a forty-day stock turn at the outside." This is the advice which the National Tire Dealers' Association is giving its members.

"Our reasons for making this statement at this most important time," says George J. Burger, president, "are due to the fact that this industry has had four advances in a ninety-day period.

"There must be something serious in the crude rubber situation to cause these sensational advances. Rubber manufacturers have been urging their dealers to buy only for immediate requirements. Will dealers go beyond this advice and gamble on possibilities? It is far better to take a profit on a forty-day stock than to find yourself overloaded when the market goes the other way."

Discussing retail prices, Mr. Burger has written to dealers:

"You fully realize that if you had the good fortune to purchase tires before the price advance, there is no reason why you should be a philanthropist and give away the possible added profit to those who may be in need of tires.

"For fully five years the market has been going the other way. Why not try to make up for some of the lean years? When you sell tires you purchased before the advance you have to go into the market and again purchase at the newer price, so you really do not gain any real profit because you were fortunate in buying and re-selling at the new."

Louisiana Registrations Are Expected to Reach 200,000

NEW ORLEANS, July 25.—Louisiana's motor vehicle registration for the present year will almost reach 200,000, about 21,000 more than in 1924, when the registration reached a total of 178,500, including trucks and trailers, according to C. F. Bailey, motor registrar in the office of the secretary of state in Baton Rouge.

According to Mr. Bailey, up to July 15 the registration was about 185,000 and at the present rate, in the remaining five and one-half months, 15,000 more vehicles would be registered. The total collected for motor vehicle registration to July 15 and approximately $3,400,000 while for the entire year of 1924 the total was only $2,738,269.92. By the end of the year the registration fees will be close to $4,000,000.

On the basis of the foregoing figures, the 1926 registration was estimated at 210,000, but in all probability will be even greater than this estimate, which is conservative.

Dealers' Stocks of Old Style Models Are Unusually Low

Situation Believed Best in Years as Sales Have Kept up to or Ahead of Output All Season

DETROIT, July 25.—At a time when dealers' stock of old style models ordinarily are plentiful, especially when certain manufacturers are bringing out new models, this year finds the situation exactly the opposite.

In fact, certain of the larger car manufacturers, find that the stock of the 1925 models which will be the old models in the near future are down to bedrock and that this situation is the best in years. Few if any are to be found in the dealers' showrooms. This condition does not apply to any certain locality but is apparently nationwide.

Trying to find the reason for this is extremely hard. Most of the manufacturers attribute it to the continued buying which except for a slight seasonal decline has not dropped to any great extent. One reason may be that the late spring in certain sections of the country has caused the buying demand to continue, another is that the prosperity throughout the United States is greater than for the past few years and the third is that the manufacturers have used good common sense in gauging their production.

Despite the knowledge of certain of the motoring public that new models will shortly appear, one of the leading automotive executives said that this fact was not deterring them from making purchases. They, the buying public, realize he said, that the new models will not differ greatly from the old ones, and that the value they will get for their money will not be greatly different. This, coupled with their desire to own a car, has led to the stock of 1925 models in the field to be exceedingly low at this time.

Purchase of Fleetwood Body Co. by Fisher Is Announced

DETROIT, July 25.—Purchase of the Fleetwood Metal Body Company, Fleetwood, Pa., by the Fisher Body Corporation, is announced by W. A. Fisher, president of the Fisher Body Corporation. The shops will be maintained at Fleetwood under the direction of Ernst Schefera. The purchase brings about the retirement of Harry C. Urich who founded the company.

Except for a few minor changes, the policies of the Fleetwood company will be followed. It is believed that jobs calling for individuality to suit the taste as outlined by the purchaser will be completed here.

In purchasing the company, Mr. Fisher said that his company had but one object in view and that was to preserve of the finest traditions of hand-craftsmanship to be found in the United States.

Boston Department Store Sells Cars

BOSTON, July 25.—The Gilchrist Company, one of the largest department stores in Boston, has announced that it has signed a contract to sell Hudson and Essex cars in its building as a sub-dealer under the Henley-Kimball Company. The Gilchrist Company occupies a large building on Washington Street at Winter in the heart of the department store district. It is remodeling one part of the store with a private entrance on Winter place where the cars will be displayed. This is the first time that any department store has ever gone into the sale of automobiles in New England and the outcome will be watched with interest. To meet the fire laws various regulations must be obeyed and the section of the store where the cars are displayed will be made fireproof.

Boston Plans Garage For Bus and Truck Use Only

BOSTON, July 25.—Ground has been broken in Boston for what will be the first garage erected here for the sole use of buses and trucks. It will be located in the business district just on the edge of the big retail department store section on one hand and the waterfront and railroad terminals on the other. It is planned to accommodate operators of buses running between Boston and out of town places and also trucks used in long hauls. At present the big increase in bus operation has been such that it is difficult to house them near their terminals. The new garage will accommodate 400 buses and trucks.

It will be a two-story brick and concrete structure fronting 140 feet along Albany and Lehigh streets and will extend 290 feet back toward the waterfront. It will cover more than 26,000 square feet giving double that area with its two floors, and allowing for additions when business warrants it. A ramp 110 feet in length will lead from the first to the second story providing an easy grade.

Among the features will be the partitioning off of sections to be assigned to fleet owners, and the construction of special repair rooms. There will be lockers and shower baths for drivers and helpers. The owners are T. J. Moynahan, Jr., and Albert Erlandson. Mr. Moynahan operates a fleet of trucks used in the distribution of newspapers, and who found it most difficult to garage his vehicles without scattering them widely. Mr. Erlandson has had many years experience in garage work.

RUBBER WORKERS' WAGES CUT

NEW YORK, July 25.—Reports reached here today announcing 5 to 10 per cent wage reductions at the Goodyear Tire & Rubber Co. Ajax Rubber Co. also was said to have cut wages.

Wisconsin Commissioner Hits Chrysler Insurance

Opposition to Plan Is Based on Four Counts—Threatens Action if Company Persists

MILWAUKEE, July 25.—Strong opposition to the plan of the Chrysler Sales Corporation of Detroit to offer an insurance contract with each car sold has developed in the insurance department of Wisconsin where Commissioner W. Stanley Smith has threatened "to take action" if "delivery charges on cars sold after July 18 include an insurance premium and you continue to give the above kind of coverage in accordance with the plan."

Commissioner Smith's opposition is based on four separate counts. He alleges first that the company is not licensed to do business in Wisconsin, meaning the Palmetto Fire Insurance Co. of Sumter, S. C., which is underwriting the risk. Although the company has application for a permit on file, the commissioner claims that he is not disposed to grant Wisconsin privileges because "the rates on Chrysler cars are apparently discriminatory and could not be used in the state."

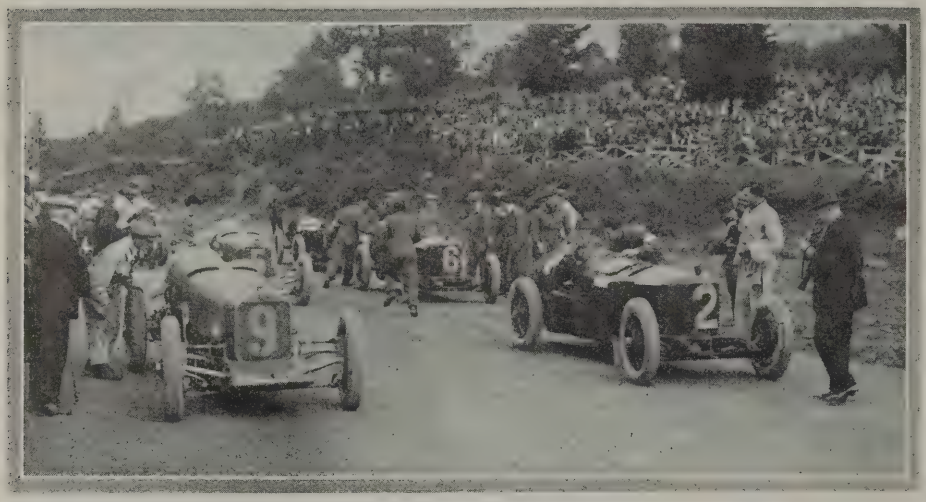
Secondly he objects to the plan, calling it illegal because every Wisconsin Chrysler dealer would in some manner aid or assist in placing this insurance, and they are not licensed as insurance agents under the law. Thirdly he finds fault with the plan because fire and theft policies under Wisconsin insurance law must be countersigned by a resident agent, and could not therefore be sent from Detroit and be construed as a Michigan contract. Fourthly he objects because provisions of the policy do not provide for a return of unearned premium in case of cancellation and exclude other provisions required in policy forms by the Wisconsin insurance laws.

"We are not acting as insurance agents nor insurance collectors, declared George E. Brown, general manager of the E. W. Clark Motor Co., which distributes Chryslers in Wisconsin. "Every Chrysler car comes equipped with an insurance policy. It is as much an accessory as a pair of headlights. The car is sold that way. The buyer if he does not like it, can tear it up. If he doesn't like the headlights he can get them changed too. Under the Chrysler plan every car that leaves the factory is covered by insurance for protection of the ultimate buyer. The cost of this policy is included direct in the price of the car."

NEW GARDNER DEALERS

ST. LOUIS, July 25.—New dealer names recently added by the Gardner Motor Co., Inc., include: Danford Motor Co., Quapaw, Okla.; Conner-Hoxsey Auto Sales Co., Taylorville, Ill.; Lehigh Garage, Shenandoah, Pa.; The Connell & McKone Co., Boston, Mass.; Herman Jones, Denver, Colo.

Alfa Romeo Wins European Grand Prix



Preparing for start of European Grand Prix race. Ascari, the winner, is seen to the right in car No. 2. Campari, second, is directly behind in No. 6.

SPA, Belgium, July 6.—(By mail.)—Antoine Ascari, automobile dealer at Milan, won the European Grand Prix here, driving a straight eight supercharged 122-inch Alfa Romeo car at an average speed of 74.46 miles an hour for a distance of 500 miles. Campari, on a sister machine, finished in second place 22 minutes behind the winner. No other cars finished the race.

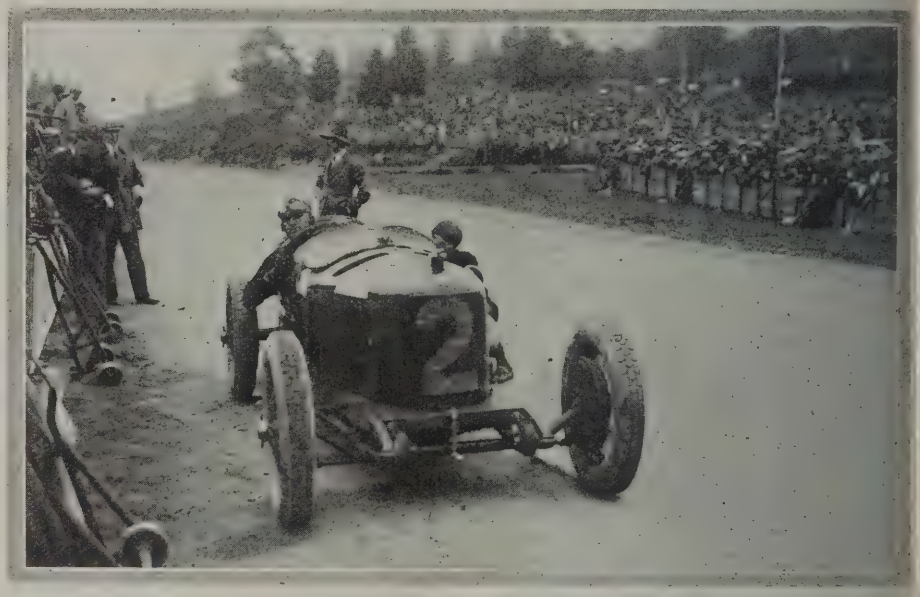
The European Grand Prix, which theoretically is the most important speed contest in Europe, was entrusted to Belgium this year and was run over a short hilly and winding road course in the neighborhood of Spa. Only twelve entries were received and only seven cars (three Alfa Romeos and four Delages) faced the starter.

All four of the twelve cylinder Delages, driven by Rene Thomas, Benoist, Divo and Torchy, were forced out of the race. In addition, one of the Alfa Romeos, driven by Brilli Perri, dropped out of the race after breaking a spring clip. The two Italians, Ascari and Campari, took the lead at the beginning and were never headed. Divo, who had a 1925 supercharged Delage, attempted to catch the Italian cars and set up a lap record at 79.4 miles an hour, but immediately after this Ascari spurted up to 81½ miles for a lap.

Rene Thomas dropped out after his car had taken fire and he had been slightly burned on the left hand. The gas tank on Benoist's Delage was pierced by a flying stone. The exact reason for the withdrawal of the two other Delages was not ascertained.

The failure of Delage to place a single car in a road race coming just one month before the French Grand Prix is a surprise and disappointment to French partisans.

Alfa Romeo used last year's cars rebuilt. These were designed by Engineer Jano, formerly with the Fiat Company, and have very much in common with the Fiat recently driven by Bordino in America. Up to half distance Ascari averaged 77 miles an hour, but when the Delages had been weeded out he reduced his speed, his average for the full distance dropping to slightly less than 74½ miles an hour.



Ascari stopping at pits during race.



Closeup view of Campari, who was second in big race

PARIS, July 27.—Antoine Ascari, Milan automobile dealer who drove the winning car in the Grand Prix d'Europe at Spa, Belgium, was killed at the Montlhery track here yesterday while driving in the French Grand Prix race. His car skidded at a turn after a drizzling rain had wet the track.

Parts, Accessory and Service Business Greater Than 1924

First Six Months of 1925 Show Steady Gain With June Decline Less Than Formerly

NEW YORK, July 25.—The business of automotive parts, accessory and service equipment manufacturers for the first half of 1925 ran substantially ahead of the same period in 1924, according to figures compiled by the Motor and Accessory Manufacturers Association.

A large number of representative makers of products sold to the motor car and truck manufacturers, the wholesale and retail trade and the motoring public reported an average increase in the wholesale value of their shipments to customers substantially in excess of the first six months of last year. The same companies reported that their plants had operated at an average of 83 per cent of capacity during this period and were operating on July first at 79 per cent of capacity.

Sales reports for June, also compiled by the association, showed a considerably less than normal seasonal decline from the high levels of April and May. The M. & A. M. A. index of sales for June stood at 158 per cent of January as compared with 165 per cent of January in May.

By divisions of the industry the index showed sales of units, parts and accessories to motor vehicle manufacturers in June 164 per cent of January sales as compared with the May figure of 174 per cent of January sales. Replacement parts sales to the trade in June were 129 per cent of January sales as compared with 134 per cent in May, accessory sales to the trade were 172 per cent of January as compared with 173 per cent in May and maintenance equipment sales showed a gain, aggregating 150 per cent of January as compared with the figure of 146 per cent.

Reports of sales by automotive jobbers throughout the United States and Canada showed a gain for the first half of the year over 1924 and a substantial advance in June over business of June a year ago. The jobbers' June business ran ahead of May in 13 of the 18 wholesale territories.

CANADIAN TIRES ADVANCE

TORONTO, July 25.—Owing to the apparent scarcity of raw materials in the rubber products industry, local prices on automobile tires and tubes have again been advanced. This advance affects all styles and sizes. On the smaller tires, the advance has been in the neighborhood of 3 per cent, whereas on the larger sizes the advance amounts to approximately 8 per cent. An advance is also effective on tubes to the extent of from 3 to 5 per cent. The market remains decidedly strong, as American markets have had much larger advances than have taken place in Canada.

Women Found to Excel as Drivers

WASHINGTON, July 25.—Women excel men as automobile drivers, it has been established by the American Automobile Association following a series of tests just carried out here by scientists and psychologists.

In these tests, conducted by Dr. F. A. Moss of the Institute of Government Research and one of the leading psychologists of the country, and assisted by H. H. Allen of the Bureau of Standards, women have uniformly scored higher averages as regards those qualities essential in a good driver.

Two of the tests in which the women outscored the men are of particular importance because they are among the primary factors that constitute driving ability. These are: First, the speed with which the driver reacts to danger and takes steps to avert it, such as applying the brakes. Second, the consistency with which the driver responds in such a situation.

Not only did the women show a quicker reaction time but they were also less variable. The average reaction-time of ten college women examined was 0.56 seconds, while that of twenty-five men from the same institution was 0.59 seconds. The mean variability of the ten women students was 0.17 seconds, while that of the twenty-five men students was 0.22 seconds.

K-D PLANT EXPANDS

LANCASTER, Pa., July 25.—The K-D Manufacturing Company, makers of automotive tools, has completed additions to its plant here which will double its output facilities. Another story has been added to the main building and two new buildings, a warehouse and parkerizing plant, have been added. The company was organized five years ago with one product, the K-D parallel jaw valve spring lifter. It then began the manufacture of K-D Britesteel Washers. Two new products which will be announced in a short time, have made it necessary to add the space.

NEW RECORD EXPECTED

DETROIT, July 25.—Willys-Overland dealers in the Detroit territory sold a total of 4,478 Willys-Overland and Willys-Knight passenger cars during the six months just ended, the figures including the sales registered in Detroit and Wayne county. During 1925, approximately 5,555 passenger cars of the above make were sold in this territory, 1,077 more than were sold during the last six months. Orders already booked and prospects assured make it seem likely that the sales in this territory for the year will establish a new high sales mark.

Rubber Manufacturers Urge Aid of State Department

Leaders of Industry Ask Secretary Kellogg to Make Representations to British

WASHINGTON, July 25.—Secretary of State Kellogg was asked this week by a delegation of American rubber manufacturers to lend his assistance to their efforts to break the British rubber monopoly.

In the delegation were Frederick Hood, president of the Hood Rubber Company, A. L. Viles, manager of the Rubber Association of America and Edward B. German, president of the Dunlop Tire and Rubber Company.

Great Britain has a restrictive policy which permits rubber planations within its dominions to produce only 65 per cent of their rated capacity. Reduced production has resulted in rapid increases in rubber prices, making it difficult for American manufacturers to buy rubber at a reasonable figure. They want Secretary Kellogg to make diplomatic representations to Great Britain to lift the ban on production.

The Department of Commerce, by direction of Congress, is now investigating rubber culture throughout the world with a view to developing fields outside the areas controlled by the British. Congress appropriated $500,000 for this inquiry.

The conference of the rubber leaders this week with Secretary Kellogg is taken as the opening shot in the long expected fight between British and American interests for control of crude rubber supplies, with indications that tropical areas throughout the globe would be economic battlefields during the next decade.

NEW VELIE DEALERS

MOLINE, Ill., July 25.—New dealers announced by the Velie Motors Corporation recently include:

Barney Wetzel, Sterling, Ill.; Hubert Motor Sales Co., Tipton, Ia.; E. E. Boynton, Camden, Me.; Newburyport Motor Co., Newburyport, Mass.; C. W. Boak, Yakima, Wash.; Williams Mtr. Service Co., Inc., Elizabethtown, N. C.; Rone H. Lewis, Whiteville, N. C.; G. E. King, Dublin, N. C.; Mrs. E. D. Morris, Everett, Wash.; George Hillerege Auto Paint and Upholstery Shop, Scottsbluff, Neb.; W. A. Helsdon & Son, Byron, Ill.; Sloan's Garage, Gloucester, Mass.; E. E. Burkett, Union, Pa.; Milton Fairley, Laurinburg, N. C.; W. L. Moore, Smithfield, N. C., and J. W. Turnage, Dunn, N. C.

FIRST AUSTRALIAN SHIPMENT

FORD CITY, Ont., July 25.—The S. S. John C. Howard has loaded 1,100 Ford cars, trucks and tractors at the Ford company's docks in Ford City, Ont. This shipment is part of the first consignment to the company's new $12,000,000 assembly plants now being erected in Australia. It is also the first time the docks have been used for exportation purposes.

Radically Different Car Is Found in New Cadillac Offering

(*Continued from page* 19)

is located at the right end of the cross shaft at the front and the oil pressure regulator is placed back of the right cylinder block. The capacity of the pump has been enlarged materially so that the overflow at low engine speeds is great. Oil is delivered under the desired pressure to all of the cam and crankshaft bearings by copper tube manifolds, drilled holes in the crankcase and the crankshaft. The overflow which leaves the oil regulator is passed through a Purolator oil filter located on the front of the dash. Due to the large capacity of the pump with consequent liberal rate of flow through the bypass at the pressure regulator, the rate of filtering of the entire oil supply is very high.

Increased Power in Engine

These provisions have resulted in an engine which has increased power and flexibility with longer life and at the same time which is more simple and accessible. In rounding the program based on this ideal, the dia. of the exhaust valves has been reduced 1/8 in. to 1 9/16 in. dia. while the cone type valve springs are made somewhat lighter and are reversed. The length of valve stem guides has been reduced and these no longer project into the ports. Both inlet and exhaust valves are made of silico-chrome steel in place of the former tungsten.

With the new arrangement of the flywheel a steel band in which the crown gear teeth are cut is pressed over a cast iron center member and held in place by dowel screws. The center flywheel member and the outside ring of the multiple disk clutch are integral. Where the former construction involved six inserted keys for driving the clutch dise, 45 gear teeth are cut into the new integral member and the periphery of the clutch dics has been modified accordingly. Both the clutch and brake pedals are mounted on a common shaft which is fixed in a bracket that is bolted to the side of gear case.

Within the gear box but few changes have been made, the chief of which is the simplification of the interlocking system by substituting one spring loaded ball for two plungers and a ball. The pilot bearing at the front end of the clutch shaft is a Hyatt roller running direct in the rear end of the crankshaft. An aluminum cover which forms part of the floor board trim has been added to the gear box cover. No change is made in universal joints although the lubrication method has been modified for greater accessibility. Instead of the customary tapered screw plugs which are threaded into the steel protecting shell of the joints, Alemite fittings are located on the end of the propeller shaft adjacent to the joints and drilled leads conduct the lubricant to the working surfaces.

The torque arm has been shifted from the right to the left side of the propeller shaft and the ball and spring assembly at the front has been replaced by a rubberized fabric member.

Gears in the rear axle continue as formerly and while the bearing layout on the pinion shaft is identical, two radex bearings have been substituted at the differential mounting for the previous single row and two annular combination. At the outer ends of the live axles comprising the full floating construction, fourteen generated teeth have supplanted the former lug and slot arrangement. With the change to semi-elliptic springs at the rear end, the spring pads are now riveted to the axle housing instead of being swivelled. Here again the possibility of noise is elimated and the new construction decreases the stress on the torque arm by imparting some of the driving reaction to the springs.

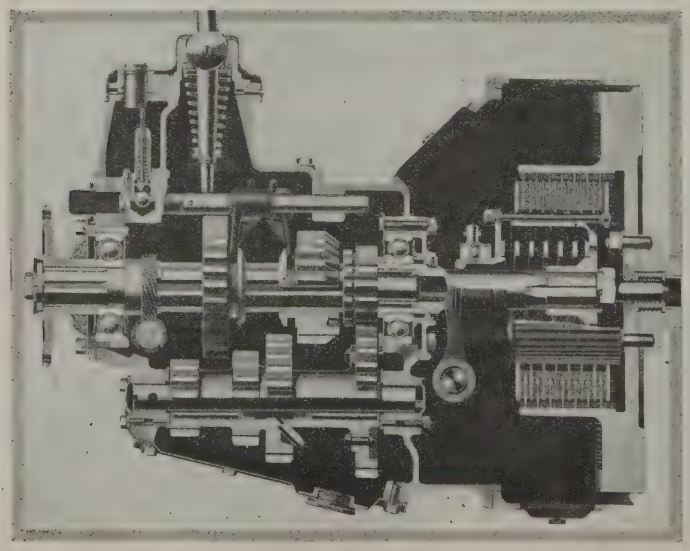
Although the spring suspension is changed, frames, with the exception of a decrease of 1/32 in. in thickness, making this figure 5/32 in. are identical with the frames of the last series. More than 30 lbs. were cut off by this change.

The additional drop required for the elliptic springs was obtained in the forged spring horn. While the front of the rear springs, which are 60 in. long, is attached at the conventional pin and bushing the rear end is shackled with pins above and a ball joint below at the spring horn. It is stated that this ball joint construction allows the same riding comfort as the older platform spring arrangement and makes for longer life of spring bushings. While the rear springs are 2 1/4 in. wide, the front spings have a width of 2 in. and a length or approximately 42 in.

Mufflers and exhaust pipes are substantially like their immediate predecessors. While the tire carrier continues at the back the lamp combination has moved to the left rear fender. Both the battery and tool box have been removed from inside of the frame and now are located in metallic boxes which are set in the rear ends of the front fenders and enclosed by locked lids. The battery which has a capacity of 130 amp. hrs. is enclosed in a composition rather than the usual wood case.

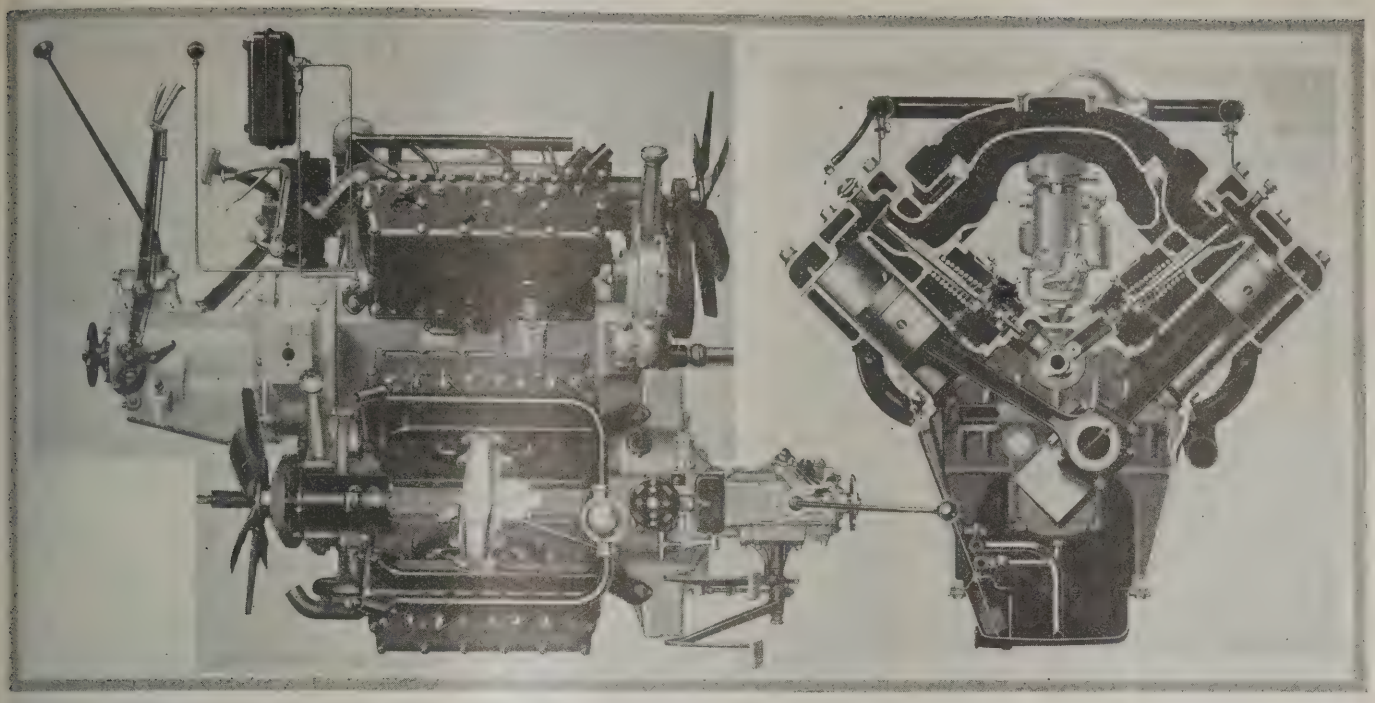
Braking Ratio Effort Modified

Brakes have been subject to little or no change. The ratio of braking effort has been modified to exert slightly greater pressure in front and with this change, the rear service brake bands have been made of hard brass so the feature of thermal equalization will be maintained for longer periods under the conditions of greater load at the front end. Adjustment within the rear internal or emergency brakes has been eliminated by modifying the toggle mechanism which operates the band so that it has capacity to operate the brake up to the full thickness of the band.





Left: Cross section of Cadillac clutch and transmission showing the crown gear on flywheel and Hyatt bearing in rear end of crankshaft; right: Driving compartment of the new Cadillac, showing walnut panels and ventilating windshield



Upper left Cadillac engine showing the arrangement of the single water pump and oil filtering device. Immediately below is a top view of the engine showing the clean trough between the blocks. Right cross section showing tappet arrangement, combustion space and new intake manifold arrangement as well as the trunnions for main bearing studs

All electrical wiring on the entire chassis is enclosed in armored conduit and all of the connections between the chassis and body are made at a junction box located on the front of the dash. The automatic cut-out which formerly was on the hidden side of the instrument board also has been moved to the front of the dash. The horn has been removed from under the hood and now is located on the left headlamp bracket. Instead of the former tilting headlamp reflectors, two filament bulbs controlled from the dash switch are used now for dimming. Auxiliary lamps of 3 c. p., also located in the drum headlamps are used for parking. A cigar lighter on a 12 ft. cord is located on the instrument board and may be removed to allow connection with a trouble lamp which is located on the front of the dash.

An interesting feature is the electrically operated gasoline gage. Due to using the pressure feed system for supplying the carbureter, none of the remote type of gasoline gages can be used. In conjunction with the Nagel Electric Co., Cadillac engineers have developed an electrical gage of the potentiometer type. The actuating element is interconnected with a float in the gasoline tank and connected by a single line of wire to the gage on the instrument board. The current consumption is in milli-amps. and 80 days would be required for the gage system to run the battery down. This interval eliminates any question of the effect of the electric gage on the battery. With the installation of a reliable gage on the dash, the emergency compartment in the gas tank has been eliminated although the capacity continues at 20 gallons. The gas tank drain has been placed at the back in conjunction with the sediment cup.

Another refinement is found under the hood as the front of the dash and the engine are finished in Duco and therefore easier to keep clean. The adjustment of the steering gear has been made more accessible and the steering column and worm may be removed without tearing down the steering gear housing.

Mechanical and Body Changes in New Buicks

(*Continued from page 23*)

tween the ends of the bands. Hexagon head brass cap screws at the brake anchor add greatly to the ease in making adjustments. The outer universal joints on the front brakes are now covered with leather boots.

Tubular Cross Brace

To increase the frame stiffness at the forward end of the Standard Six chassis, a tubular cross brace is used in place of the "U" section member at that point. Body brackets are added to the sides of the frames and are located under the main sills of the closed bodies on both chassis. This design allows better support for the bodies and makes the hold down bolts more accessible.

Easier steering on the Master Six has been achieved by adding 7 per cent to the steering gear reduction, the rolls on the yoke shaft having moved further apart on the larger model, while on the smaller car the diameter of the wheel has been enlarged from 17 in. to 17½ in. On both steering gears, a heavier wall is provided under the worm on the steering tube while the steering worm key is integral with the worm instead of a separate part used to lock the worm to the tube.

Special bosses for centering the rims on the new 21 in. wider spoked wheels are provided which in connection with the new special type rim wedges provides a better support for the rim on the wheel and insure a very rigid and positive mounting. On the Standard Six model, the hub flange and bolt circle are longer in diameter by ¼ in., with the hub caps larger in size to correspond with the new hub flanges.

All body wheels on the Standard Six chassis are finished in Buick Gray with red striping, while the upper portion of the closed bodies is in black duco. Both open models are upholstered in genuine long grain bright finish leather, having the door, cowl, coverings, etc. finished in a material to match. A special pattern taupe plush is used for the seats and backs and a plain plush of the same quality and color is employed for the body sides and headlining on the closed models.

Color schemes on the Master Six are similar in many respects to those on the smaller car. Both five passenger sedans and the two regular open models are finished the same as the Standard line. The four-passenger coupe and the seven-passenger sedan are done in lotus blue with striping to match, while the brougham sedan and country club coupe are finished in two-tone effect, employing Texas brown below the moulding and light Texas brown above. The two open sport models are offered with two duo-color options, the first being two-tone Buick blue with natural wheels and the second Texas brown with wheels to match. With the exception of the two five-passenger sedans upholstered in the same manner as the Standard

(*Continued on page 39*)

California Dealers Complain About Low Used Car Prices

New and Rebuilt Automobile Business Injured by Extremely Easy Time Payments

SAN FRANCISCO, July 25.—Dealers in new cars of all makes and in rebuilt used cars of the higher-priced models are complaining throughout California of the ruinously low prices at which used cars can be bought on time payments. It is possible now in Los Angeles, San Francisco, or practically any other of the larger cities in California, to buy a used car of 1922, 1923, or even 1924, model, for as low as $50 down and $20 a month. The total price on each of these cars is lower than it ever has been before, and the cars are being sold "as is," to be overhauled and rebuilt at an extra charge. if the buyer wishes, but otherwise just as they were received from the previous owner.

This condition applies largely to cars selling new at $1500 or less delivered on this coast. Dealers in "as-is" used cars have sprung up like mushrooms all over California, and are cutting noticeably into the sales of dealers in new cars in rebuilt used cars. The price-range on these cars, which are sold entirely at buyer's risk, runs from $100 to $300, and the current arrangement is 15 per cent down and the balance in 20 equal payments, with interest at 8 per cent.

Hundreds of these cars have been bought by comparatively low-salaried workmen and others, who make the first payment, possibly cover the first monthly payment, use the car for two months on vacation in the mountains or running it up and down the coast, and then return it to the vendor. This amounts merely to a constant turn-over of used cars, and, in addition to increasing the sales-resistance for new as well as rebuilt cars, keeps the market flooded with low-grade used cars.

One used-car dealer in Oakland sold the same car, for which he orginally paid $150, five times in the past year. His original price on the car was $300 on which he received $45 and $12.75. His second price also was $300, on which he was fortunate enough to get $45 and two months' payments, $25.50. His third sale was for $250 and he obtained $37.50 and $10.65. His fourth sale was for $200, on which he received $30 and $8.50, while his fifth sale was for $100 cash. Interest he collected is not included, but he had received approximately $315 net for a car which cost him $150, and the interest he garnered, probably around $20, paid for the costs of getting back the car in each instance. This is only an average example; there have been scores and hundreds of cases in which profits as high as 500 per cent have been made on one used car of good external appearance.

TRIANGULAR FERRY PLANNED

BERKELEY, Cal., July 25.—The Golden Gate Ferry Company has applied to the Berkeley city council for a 50-year franchise for the operation of automobile ferries between San Francisco, Berkeley and Sausalito, at the northern side of the Golden Gate, and thence back across the Gate to San Francisco. This triangular service would open both mainland areas of northern and eastern California to the San Francisco dealers and shorten distances both ways by something like 15 miles. The Golden Gate Company now operates the largest automobile ferries in the world.

PULITZER RACES OCT. 10

NEW YORK, July 25.—E. O. McDonnell, president of the New York 1925 Air Races, Inc., has announced that the national air races will be held at Mitchell Field, L. I., October 8, 9 and 10. The Pulitzer Trophy race will be the last day's feature event. Army air forces will participate and Major General Summerall, commanding the Second Corps Area, has pledged his cooperation. The present speed record for the Pulitzer Trophy is 243 miles an hour, but it is expected this will be bettered by more than twenty miles an hour by three planes being built by the Curtiss Co. On a straight course they may travel 300 miles an hour.

Nash Declares Extra Dividend Of $6.50 Per Common Shar

President Reports Net Income Near $3,000,000 More Than for Same Quarter Last Year

KENOSHA, Wis., July 25.—At a mee ing of the directors of The Nash Moto Company dividend action was taken the form of an extra dividend of $6.50 p share and a regular semi-annual divider of $3.50 per share on the common stoc of the company, payable August 1, 192 to holders of common stock of record the close of business July 20, 1925; and quarterly dividend of $1.75 per share the outstanding preferred stock of t company, payable August 1, 1925, to hol ers of preferred stock of record at t close of business July 20, 1925.

President C. W. Nash reported that t net income for the three months end May 31, 1925, after deducting expens of manufacturing, including depreciatio selling, and administrative expenses a local, state and federal taxes, amount to $4,193,850.11 as compared with $1,501 000.35 for the same period a year ago.

The value of sales for the three mont of this year shows an increase of 100 per cent over the corresponding quart of 1924.

25 Years Ago In the Automobile Industry
As Recorded In MOTOR AGE

(From MOTOR AGE of August 2, 1900)

Rain Interrupted the Meet

Charles S. Henshaw ran the first outdoor automobile tournament ever run in America on Thursday afternoon at Branford, Conn. The track was the half-mile dirt horse track belonging to Louis A. Fiske of New Haven, who backed Henshaw to the extent of $800 for the affair. The first day's races, which were somewhat of a success, consisted of the trial heats. There were about 1,500 people present at $1 a head and the day's sport was somewhat marred by the collapsing of a large tent used for exposition purposes injuring a few people. To wind up the day a heavy rain fell, which continued all the next day and the tourney was called off to some indefinite period.

New Buffalo Concern

Arrangements have been made by John R. Keim to devote a portion of his extensive plant at Buffalo to the manufacture of automobiles. The factory was formerly owned by the Spalding Machine Screw Co., and has been devoted principally to the production of cycles and cycle parts, and is one of the best equipped in America.

Derelictions Bring Fines

Springfield, Mass., July 30.—Millionaire owners of automobiles who are passing the summer at New England resorts have occupied valuable space in the newspapers the past week. Society h scarcely ceased to discuss the $15 fi which was imposed upon one of the Va derbilts for operating his automobile a higher rate of speed than a Massach setts constable approved of, when W liam H. Bradford, a millionaire who sur mers at Lenox, Mass., was summon into court for riding his automobile the sidewalk. Mr. Bradford's counsel e plained in court that the highway was such poor condition that he appropriat the sidewalk. The court decided th the saving to the tires of the automobi was worth $5.

May Not Cross Ferries

New York, July 30.—The Automobi Club of America Law Committee, which President Chamberlin is a mer ber, is now in correspondence wi United States Supervising Inspector Ge eral Dumont, with a view to induci him to modify his recent decision in t Jamestown (R. I.) Ferry Co. case which he held that vehicles using gas line directly or indirectly came und the ban of section 4472 of the U. S. R vised Statutes, forbidding the carryi of combustibles in steam or ferry boa run on navigable bodies of water. Und this strict ruling a gasoline vehicle steam vehicle using gasoline or fu could not cross a ferry.

Buick Announces New Models

(Continued from page 37)

ix bodies, all closed cars are finished in he interior with a rich mohair plush in olor to match the exterior.

On the two sport cars, the collapsible top s carried in nickelplated brackets which re used when the top is down. These rackets are carried loose in the cars and hen in use are inserted in holes at the op and back of the outer end of the seat rame.

Additional items of equipment included s standard on all cars on both chassis re: rear view mirror, windshield wipers, hose on the closed cars and the two port models being of the automatic type, owl or windshield ventilators, sun isors, transmission locks and door locks n all closed cars.

Heaters are provided only in the two oupes, seven passenger sedan and rougham sedan on the Master Six chas- is. In addition to being fitted on these odels, aluminum scuff plates, front nubbers and dash gasoline gages are lso supplied on the two sport cars.

Combination vanity and smoking sets re included on the Master Six four assenger coupe and seven passenger edan while a smoking set is carried on he back of the front seat on the rougham sedan. These three cars are lso provided with attractive braided ords to assist the passengers when ising from the rear seats. Cigar ighters are only supplied on the two port models.

Special ribbed rubber matting of new lesign and construction is used to cover he running boards on all models.

Radiator caps with attractive arms, notometer and lock are supplied on the ame cars as are equipped with the dash ype gasoline gage.

Gray Motors to Build Gas-Electric Drive Bus

NEW YORK, July 25.—Preparations re being made for the production of the Tilling-Stevens Gas-Electric Drive Bus, y the American National Omnibus Corp. f New York, as a result of the reorgani- ation of the Gray Motors Corp. of Detroit. It is understood that the Gray Motors plant will be utilized for bus roduction, along with the automobile ctivities of the company.

An official statement is expected from E. M. Howe, president of Gray Motors, in which the reorganization will be de- cribed in detail. Meanwhile it is learned at the New York offices of H. H. Mel- ille, president of the American National Omnibus Corp., that a number of the buses will be on display at the American Electric Railway Association Convention at Atlantic City, October 5-9, and that deliveries will commence November 1.

Three types of buses are under produc- ion—the single deck pay-enter city type; ully enclosed double deck city type, and super de luxe touring. They are being built under the patents of the Tilling-Stevens Motors, Ltd., of England.

Ignition Condensers

(Continued from page 14)

"The paper used is either glassine which is a crinkly waxed paper, or else soft paper is used, which is afterwards treated in a vacuum to draw out all moisture and then in hot wax to thoroughly fill up all spaces in the paper and give it great insulating strength, for the paper in the condenser must resist not merely the battery voltage but the inductive kick voltage of the primary winding which may be from 100 to 200 volts or more.

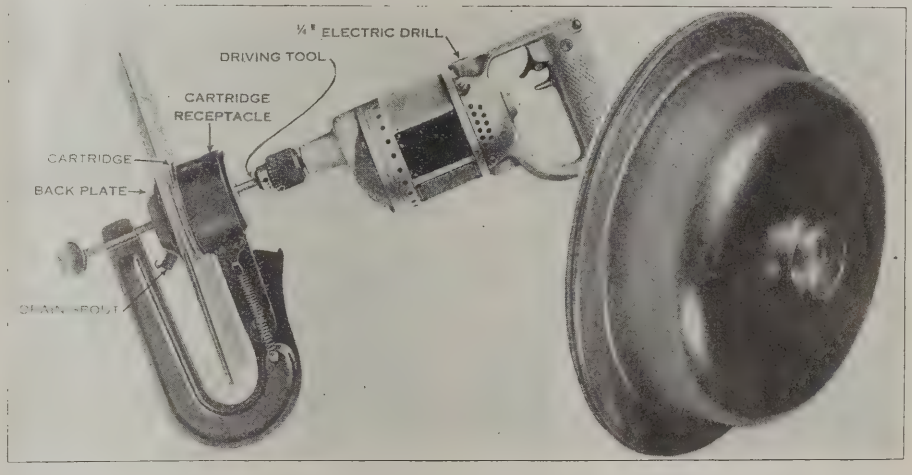
Testing Condensers

"If you wanted to test a spring, you would load it down and then release it to see if it would spring back in good shape. The condenser is tested in similar manner. First you load it electrically by means of the 110 volt test points. Then with the points still in contact with the condenser terminals you slide one along until it touches the other. This permits the charge in the condenser to get away, the two condenser terminals being shorted, and at the same time the lamp lights up. The sign of a good condenser is a snappy spark which makes a cracking sound like a small whip. Another way of testing is to remove the 110 volt points and then short the condenser terminals with some metal object as a screw driver blade. The trouble with the latter method is that a condenser which is slightly leaky (not shorted) will not hold its charge long enough to give the characteristic spark, although satisfactory when put into service."

DAKOTA STATIONS TO REOPEN

PIERRE, S. D. July 25.—At an emergency meeting of the state gasoline board it was decided to reply to the advance by the Standard Oil Co. of 1 cent a gallon on gasoline by reopening the state stations in Aberdeen, Brookings Huron, Madison, Mitchell and Rapid City, and starting new ones in Kennebec, Armour, Leola, Selby, Webster and Woonsocket. The old stations were closed only a few weeks ago, when their purpose was accomplished.

New Windshield Cutter



The set-up used in connection with drilling a hole through the windshield glass with the Fyrac method. Right, cartridge which contains grinding compound and water. The slot is for insertion of drill chuck

The Fyrac Manufacturing Company, makers of the Fyrac Night Guide, and the Clymer Manufacturing Company, manufacturers of the Clymer Safety Light, both of Rockford, Ill., have perfected a new and patented method of cutting a windshield, which consists of a cartridge placed against the windshield glass, the cartridge containing the windshield cutter, and the mixture of cutting compound, water and everything necessary to make the 2-inch hole through the glass. One of the cartridges is contained in each carton, which holds the light, and the cartridge, when used, is thrown away.

The new process is simple. The cartridge holder, a "u"-shaped tool, is adjusted on the windshield so that the cartridge receptacle is on the side from which the mechanic drills. The backplate is on the opposite side of windshield and is tightened to the glass by a thumbscrew. The driving tool is then inserted in slot in cartridge through the hole in back of the cartridge receptacle.

The end of driving tool is inserted in the chuck of a quarter-inch electric drill and the power turned on, with the result that a clean 2 inch hole is drilled in a few minutes. So thorough has been the work of devising this new process that even the escape for the used mixture of cutting compound and water is provided in a spout in the backplate on which hangs a tiny pail during the operation. A rubber pad within the backplate, by "the feel," tells the mechanic when the hole is cut.

Along Automobile Row

BALTIMORE.—Herbert M. Hartman, president of the Fidelity Motors Company, distributors, has announced the appointment of the Wienhold Motor Company, as sub-dealer in Chrysler and Maxwell cars. John T. Wienhold is president of the Wienhold Motor Co.

MILWAUKEE.—G. J. Zinke has been appointed retail salesmanager of the Milwaukee Flint Company according to an announcement just made by that company. Mr. Zinke has been proprietor of the Zinke Auto Co. of Cudahy, Wis., a Milwaukee suburb, for many years.

ST. LOUIS—Cleveland-Downer Motor Sales Co., Cleveland dealer has opened a new building at 5628 Gravois Ave. It was formerly located at 4618 Delmard Blvd. The Cleveland-Downey Co. will continue to handle the Cleveland in its new establishment and has also been granted a dealer franchise for the Chandler car by the St. Louis distributor, Lewis Automobile Co.

WATERLOO, Ia.—Frank L. Negus, formerly with the Central Iowa Motors Company in Des Moines, has been made manager of the service department of the Hupmobile agency here, succeeding Ray Dixon, advanced to the sales staff.

CHICAGO.—L. B. Massey of the Motor Transport Company of Minneapolis, has joined the sales force of the Diamond T Motor Car Company as district sales manager.

PORTLAND, Ore.—It is announced by officials of the company that the Elite Auto Repair Co., Chevrolet parts and service, has changed its name to the Bankhead & Walter, Inc., and is arranging for larger quarters on account of the press of business.

ASHEVILLE, N. C.—The new home of the Sawyer Motor Company, dealers in Dodge Brothers automobiles, is nearing completion. The new garage will have a concrete roof for day storage and total floor space is more than 45,000 square feet.

DESERONTO, Ont.—R. H. Raynor of Picton, Ont. has recently taken over the property and business of the Riggs Motor Sales. Riggs has been handling Jewetts, Studebakers and Paiges.

DALLAS, Tex.—The Ferguson Motors Company, Hudson-Essex dealers and distributors in Dallas and territory, has named W. J. Roberts wholesale manager. Mr. Roberts was previously associated with Adam E. Ferguson, president of the company, in the automobile business in Northern cities.

LOS ANGELES.—Charles G. Darrach, Jr., former wholesale manager of the Walter M. Brown Motors, Inc., Los Angeles, has joined the sales department of the W. P. Herbert Company, Southern California Chandler and Cleveland Six distributors.

DES MOINES, Ia.—L. B. Chase, since 1907 associated with the Des Moines Buick company, has severed his connections with the firm to become manager of the new American Gear company branch in Kansas City.

CHICAGO.—Lester Rich, formerly sales manager for the Bird-Sykes Company, Paige-Jewett dealers and distributors, has become retail sales manager of Community Motors, Inc., Oakland dealers.

CHARLOTTE, N. C.—Thomas L. Craig Motor Company, of Gastonia, N. C., has relinquished the Willys-Knight and Overland lines and has closed a contract with Hoppe Motors, Inc., distributors, for a Chrysler dealership.

ST. LOUIS.—Southwest Nash Motor Car Co., Nash distributor for the St. Louis district, has announced the appointment of the West Side Nash Co., a new organization as an authorized Nash dealer. William J. Wolff, formerly of the South Side Nash Company is president of West Side Nash.

TOLEDO.—The U. N. Auto Parts Co., has been chartered with a $20,000 capital to retail new and used autos, parts and accessories.

BALTIMORE.—The Shelton Garage, Inc., 2005 North Charles Street, Baltimore, has been incorporated with $50,000 capital stock to hire and store automobiles. The incorporators are Charles M. Green, Frank J. Rowe and Paul B. Mules.

CHICAGO.—Harry M. Reid has sold his interest in the Reid-Burton Motor Company, Ford agency, to Thomas W. Burton. The firm name will remain the same.

LOS ANGELES.—The Star Motor Company of California announces the appointment of The McLean Motor Sales Company as Star dealers in Glendale, Eagle Rock and Burbank. R. A. McLean is president of the company; L. V. Freeman, vice-president of the company; R. T. McLean, secretary.

DETROIT.—Hubert W. Roberts, formerly vocational director of the schools at Anderson, Ind., has resigned to become director of personnel at the Olds Motors Works under the direction of I. J. Reuter, president and general manager.

CINCINNATI.—Papers have been filed with the secretary of state, chartering the Vine & Clifton Auto Sales Co., with a capital stock of $50,000 to deal in motor vehicles and accessories.

LOUISVILLE.—Browder and Hoskins, Chevrolet dealers, have recently moved their used car department from 210 East Walnut Street to 125 West Chestnut Street, in the building formerly used by the Kentucky Overland Company as their used car department.

LINCOLN, Ill.—Marvin Richardson has sold his half interest in the Richardson Motor Company to his partner, John L. Gordon, who will continue the business alone. Temporarily, Mr. Richardson will remain as salesman. The firm will continue to distribute Studebaker cars in the Logan county territory.

BALTIMORE.—E. E. Starkey, who maintains a battery and electrical service station at 3401 Reisterstown Road, Baltimore, has opened a branch station at 2638 Pennsylvania Ave. William Linker, long experienced in this work, is in charge of the branch.

OZARK, ARK.—W. H. Mason has bought half interest in the Ozark Peoples garage.

MILWAUKEE.—Removal of the Scherer Automobile Company, formerly known as the Janesville Buick Company, from its old quarters to a large new garage has been completed. Gerald O. Scherer, manager of the Janesville Buick Company, will continue as manager of the firm under its new name.

CHARLOTTE, N. C.—W. A. Masterman, vice-president and general manager of the B. D. Heath Motor Company, distributor of the Hudson-Essex line of passenger cars and one of the important automotive trade establishments of this city, has resigned, it was announced.

BOSTON.—A new company formed here called the Stone Motors, Inc., to take over the selling rights of the Yellow Cab trucks, has leased salesrooms in part of the showroom vacated by the defunct Sterling Knight Motor Company of New England.

HOUSTON, Tex.—The franchise for the Hudson-Essex cars here has been divided. The new agent is the Alex Clark Company of which Alex Clark is president. The A. C. Burton Company, Hudson-Essex dealers in Houston for years, will continue handling the Hudson-Essex lines.

MONTREAL.—Franklin Motors, Ltd., has moved its office and showroom to more central and commodious quarters at 377 St. Catherine Street, West.

NEW BEDFORD, Mass.—The Rickets Motor Car Company, dealer for the Rickenbacker car and the Federal truck southern Massachusetts with salesroo and service in New Bedford, has signed contract to handle the Flint in the sa territory.

CHARLOTTE, N. C.—J. Ray Barkalo sales manager of the Lincoln departme of the Etheredge Motor Sales Compar of Charlotte, has resigned his position accept the position of wholesale sal manager of the newly organized Hop Motors, Inc., of Charlotte, which corpor tion has taken over the distribution the Chrysler line.

SPOKANE, Wash.—Announcement made by the Eldridge Buick company Spokane and Seattle, that a contract h been awarded to Alloway & Georg Spokane to erect a modern automob sales and service building here, estimat to cost $120,000.

MONTREAL.—The Brooks Stea Motors, Ltd., has just installed a sho room in the Keefer building formerly o cupied by Benson-Manley, Ltd.

BOSTON.—William R. Davis and Eliot Ware, who now handle the Pierce-Arro in Boston have perfected their organiz tion with Mr. Davis president and M Ware treasurer and general manager, r taining the name J. W. Maguire Compan

MOUNT MORRIS, N. Y.—One of t largest transactions in Livingston coun real estate was closed this week when t Mount Morris Ford Garage, Inc., includi the real estate and stock, was sold W. B. Sanders, of Nuda, acting for Hen McIlravy, president of the corporation, the Mount Morris Sales Corporation. T new owners plan to greatly improve t property and garage service. They wi build a new showroom and make a nun ber of changes in the interior of the buil ing.

DETROIT.—The Piston Service Com pany, Inc., of Detroit has opened a branc station in Flint. H. Parker has been place in charge with F. H. Smith as distri salesman. The office will serve the cou try in and around Flint with piston ring bearings, and other parts of standa motors for all makes of cars.

MONTREAL.—Studebaker is now o cupying a down town showroom in t heart of the financial and business distri in the Insurance Exchange Buildin where they have ground floor showroom with plate glass show windows.

ROCHESTER, N. Y.—A. W. Martin an George H. Strickland, prominent in aut mobile circles here, recently purchase the Standard Auto Tire Works of Windsor Street. The new owners will re tain the name of Standard Auto Ti Works and the same personnel.

PORTLAND, Ore.—The C. L. Boss Aut mobile Company, exclusive distributors Star and Durant cars, has taken a lease a new building which will give the or ganization 18,000 square feet of addition store space. Two dealers have recentl been added. At St. Johns, Ore., Brown an Dulen will handle Star and Durant car and the same lines will be handled b Repyard and Dorris at Milwaukee, Ore.

CHARLOTTE, N. C.—Organization Hoppe Motors, Inc., by W. T. Hoppe an dissolution of firm of Knight-Overlan Company, of which Mr. Hoppe was th executive head is announced. Mr. Hopp also announced that he had relinquishe the Charlotte dealership for the Willys Knight and Overland lines and has bee given a distributor's contract by th Chrysler organization.

BUFFALO, N. Y.—Rollin Buffalo Corpo ration of Buffalo, S. Lee Abrams, presi dent, has been given the Rickenbacke franchise for Buffalo and territory.

CHICAGO.—The Husky Wrench Com pany of Milwaukee has moved its Chicag office, formerly located at 189 N. Clar Street to 610 Sycamore Street, Milwaukee it is announced.

With the Associations

Plan Discount Elimination

LOS ANGELES, July 25.—The Los Angeles Automobile Trade Association is conducting an intensive educational campaign among its members to eliminate the "discount-to-customer" evil which has become increasingly prevalent throughout Southern California.

In a recent bulletin to members, the executive officers of the association declare that a condition created by the automotive merchant has brought the mind of the ordinary consumer of automobile supplies to a position where it is considered sacrilegious to pay the list price for anything purchased for an automobile.

"The plan," says the bulletin, "works about like this: A good customer comes into your place of business and makes a statement that he is about to have his car painted, buy a camping outfit, get some spotlights or purchase some piece of equipment which you do not carry in stock.

"Immediately, because of the profit which you have made from your transaction with this customer, you are overcome with generosity and insist that the customer use your purchase order and in that way obtain your discount to which, by your very action, you prove you are not entitled.

"It does not make any difference what line of business you are in, somebody is issuing a purchase order enabling the customer to obtain your very line of merchandise at a discount.

"This thing must be stopped. The place to stop it is where the order is issued. If you must issue an order to a customer, forget the profit you have made off of your previous transactions with him. Send your call boy with the order, get the merchandise and sell it at list."

Greensboro Picked for Meet

CHARLOTTE, N. C., July 25.—The fall meeting of the North Carolina Association of Gasoline and Tire Dealers will be held at Greensboro, October 20-21, it was announced here by President Keely Grice, on his return from a conference of association officers at Greensboro.

An exhibit of supplies and equipment for automotive service stations will be on display during the convention.

Officers of the association are in accord that "something must be done to prevent jacklegs from operating service stations," it was explained, and this will be one of the important matters to come before the October meeting.

Carolina Used Cars Lower

CHARLOTTE, N. C., July 25.—A total of 14,560 used automobiles were in the hands of dealers in North Carolina June 30, according to an announcement by the office here of the Carolina Motor Club after completion of a census. These cars were estimated to be worth $3,281,233.20.

The census was made under direction of H. A. Rouzer, of Salisbury, chairman of the committee on trade methods and policies of the North Carolina Automotive Trade Association.

The association's statement said there are "a few more than 1,100 automobile dealers in this state" and added that "the used car situation in this state is not such a critical one."

Washington Association Elects

WASHINGTON, July 25.—Mark Lansburgh, secretary of Lansburgh and Brother, was unanimously elected president of the Commercial Motor Vehicles Owners' Association at a meeting in the City Club this week. He succeeds William Jorg, manager of the Corby Baking Company, whose resignation, because of his inability at the present time to take care of the many details of the position was accepted. A standing committee to confer with the district commissioners on traffic regulations as relating to trucks was provided for after several members had cited instances where their business was interfered with.

Louisiana Club Organized

NEW ORLEANS, July 25.—The Automobile Club of Louisiana has been opened with temporary headquarters on Baronne Street, New Orleans. The charter, filed recently, shows the following officers: Nat W. Bond, attorney, president; J. C. Barnes, New Orleans Public Service, Inc., first vice-president; Dr. G. F. Roeling, physician and coroner of the parish of Orleans, second vice-president; A. B. Nicholas, real estate dealer and president of the Young Men's Business Club, treasurer; Edgar Boutwell, former manager of the Motor League of Louisiana, secretary.

Besides providing many services for its members, the club will devote itself to promotion of good roads and to advertising Louisiana and its growing number of highways. It will concern itself with traffic problems of the city and state and also with all legislation, state and national, affecting the ownership of motor cars, the development of highways and the solution of traffic problems.

Tudor Heads Roads Bureau

SAN FRANCISCO, July 25.—William M. Tudor has been appointed manager of the good roads bureau of the California Automobile Association, succeeding A. E. Loder, resigned, according to announcement by D. E. Watkins, secretary and general manager of the association. Mr. Loder has resigned to accept an executive position with the Caterpillar Tractor Company. Mr. Tudor has been in the employ of the association for the last eight years.

Tax Reduction Urged

CHARLOTTE, N. C., July 25.—A campaign looking to the general revision of the policies of the North Carolina state government involving the automobile manufacturing and sales industry and of the laws directly or indirectly governing the operation of motor vehicles was launched here today by the North Carolina Automotive Trade Association, in an address by C. W. Roberts, of Greensboro, secretary of the association.

Emphasis was given by Mr. Roberts, in his address before the membership of the Charlotte Automotive Merchants' Association and officers of the state association, to his demand for reduction of the burden of taxes imposed by state and federal governments on the automotive trade and manufacturing industries.

In connection with the association's efforts to obtain revision downward or repeal of state taxes, Mr. Roberts said "now is the time" to begin the campaign intended to create favorable sentiment among members of the legislature. A statewide sensation was expected to result from his formal declaration of favor for the election of W. N. Everett, North Carolina, secretary of state, as governor to succeed A. W. McLean.

The North Carolina legislature was criticised by Mr. Roberts for being the only body of its kind which has imposed a license tax on automobile manufacturers. This tax is $500 per year.

The federal government has "no reason for building up a great surplus to the credit of our nation," said Mr. Roberts. He pointed out that the federal government in 1924 collected a total of $160,028,000 in various taxes. The total of all taxes paid by the automotive manufacturing and selling industries in that year was estimated at $600,000,000, including federal, state, county and city taxes.

Regarding state taxes, Mr. Roberts said motor registrations in North Carolina have increased 35 times in the ten year-period ended with 1924, while "state taxes paid by motor car owners have been increased 100 times in that period."

Drive Against Taxes Planned

SAN FRANCISCO, July 18.—In the interests of public safety, the California State Automobile Association, with headquarters in this city, is heading the campaign in the west for the removal of the special war-time excise taxes on automobiles by the next session of Congress. These taxes are a definite burden on the upkeep of motor vehicles necessary to keep them in such running condition that they can be operated with the greatest degree of safety, according to the association, which charges that owing to the taxes many owners neglect proper maintenance of their cars. The total of these taxes last year was $158,000,000, all of which came out of the pockets of the motorists, according to the report.

Canadian Automobile Output Decreases 10 Per Cent in 1924

Closed Car Production Raises Above 1923 Figure but Open Models Drop 15 Per Cent

OTTAWA, July 25.—In 1924 the eleven automobile factories in Canada produced 98,245 passenger cars, 18,043 trucks and 16,172 chassis, a total of 132,460 cars with an aggregate selling value of $88,-240,418. This was a decrease of 10 per cent from the 1923 production of 147,202 cars valued at $96,614,176, according to a statement just issued by the dominion bureau of statistics at Ottawa. With a capital investment of $60,000,000 and using raw materials costing $64,000,000, the automobile industry employed 9,270 persons during 1924 and paid over $14,-000,000 in salaries and wages.

Production of closed cars increased to 31,041 from 27,209 in 1923, but the output of open cars dropped 15 per cent to 67,-204 in the same time. Production of trucks numbered 18,043 as against 19,226 in 1923. The average selling value of motor cars remained about the same as for 1923, this figure for passenger cars being $664 and for trucks $450.

Registration of passenegr cars in Canada numbered 573,975, of trucks 55,572, and of other motor vehicles 22,574, giving a total of 652,121 registrations in 1924 as compared with 586,850 in 1923.

Although production declined 10 per cent below the 1923 totals, the average number of wage-earners for 1924 was slightly higher at 7,867. In January there were 7,775 wage-earners employed; in May, the number reached a maximum of 8,819, and then declined to 7,487 in August and to 7,080 in December. Salaried workers numbered 1,403, making a total of 9,270 employes in 1924 as compared with 9,305 in the previous year.

Canada imported 8,344 passenger cars, 957 trucks, 27,371 engines, and automobile parts worth $15,175,108, giving an aggregate import value of $28,954,700 as compared with $32,081,064 in 1923. Exports included 12,772 trucks, 43,883 passenger cars, and parts valued at $4,992,-049 to a total value of $31,501,442, decrease of 6 millions from 1923.

Chevrolet Production to Equal Last Year's Figure by August

DETROIT, July 25.—At the rate of production now being maintained by Chevrolet, the total output for 1925 up to and including August 20 will exceed that for the entire year of 1924, R. H. Grant, general sales manager has announced.

Chevrolet production for last year was 305,303. For the first six months of the present year, the output reached 246,081, or 59,222 under the total for last year. This follows the establishing of successive production records for April, May and June.

Production for June amounted to 54,944, which was exceeded by only one month, that of Octber, 1923. Sales to dealers during the past month were 54,-725, with 24,654 unfilled retail orders being in dealers' hands at the end of the month.

According to Mr. Grant, the prospects for the second half of the year are as good as those for the past six months. A review of May Chevrolet passenger car sales showed them to be 233.6 per cent better than those for May, 1924. The truck sales for the same period were 297.6 per cent better than for the corresponding month of last year.

Coming Motor Events

Automobile Shows

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition.

Dallas, Tex. ..... Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis. ..... Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal. ..... Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich. ..... Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla. ..... Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal. ..... Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La. ..... Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va. ..... Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt. ..... Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn. ..... Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago ..... Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City ..... Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina ..... Oct. 3-13
Pan-American Road Congress.

London, England ..... Oct. 8-17
Olympia Passenger Car Show.

London, England ..... Oct. 29-Nov. 7
Annual Truck Show.

Races

Altoona, Pa. ..... Sept. 7

Charlotte, N. C. ..... Oct. 24

Fresno, CaCl. ..... Sept. 30

Laurel, Md. ..... Oct. 10
A. A. A. Race, Baltimore-Washington Speedway.

Los Angeles, Cal. ..... Nov. 26

Monza, Italy ..... Sept. 6
Italian Grand Prix Race.

Syracuse, N. Y. ..... Sept. 19

Salem, N. H. ..... Oct. 12

Conventions

Buenos Aires, Argentine ..... Oct. 3-13
Pan-American Road Congress.

Cleveland ..... Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland ..... Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia. ..... Nov. 12-13
Automotive Merchants' Association Convention.

Everett, Wash. ..... Aug. 3-4
Annual state convention Washington Automotive Trades Association.

Montreal, Que. ..... Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia ..... September
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa. ..... Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis ..... Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Eaglesmere Park, Pa. ..... Sept. 14-17
General meeting of the Automotive Electric Association.

Dodge Brothers Factory Will Be Enlarged to Raise Output

Five of Eight New Buildings Already Started—Production to be 1,500 Cars Daily

DETROIT, July 25.—A program of expansion that will increase the capacity of the Dodge Brothers, Inc., factory here from 1,100 to 1,500 cars daily has been launched, President F. J. Haynes has announced. Construction has already been started on five of the eight buildings planned with construction of the other three scheduled to start immediately.

The cost of the expansion is estimated at approximately $8,000,000 and when completed will add several thousand workers to those already employed. The amount of square feet that will be allowed by the new additions will be around 750,000. It is expected that the program will be completed by January 1, 1926. The company's present intention is to go into full production as soon as possible.

A complete series of new buildings as large as many factories are being built on Lynch road. One building, 75x500 feet will house the heat treat department, another also 75x500 feet will house the heavy hammer shop, another 65x500 feet will take care of the light hammer shop. A die shop 100x312 will be erected. To supply power for these units, a large power plant equipped with the latest and most improved machinery will be built. Railway tracks are already being laid.

The largest of the additions to the main plant will be a six-story extension of plant No. 2, 100x462 feet and having a floor area of 282,000 square feet. The new forge department on Lynch road replaces a similar department in the main factory and the buildings which formerly housed it will make way for a five-story building 205x100 feet, which will be used for machining and storage purposes. What will be known as main plant No. 4, measuring 75x475 feet will join the machining and storage plant. It will also be five stories in height and will complete an L shape unit.

When Dodge Brothers first started operations in 1914, the company had only a few buildings with a total floor area of 20 acres. Today it consists of 110 acres and with the additions of the new buildings, the acreage will be brought to 130 acres, making the Dodge factory one of the largest in the world. The present buildings will be erected by the construction department of the company which has erected all the previous buildings of the factory.

World Survey of Traffic By Air Is Planned by U. S.

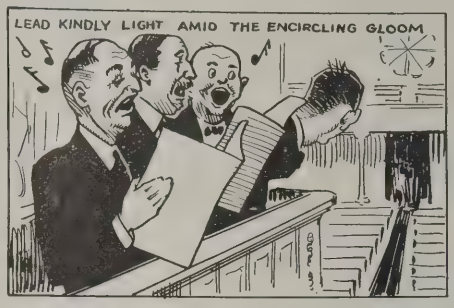
WASHINGTON, July 25.—A world economic survey of air transportation, the first to be undertaken in this or any other country, will be carried out jointly by the Department of Commerce and the American Engineering Council, it is announced by Secretary Hoover.

A committee of six, with J. Walter Drake, assistant secretary of commerce, as chairman, has been appointed to direct the work, which will be actively conducted by a field staff, of which Professor Joseph W. Roe, head of the Department of Industrial Engineering in New York University, vice chairman of the committee, is director.

The other members of the committee are: Dr. W. F. Durand, president of the American Society of Mechanical Engineers, New York; Prof. E. P. Warner, head of the aeronautical engineering course at the Massachusetts Institute of Technology; Luther K. Bell, Washington, traffic manager of the U. S. air mail and C. T. Ludington, Philadelphia, aviator.

SQUEEKS and RATTLES

THE LOST CHORD



"Church was out early last night, wasn't it?"

"Yes."

"What was the trouble?"

"Some one blew an auto horn outside and the male quartet was all that was left."

—West Virginia Moonshine.

It is said that six quarts of oil will cover a mile of sea. But have you ever let a sardine tin drop on your white flannel trousers at a picnic?

—Punch.

Why He Went Faster

"The officer is all wrong, Your Honor. I wasn't doing anything like sixty miles an hour."

"Were you watching the speedometer?"

"No, sir. I didn't need to. I wasn't in any hurry—I was just out for a spin. I wasn't going anywhere."

"Well, you're going somewhere now—Ten days."

—Huntington Motorist.

It is reported that Eddie Rickenbacker has made a fortune as a motor car manufacturer. Well, doesn't the ace always take the jack?

—Springfield Leader.

Built In Squeals

Maudie: "What's wrong with the car, it squeaks dreadfully."

Jimmie: "Can't be helped; there's pig iron in the axles."

—Columbia Jester.

Irresistible

Slick: "How do you get so many girls?"

Slicker: "Oh, I just sprinkle a little gasoline on my handkerchief."

—Punch Bowl.

Well Enough

He: "Now I want to show you how to change gears."

She: "Oh, Jack, let's not change them—they are just right as they are."

—Judge.

About his bier the mourners kneel: He was holding his cutie instead of the wheel.

—Who Bit You, 'Arry?

The fool and his money are soon parted. If only nature would arrange a similar alienation of the fool and his car.

—Associated Editors, Chicago.

Another version: Lafayette, we are hearing nothing.

—Arkansas Gazette.

A Helicopter enables you to go straight up but it doesn't sound that way.

—Arkansas Gazette.

A DEFERRED OPPORTUNITY



She: Don't you love driving on a night like this?

He: Yes, but I thought I would wait till we got farther out in the country.

—Oregon Owl.

SUSPEND CHRYSLER POLICIES

LOS ANGELES, July 25.—The California insurance department has ordered suspension of the Chrysler automobile insurance plan until an investigation reveals whether state laws have been met on the coverage.

WASHINGTON RECEIPTS UP

OLYMPIA, Wash., July 25.—Motor vehicle license receipts by the state for the year 1925 up to June 30 were not only more than $500,000 larger than for the same period last year, but are $134,072 more than for the entire year, 1924, as shown by the report just issued by W. G. Potts, state treasurer. Reports already aggregate $4,609,269.15, as against $4,176,783.56 up to June 30 last year, and $4,475,196.70 for the entire year 1924.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN "4"			
------	5-p	Touring	$795
		"6-66"	
------	6-p	Roadster	1,495
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
		"8-88"	
------	6-p	Roadster	1,975
------	4-p	Sport Roadster	1,975
------	4-p	Club Roadster	2,075
------	5-p	Sport Brougham	2,250
------	5-p	Sedan	2,350
BUICK "Standard"			
2750	2-p	Roadster	$1,150
2920	5-p	Touring	1,175
2960	2-p	Coupe	1,375
3075	4-p	Coupe	1,565
3185	5-p	Dbl. Srv. Sedan	1,475
3245	5-p	Sedan	1,665
3050	5-p	Coach	1,295
		"Master" (120 in. W. B.)	
3285	2-p	Roadster	1,365
3465	5-p	Touring	1,395
3850	5-p	Sedan	2,225
3560	5-p	Coach	1,495
		(128 in. W. B.)	
3485	3-p	Sp. Roadster	1,750
3550	5-p	Sp. Touring	1,800
3610	7-p	Touring	1,625
3745	3-p	Country Club	2,075
3770	4-p	Coupe	2,125
3905	5-p	Brougham Sedan	2,350
4030	7-p	Limousine	2,525
3995	7-p	Sedan	2,425
3850	7-p	Town Car	2,925
CADILLAC "V-63" Standard Line (132 in. W. B.)			
------	2-p	Coupe	$3,045
------	5-p	Sedan	3,195
------	7-p	Sedan	3,295
------	5-p	Brougham	2,995
------	7-p	Imperial	3,435
------	4-p	Victoria	3,095
		Custom Built (132 in.)	
------	-----	Roadster	3,250
		(138 in. W. B.)	
------	7-p	Touring	3,250
------	-----	Phaeton	3,250
4400	5-p	Coupe	4,000
4490	5-p	Sedan	4,150
4590	7-p	Suburban	4,285
4655	7-p	Imperial	4,485
CASE J. I. C.			
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3223	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3428	5-p	Sedan 4 d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET "Superior" (Series K)			
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	715
2110	5-p	Coach	735
2220	5-p	Sedan	825
CHRYSLER "Four" (109 in. W. B.)			
2390	5-p	Touring	$895
2440	2-p	Club Coupe	995
2590	5-p	Coach	1,045
2680	5-p	Std. Sedan	1,095
"Six" (112¾ in. W. B.)			
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
(118¾ in. W. B.)			
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3040	5-p	Sedan	1,495
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
2990	5-p	Brougham	1,545
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM "V-6"			
4600	7-p	Touring	$6,650
4500	4-p	Sp. Touring	6,150
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR "6-70"			
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS "90"			
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
------	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
------	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
------	5-p	Phaeton	1,895
3245	5-p	Std. Sedan	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
------	5-p	Brougham	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	885
2695	5-p	Spec. Touring	985
2708	2-p	Coupe "B"	995
2823	2-p	Spec. Coupe "B"	1,095
2995	5-p	"B" Sedan	1,095
3077	5-p	Spec. "B" Sedan	1,195
3020	5-p	Sedan A	1,245
3107	5-p	Spec. "A" Sedan	1,330
2723	5-p	Coach	1,095
2823	5-p	Spec. Coach	1,195
DORRIS "6-80"			
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG Straight "8"			
3920	2-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
------	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT "D"			
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT A-22			
------	2-p	Sp. Roadster	900
2225	5-p	Touring	810
------	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
------	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
------	5-p	Spec. Sedan	1,280
2430	5-p	Coach	1,050
------	5-p	Spec. Coach	1,100
ELCAR "4-55"			
2560	5-p	Touring	$1,095
2779	5-p	Coach	1,195
2930	5-p	Sedan	1,395
		"6-65"	
------	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
------	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
------	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
------	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	850
FLINT "55"			
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD Without Starter and Dem. Rims			
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
With Starter and Dem. Rims			
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN "11-A"			
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	5-p	Cabriolet	4,400
GARDNER "Series 5"			
2680	5-p	Coupe	$1,275
2895	5-p	Sedan	1,475
3070	5-p	Sp. Sedan	1,595
		"6"	
3070	5-p	Touring	1,395
3200	5-p	Brougham	1,595
------	4-p	Cabriolet	1,845
3310	5-p	Sedan	1,795
3320	5-p	Sport Sedan	1,895
		"8"	
3350	5-p	Touring	1,995
------	4-p	Cabriolet	2,245
3510	5-p	Brougham	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	Sedan	2,495
GRAY "O"			
1750	5-p	Touring	$630
1880	3-p	Coupe	845
2020	5-p	Sedan	895
2130	5-p	Royal Sedan	975
HAYNES "60"			
3295	5-p	Touring	$1,600
3650	5-p	Brougham	2,200
3765	5-p	Sedan	2,300

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ D-1			
3360	5-p	Sedan	$1,69
HUDSON "Super Six"			
3425	7-p	Phaeton	$1,25
3450	5-p	Coach	1,25
3425	4-p	Brougham 4 d.	1,59
3675	7-p	Sedan	1,79
HUPMOBILE "R"			
2595	2-p	Roadster	$1,22
2705	5-p	Touring	1,22
2760	2-p	Coupe	1,35
2875	5-p	Club Sedan	1,37
		"E"	
3050	2-p	Roadster	1,79
3270	4-p	Roadster	1,89
3135	5-p	Touring	1,79
3295	2-p	Coupe	2,09
3295	4-p	Coupe	2,09
3410	5-p	Sedan	2,19
JEWETT "23-25"			
3025	4-p	Roadster	$1,63
2835	5-p	Touring	1,20
3015	5-p	De Luxe Touring	1,32
2835	2-p	Bus. Coupe	1,34
3025	5-p	Sedan	1,58
3305	5-p	De Luxe Sedan	1,78
3000	5-p	Coach	1,26
JORDAN Series "A"			
3330	2-p	Playboy Road.	$2,57
3340	5-p	Touring	2,57
3450	3-p	Friendly "3"	2,87
3625	5-p	Brougham	2,87
3520	4-p	Victoria	2,77
3525	5-p	Sedan	2,97
3470	7-p	Sedan	3,32
3800	7-p	Suburban Sedan	3,37
KISSEL "55"			
3130	2-p	Speedster	$1,89
------	2-p	Sp'dster De Luxe	2,18
------	4-p	Speedster	1,99
------	4-p	Sp'dster De Luxe	2,28
3530	2-p	Enc. Speedster	2,28
------	2-p	Enc. Sp'd'r DeL.	2,78
3190	4-p	Tourster	1,89
------	4-p	Tourster De L.	2,08
2980	5-p	Phaeton	1,68
3170	5-p	Phaeton De L.	1,88
------	7-p	Touring	1,78
------	7-p	Touring De L.	1,98
3430	4-p	Coupe	2,18
------	4-p	Coupe De Luxe	2,58
3540	5-p	Brougham Sedan	1,99
------	5-p	Broug. Sed. DeL.	2,68
------	5-p	Brougham 2 d	1,79
4070	7-p	Sedan De Luxe	3,28
4010	7-p	Berline Sed. DeL.	3,38
3530	5-p	Victoria	2,28
------	5-p	Victoria De Luxe	2,68
		"75"	
------	2-p	Speedster	2,19
------	2-p	Speedster De L.	2,48
------	4-p	Speedster	2,29
------	4-p	Speedster De L.	2,58
------	2-p	Speedster De L.	2,58
------	2-p	Enc. Sp'd'r DeL.	2,98
------	4-p	Tourster	2,19
------	4-p	Tourster De L.	2,38
------	5-p	Phaeton	1,98
------	5-p	Phaeton De Luxe	2,18
------	7-p	Touring	2,08
------	7-p	Touring De Luxe	2,28
------	4-p	Coupe	2,48
------	4-p	Coupe De Luxe	2,88
------	5-p	Sedan	2,39
------	5-p	Broug. Sed. DeL.	2,98
------	5-p	Brougham 2 d.	2,19
------	7-p	Sedan De Luxe	3,48
------	7-p	Berl. Sed. De L.	3,58
------	7-p	Victoria	2,58
------	7-p	Victoria De Luxe	2,98
LEXINGTON "Concord"			
------	5-p	Touring	$1,59
------	5-p	Touring (Enc.)	1,69
------	5-p	Spec. Touring	1,79
------	5-p	Sedan	2,18
------	5-p	Spec. Sedan	2,44
"Minute Man"			
------	2-p	Roadster	2,14
------	5-p	Touring	2,09
------	7-p	Touring	2,19
------	5-p	Lark Touring	2,34
------	5-p	Cal. Touring	2,49
------	7-p	Cal. Touring	2,49
------	5-p	Royal Coach	2,49
------	5-p	Brougham	2,59
------	5-p	Sedan	2,89
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	$4,000
------	-----	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

MOTOR AGE
Reg. U. S. Pat. Office

Vol. XLVIII No. 6

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Subscriptions accepted only from the Automotive Trade
Entered as Second Class Matter, Sept. 19, 1899, at the Post Office at Chicago, Ill., under Act of March 6, 1879.



The Ideal Heat Outfit for the Garage or Repair Station

With this Prest-O-Lite 5-in-1 Outfit you can do any ordinary brazing, soldering, melting or fusing job quicker and better than ever before.

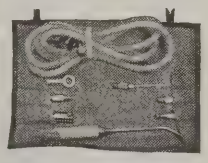
Four torch heads give you the exact flame you want for the work in hand. Temperature range accurately controlled. Handy soldering iron attachment. Heats in an instant and stays **hot** until the job is done.

You'll find this 5-in-1 the handiest "heat outfit" you ever used. It costs but $7.50, complete with rubber hose, wrench, etc. No pumping or generating. The 5-in-1 outfit operates on Prest-O-Lite Gas from handy Prest-O-Lite Tanks. A turn of the valve and it's ready for work.

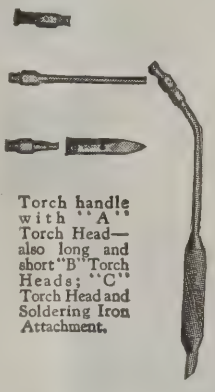
Thirty-six big gas-producing plants supply thousands of Prest-O-Lite Exchange Stations located all over the country. You can always get a full tank for an empty one by paying a small amount for the gas only.

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The PREST-O-LITE CO., Inc.
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New York *Dept. J-8* San Francisco
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The Prest-O-Lite **5-in-1** Outfit, packed complete in attractive canvas case.



Torch handle with "A" Torch Head—also long and short "B" Torch Heads; "C" Torch Head and Soldering Iron Attachment.



The **5-in-1** Outfit, rolled in a neat convenient kit.

Prest-O-Lite



The Prest-O-Lite Tank—the same kind that is used everywhere today for lighting heavy trucks.





"Sure, I PEEL 'em—I PEEL 'em for profit. Just take the old pocket knife, remove the layers of brass and the job is done. No filing. No trouble at all. You make an adjustment in half the time and the extra coin is extra profits. Throw the old file on the bench and PEEL 'em—

FOR PROFIT !"

A Shim for Every Make of Car—All Reliable Jobbers Sell 'em.

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LAMINUM

MOTOR AGE

Vol. XLVIII August 6, 1925 No. 6

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

JULY one of best months in history of automotive industry. Sales slightly below June but ahead of last year. Dealers' stocks of 1925 models and used cars generally low. Page 32.

Alabama Automotive Trade Association meets in annual convention at Tuscaloosa. Merchandising methods and good roads are principal topics. Page 39.

Rochester, N. Y., reports sales of new cars in July slightly below June. Page 33.

Despite sensational price reductions by manufacturers, used car authorities are still optimistic over the future. Present used car situation considered very good. Page 42.

Salt Lake sales volume in July considered normal by dealers. Page 33.

Production of automobiles in the United States sets record for first six months of 1925. June largest month in history of the industry. Page 38.

Boston dealers report there has been no seasonal slump in their sales this year. Page 34.

Tommy Milton and Pete Kreis will drive their Duesenbergs in European speedway races this fall, but Peter de Paolo decides to stay in United States. Page 34.

July business in Louisiana is slightly under June volume but August is expected to witness year's greatest rush. Page 34.

Fifty more cities will receive dealerships for new Ajax Six following expansion of factory output. Page 32.

Earnings of the Gabriel Snubber Manufacturing Co. are three times dividend requirements in first six months of 1925. Page 38.

Quick period of recovery from sales slump of last six months is expected in Wisconsin, following greater volume in June and July than same months last year. Page 36.

Airplane reliability tour covering twelve cities to demonstrate utility and practicability of air commerce is planned by the Detroit Aviation Society. Page 36.

Congressman Davey of Ohio promises co-operation in effort to eliminate war excise taxes on automotive industry and believes action will be taken at the next session of Congress. Page 37.

Prospects for excellent Fall business are seen in Indiana as result of splendid farm conditions throughout state. Page 37.

British automotive authority tells of current state of industry in Europe before luncheon in his honor given by N. A. C. C. Progress in last three years in Great Britain cited. Page 43.

Manufacturers expect last six months of 1925 to continue the progress and increased volume of business started in the first half of the year. Page 35.

New Chrysler service plan claimed by officials to save owners 20 per cent of their maintenance costs. Page 36.

N. A. C. C. appoints President Erskine of Studebaker chairman of new insurance committee to investigate surety field. Page 35.

E. E. Haight, 17 years with MOTOR AGE, becomes head of new business publishing firm. Page 35.

In Next Week's Issue—Another Bill Fixit Story



Ralph Hamlin, who first started selling Franklins in Los Angeles in 1905

20 YEARS *Selling the Same Make Automobile*

Now Ralph Hamlin Is One of Los

By ROY H. COMPTON

TWENTY years ago Ralph Hamlin, of Los Angeles, received a telegram from H. H. Franklin offering him the agency for Franklin automobiles. The offer was accepted, cars shipped and received and ever since that day early in 1905, Mr. Hamlin has been the Franklin dealer. There may be several men in the country who are older as automobile dealers than Mr. Hamlin, but the number who have represented one line continuously as long as he cannot be large. Among Franklin distributors he is the first.

Mr. Hamlin's career as a dealer reads like a romance. Destiny may have had some part in shaping it but unquestionably Mr. Hamlin himself was chiefly responsible. Had he waited for opportunity to knock he might have been waiting still as there was no door on the little store in South Main street, Los Angeles, where as a youth he held forth in the bicycle sales and repair business in 1896. An iron grating across the front sufficed.

Mr. Hamlin is a self made man. Early in life he "went to work" and has been working ever since. When still in his teens he engaged in the bicycle repair business, but progress was slow. He sought to learn the reason by self analysis and came to the conclusion it was because nobody knew him. There were other men in the same line of endeavor, "old heads" at the game with impressive stores, big stocks and money to keep their names in the newspapers by advertising. Mr. Hamlin lacked the price of an "ad" so was passed up by the business offices, but managed to slip in at the back door. He entered through the news columns. He personally participated in every bicycle event that anybody would stage and when promoters were lacking he put them on himself. He became "known" and regarded himself as "made" from the bicycle riders' viewpoint in 1902 when he won the annual Los Angeles to Santa Monica race.

A Leader in Sports

His place became the chief source of bicycle news and he was one of the leaders on the sport pages of those days. Scarcely a day passed when his name was not in the papers. Business picked up and with it came profit. Mr. Hamlin had heard of power-propelled bicycles or motorcycles as they became known and he purchased an Orient having a 3½ h. p. Astor motor which was the first to be delivered west of the Rocky Mountains. His first motor vehicle agency was for the Orient buckboard in 1903.

There were few automobiles in Los Angeles in those days and what there were needed the almost constant attention of a mechanic to keep them running. Mr. Hamlin became interested as many who had known him in the bicycle business brought their cars to his place to see if he could fix them. Quite a few of the automobile owners soon became discouraged and discarded the vehicles or stored them away with old furniture in the barn. Mr. Hamlin started in buying these up one at a time, putting them in running condition and disposing of them. This represented his principal activity in 1905 when he obtained the Franklin agency.

Profiting by his bicycle experience and realizing the value of newspaper publicity he immediately began to get himself talked about in connection with the Franklin automobile. He had been the dealer only a few weeks when he took a little 12 h. p. Franklin runabout and established a new record from Los Angeles to San Francisco. Im-



Three of the four establishments owned by Ralph Hamlin. Above (right): Headquarters building in Los Angeles; above (left): Pasadena branch from which he sells Reos as well as Franklins; below (right): Hollywood branch

Angeles' Prosperous Business Men

iediately a representative of a more powerful car lowered is Franklin record, so ten days after setting the first iark he again lowered it so decisively that Franklin was egarded as champion for some time.

From 1905 to 1912 Mr. Hamlin participated in about very automobile contest of any kind that was held in outhern California. Road races, dirt track events, hill imbs and all others found him an entrant. He climaxed is racing career by winning the famous Los Angeles-hoenix race in 1912. This was said to have been the ost severe test of endurance for men and cars ever held in this country. It was before the day of paved roads and the drivers had to fight their way across trackless deserts, stopping frequently to change tires, dig boulders from their paths or dislodge the car after it had hung up on a high center.



Mr. Hamlin at the wheel of an early Franklin with which he set a record for the run from Los Angeles to San Francisco in 1905. For years he took part in all runs and competitions in his territory

Takes a New Store

All of this competition had for Mr. Hamlin the single purpose of keeping his name before the public. Moreover the result was accomplished. In 1908 a new store on Olive street, which later became the automobile row of Los Angeles, was occupied. Five years later he removed to his new building built on Flower street three blocks west of Olive and competitors predicted his failure because he had left the row. In 1915 it was necessary to build an addition larger than the original structure and today his headquarters are on the eastern outskirts of the city's automotive center rather than the western.

Mr. Hamlin's grant of territory by the Franklin company did not include at that time all of the eleven counties now known as Southern California. There was another dealer in San Diego. Some years ago when the Holmes air-cooled car was put on the market this dealer preferred that agency to the Franklin. This gave Mr. Hamlin the opportunity he had longed for and he acquired the San Diego territory where he now maintains a branch operation. Other branches owned and operated by him are located in Hollywood and Pasadena. In addition to the Franklin he represents the Reo in San Diego and Pasadena. Although from time to time he has had other agencies, including the Rauch & Lang electric, Scripps-Booth and Selden truck, the Franklin always has been the mainstay of his business.

Although he retired from automobile racing thirteen years ago Mr. Hamlin never has refrained from being involved in some kind of competitive contest that would serve to keep his name and that of the Franklin automobile in the limelight. He was one of the early advocates of the famous Los Angeles-Yosemite Valley economy run which

(*Continued on page* 20)

Taking the Guess Out of Trouble Shooting

Equipment Gives Accurate Report on Motor Car Ills. Dealers Take Advantage of Institution for Reconditioning Used Cars

By B. M. IKERT

The automotive maintenance man who knows with certainty what and where the trouble is finds that his job of correcting it is greatly simplified. He saves time and he turns out a better repair job. He pleases the car owner and writes a recommendation for his own skill. If he is working on flat rate he increases his profits and is able to reduce prices to his customers. Not every automotive repair shop or service station can afford the extensive equipment required for the complete diagnosis made by the Automobile Testing Laboratory in Chicago, but even the smallest shop can work on the principle of intelligent diagnosis as the first step in automobile repairing. The more accurate the diagnosis the better will be the repair job.

REMOVING all guesswork from trouble shooting—that in a few words describes the work of the Automobile Testing Laboratory, 2615 Michigan avenue, Chicago.

This laboratory, which is in no way connected with any dealer establishment, repair shop or garage, hands the owner of a motor vehicle a record sheet after a test of such a vehicle has been made. This sheet gives an accurate diagnosis as to the condition of the various units, engine, transmission, axles, electric units, etc.

The record sheet in reality constitutes a work order, or prescription, to be executed by any service station or shop the car owner chooses. The laboratory does no repair work or adjusting. As the name implies, it is for testing work only and since it is not connected with any specific make of car, no partiality is shown. It is operated primarily to give an unbiased report of the condition of a car brought in for diagnosis.

The laboratory is in charge of Mr. F. E. Edwards, for years chairman of the technical committee of the American Automobile Association. Mr. Edwards has focused in this laboratory his many years of automotive testing work and the result is a line of equipment which leaves little to be desired for accurate and complete diagnosis or trouble shooting.

This laboratory has substituted the word "know" for "think." Instead of telling a customer they "think" the compression in his engine is poor, he is given the exact compression figures. There is no guesswork about the condition of the oil in the crankcase. The customer is given the dilution in percentage. He is told in exact figures how much fuel his engine consumes at 25 m.p.h. In short, there is a definite report about the entire car's condition.

Very few automobile dealers or repair shops can afford the equipment of the Automobile Testing Laboratory. Only with this equipment can one expect accurate reports. No doctor would attempt to tell the blood pressure of a patient without apparatus. Likewise no one can accurately tell the power output of an automobile engine without suitable means for measuring it.

To that end we find in this laboratory a General Electric 75 h.p. dynamometer to measure the engine power and



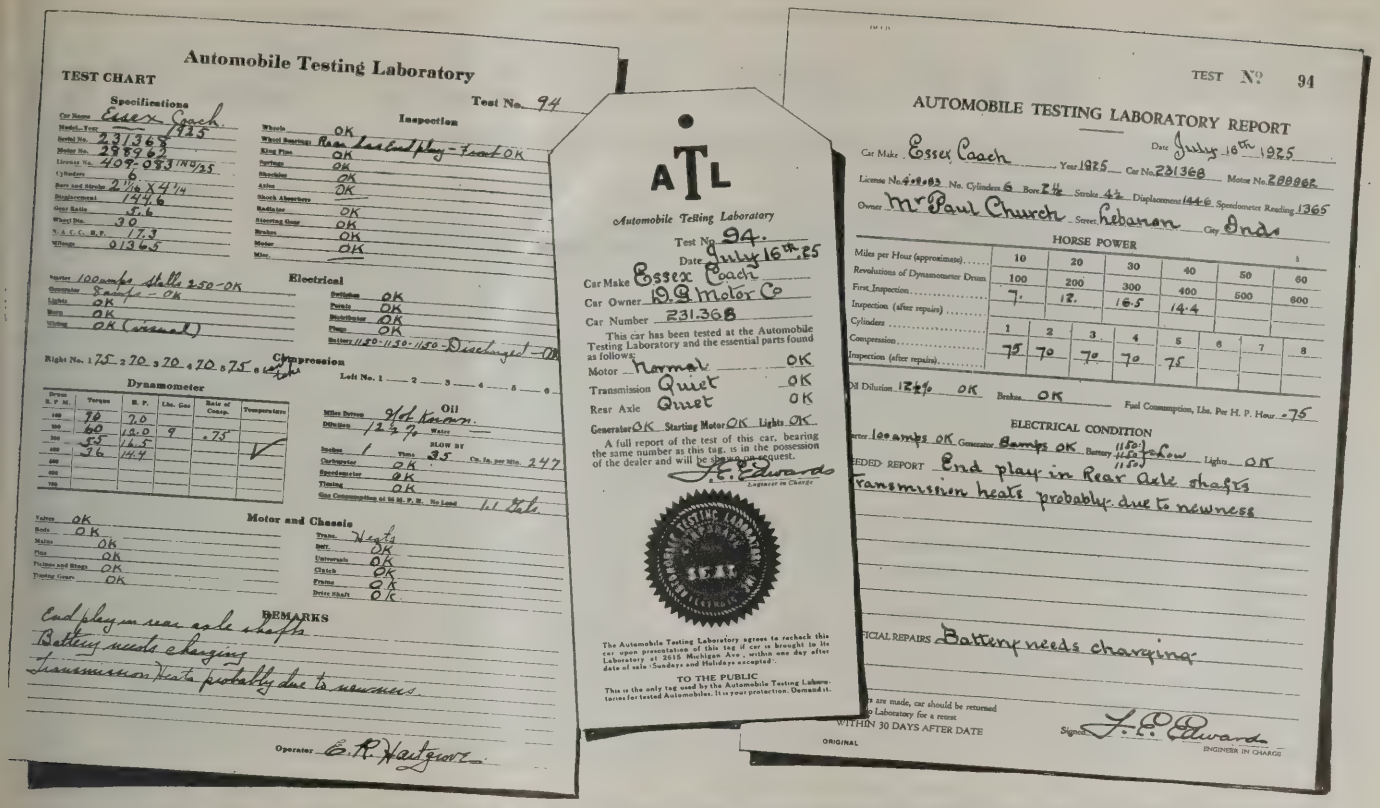
A car being tested on the dynamometer of the Automobile Testing Laboratory to measure the power output of the engine

torque. The rear wheels of the vehicle being tested are i contact with rotating drums in the floor, the drums i turn driving the dynamometer by which the output o the engine is measured.

In addition to the above some of the more importan apparatus includes flowmeters for testing fuel consump tion; blow-by meter, for testing the amount of the charg which escapes past the pistons into the crankcase; com pressionmeters, for testing cylinder compression; ampli fied stethoscope for diagnosing engine knocks and noises electric still, retort and condenser tubes for measurin the amount of oil dilution; ammeters, voltmeters micrometers, etc.

When a car comes in to be tested it first is given preliminary inspection as to the amount of play in th front axle king pins, wheel alignment, shackles, whee bearings, battery, wiring, switches, plugs, etc. The item listed on the test chart reproduced herwith show the com pleteness of the test.

The car is then placed on the dynamometer, means be ing provided for carrying off the exhaust gases. Th



Reproductions made from the record sheets of a car tested at the Automobile Testing Laboratory. In the center is the tag attached to a used car which has been given a clean bill of health by the laboratory.

carbureter is connected to a fuel line coming from the flow-meter and a sample of oil taken from the crankcase is placed in the retort of the still for a dilution test. The various engine tests are then made at car speeds equivalent to 10, 20, 30, 40, 50, and 60 m.p.h. depending on the ability of the car to attain these speeds.

After the tests the reports are made out as shown herewith. But the work does not stop here. Every test carries with it a re-check, whereby the owner of the car is entitled to bring back the car within 30 days to be tested again. This, then, is an absolute check as to whether or not the adjustments or repairs recommended in the first test have been properly made.

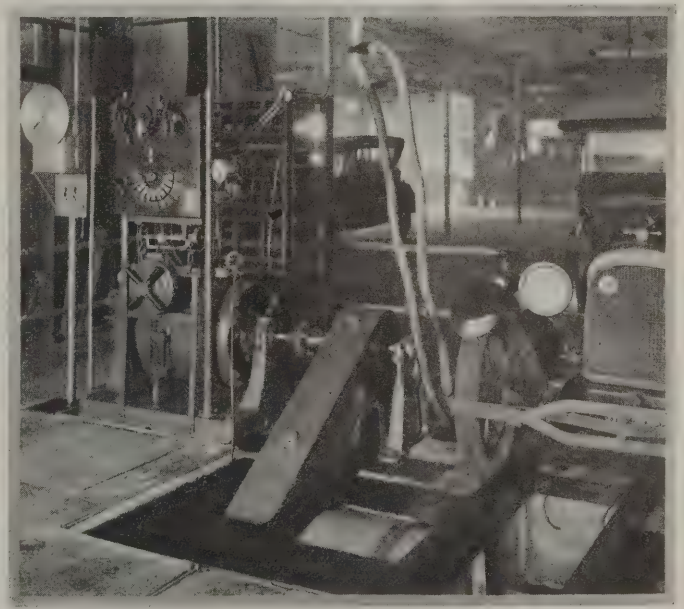
Used Cars Carry Check Tag

Many dealers are taking advantage of the laboratory in reconditioning used cars. By this means they are able to do the work needed to put a used car in shape for resale. Such cars carry a tag showing the laboratory has checked them and when bought the purchaser brings in the car for a re-check to show what the card says is true. This system has simplified the used car selling of various Chicago dealers.

The laboratory also is used for testing accessories. Inasmuch as the power output and fuel consumption accurately can be measured under conditions approximating those of the road, such devices as manifolds, carbureters, fuel saving apparatus, ignition devices, etc., can be tested. Here again, claims give way to facts because dynamometers and flowmeters tell but one story.

It is said to be the first institution of its kind that works for the general public. Nevertheless, dealers and fleet owners are taking advantage of it in various ways. The dealers use it to get the exact "low down" on a car. Or, if an irate customer thinks the service station of the dealer is trying to pile up a huge repair bill, the suggestion is made he take the car to the laboratory for testing. Many a dealer's repair order has been thus written from the report of the laboratory.

Those who contemplate selling certain accessories for which claims of all kinds are made take advantage of it. A representative of MOTOR AGE witnessed a test, for example, on a certain make of valve packing designed to prevent leakage around the valve stems. An engine was tested without the packing and then with the packing, the net result being an increase in power and better idling, as well as better fuel economy. Thus the man wishing to take on this packing had definite figures to show.



A close-up of the General Electric Co. 75 h.p. dyamometer used in the Automobile Testing Laboratory. This shows one of the drums sunk in the floor and on which the rear wheels of the car are placed. With apparatus like this it is possible to test a car at road speeds equal to 10, 20, 30 and more miles per hour

Some *Letters* to the *Editor*

Thinks Discounts Too Low

Corvallis, Ore.

To the Editor of MOTOR AGE:

As a small dealer and trying to keep my head above water, I read with interest every article I can on selling, profit, overhead, and like subjects.

It seems that nearly always the article goes on to tell of the various items of expense which go to make up that awful nightmare, "overhead" and of how to mark up goods to cover it, etc., without apparent regard for one thing and that is, most everything we have to sell is nationally advertised at a certain list price and we buy it at some discount, usually around 30 per cent from this list. Now, how in the world is a person going to mark this article so as to cover "overhead" with all the usual variations, and do it on the discount which is fixed by the manufacturer?

Understand, I am not trying to start an argument, I am seeking information. If overhead is so much and cannot be reduced and there is only so much discount allowed, I cannot figure where the real profit is.

I have been in the electrical contractor-dealer business and the same thing prevailed there. The trade journals were always putting out articles on how to figure costs and mark-ups and the salesman for the appliance companies and the washing machine companies would come and tell us how much money we could make selling their goods, when they would only offer a discount from nationally advertised list price, equal to what our overhead usually was, and which we could not reduce and still do business.

Volume and turnover are of course the main things, we all know that, but when they are somewhat limited what is a person going to do? Quit? Sometimes even that is hard to do without a great sacrifice.

I surely would be glad to get some light on this subject. It seems to be wrong some way. It would seem that it is the greatest encouragement for a dealer to handle so called "gyp" or "pirate" that could be found because of the low cost of this class of stuff, but it gives a dealer a living profit.

I would be glad to hear from you on this subject as I am vitally interested in it.

W. G. CUMMINGS,
Exide Battery Service.

German Automotive Conditions

Blenheim, Germany

Mr. B. M. Ikert,
Technical Editor,
Motor Age.

Dear Mr. Ikert:—

As a constant reader of Motor Age I am interested in articles appearing under your name and at the moment of writing I have before me a copy of Motor Age dated April 9 and have just read with interest "Tying up Equipment with Sales."

We operate a Ford Sales and Service Station. Our town, Blenheim, carries a population of 4,000 and is in the center of a farming community.

There are nine garages in addition to several "Back Door" mechanics so that it will be seen the motoring public are well catered to. Six of the garages have car agencies and competition is surprisingly keen—unfortunately not free from knocking. In one instance one of our friends makes a practice of carrying a Ford Rear Axle Shaft and Crown Wheel and we have naturally felt the knocks.

Going back to our own garage. We employ a staff of twelve made up of sales manager, clerical two, road men two, mechanics five, day floorman one, night floorman one, and we think it would be difficult to find a more united family than ours. This, of course, spells to a very large extent, success. We do not confine our servicing activities to Fords and have a very large following in most other makes. It is here we find the advantages of labor saving tools and on comparing our appliances with the chart shown by you on page 10 Motor Age, April 9, 1925, we are close in line with your majority. Comparatively with the chart mentioned we use the following:

Lathe—Yes.
Drill Press—No (Use a Portable Electric Drill).
Power Grinder—Yes.
Arbor Press—Yes.
Air Compressor—Yes.
Welding Outfit—No.
Cylinder Tool—Yes (K. R. Wilson boring machine for Fords).
Hoist—Yes.
Engine Stand—Yes.

No doubt you are a busy man but any time you have an opportunity of exchanging greetings we will be pleased to hear from you.

Perhaps we will have a chance of calling on you at some future date. In the meantime, we will continue to use Motor Age with profit and pleasure.

With kindest regard,

H. R. DIX & SONS, LTD.,
HERBERT R. DIX,
Central Garage.

A Warning

Wichita, Kans.

To the Editor of MOTOR AGE:

For the good of the automobile industry and those concerned I submit the following which might be well to publish:

On June 11, 1925, a man representing himself to be a salesman for a tire supply house drove up to my service station and presented samples of what he called Corduroy tires and persuaded me to put in a stock, fabrics 30x3 and cords 30x3½ and sizes in general use, mostly 30x3 and 30x3½, and tubes representing the amount of near $200, which would be shipped from their warehouse in Kansas City, Mo., immediately and they would stand all responsibility of fire and theft and give me six months to pay for them. At that time salesman would call and ship back to company all goods I had on hand and replenish with new stock which I would have to pay the return freight on.

They furnishing display signs, etc. and giving me a duplicate bill of my order out of a supposed to be "to-date" order book, and all was needed was a deposit of $26.50 for freight, but this would be deducted from my payment. I gave check which he said would be mailed with order to company.

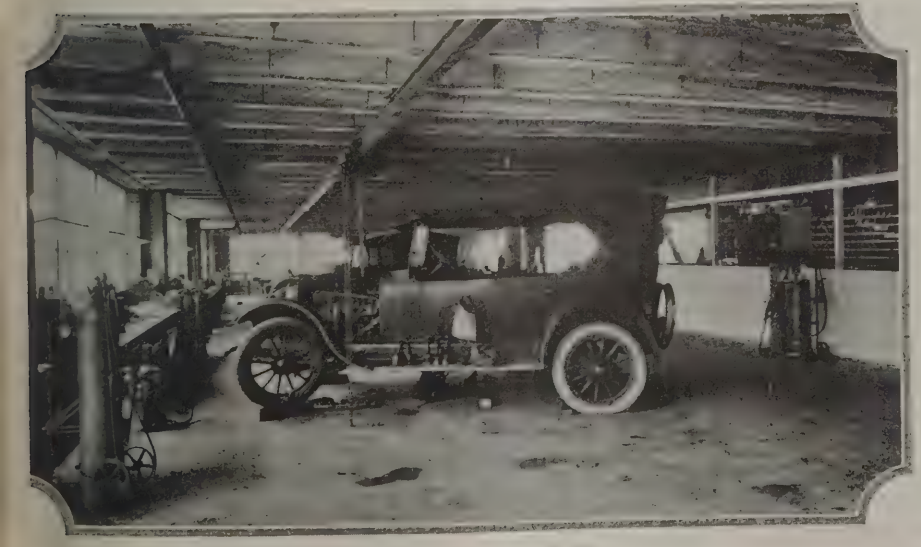
A week passed and after inquiring several times about arrival of goods as freight here, I wrote company and my letter was returned "Unclaimed." So I have decided this is a complete swindle by this Mr. I. Benson, as he cashed check here by his own signature and if you cannot locate any firm by this name and address I think it would be of some help to expose this culprit's method to our fellowmen. L. G. DUTCHER.

Up-to-Minute Home of St. Louis Dealer



Picture above shows exterior view of he new sales and service building which recently was opened by the West side Buick Auto Company, of St. Louis t Kingshighway and McPherson street. t is a two-story brick structure, commodious and contains all modern features. Ground was broken for the building in September, 1924, the finishing touches being made early in April. The company moved into the new place rom its old location, 5023 Delmar avenue, on March 15. David E. Castles is resident of the company, while Waldo V. Wilson is vice-president.





The center picture offers a glimpse of the main showroom, 40 by 99 in dimensions. Its appointments and decorations are very attractive. The picture to the left shows the shop on the first floor for light service work and adjustments. The main shop for major maintenance work is on the second floor. There also is a used car show room and a parts department where replacement parts are stocked as well as other features.

Some Things to Observe in Using Pyroxylin Finishes

Constructing Building and Spray Booths to Lessen Fire Hazards. Storing the Materials. Heating the Building

By B. M. IKERT

THERE has been some agitation of late regarding the fire hazards created by the use of various enamels, lacquers and other finishes having nitrocellulose as a content. Most of these finishes are in the alcohol class having a low flash point and the hazard is similar to that of paints and varnishes in general.

Since pyroxlyn finishes are sprayed on and as the thinners used are highly volatile with quick drying characteristics of the finish itself, fire hazards in general can be greatly minimized by proper ventilation.

Some of the manufacturers of pyroxylin finishes caution their users when using the materials as regards fire while some manufacturers claim that there is no more danger in a paint shop with the new finishes than with the former paints and varnishes.

In the belief, however, that the motor car finishing institution might as well take no chances we publish herewith some of the things set forth in the report of the committee of The National Fire Protection Assn. or Manufacturing Risks and Special Hazards as to pyroxylin finishes.

Store in a Cabinet

If more than one day's supply of pyroxylin finish and thinner is kept in stock, it should be stored in a cabinet, tightly enclosed and made of sheet iron at least No. 18 U. S. gage in thickness and double walled with 1½ in. air space, or equivalent construction. Doors should be of construction equivalent to walls, provided with 3 point locks and kept closed when not in use; door sill should be raised at least 2 in. above bottom of cabinet. Cabinet should be vented 3 in. above the bottom and close to the top by a vent pipe having an area of not less than 10 sq. in. and made of metal not thinner than No. 22 U. S. gage with lapped seams and riveted joints; vent pipe should be kept at least 6 in. from combustible material, extend directly to outside air and terminate in a hood or shield.

Quantities of pyroxylin finish and thinner exceeding 50 gal. should be stored outside; or if inside, in a small storage and mixing room separated from the remainder of the shop by walls of material and construction as indicated below, but under no circumstances should storage inside a building exceed 250 gal.

Walls may be of the following construction and should be continuous from floor to ceiling and be securely anchored:

Reinforced concrete.

Brick.

Expanded metal lath encased in solid cement plaster not less than 2½ in. thick.

Gypsum or cement plaster at least ¾ in. thick on metal lath on each side of a stud partition.

Tile, gypsum or concrete block (cement plaster on each side to a thickness of ¼ in.)

In lieu of the foregoing any type of partition construction may be used which will afford one hour's protection.

Ceiling unless of fire resistive construction should be protected with cement of gypsum plaster on metal lath or its equivalent.

Walls in frame buildings should be protected with cement or gypsum plaster on metal lath or its equivalent as specified for ceilings.

Floors unless equal to 2-ply matched boards and free from cracks and other openings should be protected with 2 inches of concrete.

All openings should be protected with fire doors of approved automatic or self-closing type, suitable for use on openings in corridor or room partitions and conforming as to installation with the Class C requirements of the National Fire Protection Association's regulations for the Protection of Openings in Walls and Partitions Against Fire.

Artificial lighting should be restricted to electricity with installation in accordance with the requirements of the National Electric Code for extra hazardous locations.

As previously indicated adequate ventilation is of pronounced importance and care should be exercised to insure the installation of a system capable of completely removing the vapors and thereby preventing the accumulation of combustible mixtures.

Natural ventilation, such as ordinarily provided for oil and paint houses is preferable. Ducts should be of substantial metal construction extending above roof of building and terminating in an efficient suction creating device and having screened opening at floor level.

Thinner when obtained in metal drums should preferably be stored outside of building or in the above de-

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G. J. NIKOLAS & COMPANY
1227 W. Van Buren Street
Chicago, Ill.

The Class Journal Co.,
5 S. Wabash Avenue,
Chicago, Ill.
Gentlemen:

Your letter of June 25th with attached reprint has been received and most very carefully read.

The article is well gotten up but we believe the equipment suggested is rather large for a small refinishing plant. Special containers for spraying, although very good where a large number of cars of the same color are being put through is not advisable for the average custom shop.

We note that you expect to establish flat rates for service station work. This, of course, is not in line with business principles, in our estimation. Supposing one man is very capable and turns out a high grade job, and another is incapable and turns out a poor job, due to nothing more than his own carelessness and negligence. Surely no one would want to pay as much for a job produced by the latter as by the former, would they?

We believe that great stress should be placed on the proper preparations on the work, before applying the lacquer. Results depend entirely upon this, more so than anything else.

—G. J. NIKOLAS & COMPANY.

scribed storage and mixing room. Mixing operations should preferably be carried on in the storage and mixing room, but mixing operations on a small scale can safely be effected in the spraying room or booth provided the amounts exposed are reduced to a minimum and the ventilating system is in operation.

Spraying should never be permitted in basement or below grade floor, of a building. If individual non-combustible spray booths are not used, spaces in which cars or other materials are refinished should be separated from the remainder of the shop by partitions of fire retardant construction such as wall board on wooden studding, cement or gypsum plaster on metal lath on wooden studding or wooden studding covered both sides with galvanized iron or its equivalent. Doors at openings in spray room partitions should be equal in fire resistance to the partitions and be of self-closing type or be installed so as to close automatically.

The ventilating system should be capable of effecting a complete change of air every three minutes and be provided for each spray booth or spraying room. Fans and exhaust outlets should be located several feet above the floor and discharge directly outside of building. Installation should be in accordance with the requirements of the National Fire Protection Association for Blower and Exhaust Systems for removal of flammable vapors.

If shop is so located that direct outside discharge cannot be obtained ducts should be run directly outside of building and to a safe point above roof. The fan is direct motor driven, the motor should be of the non-sparking induction type and shielded to prevent vapors or dust coming into direct contact with it. If fan is belt driven, the motor should preferably be located outside of room or at least at ceiling of room. Motor should never be placed directly beneath floor or spraying room. In general installation of all electrical equipment should be in accordance with the requirements of the National Electric Code for extra hazardous locations. This will also require switches, fuses and rheostats controlling ventilating fans, also switches and fuses in connection with the lighting system or equipment and including air compressors to be located outside of spray booth or room. Belts and fans should be electrically grounded in an effective manner in order to guard against static electricity. All wiring should be in metal conduit and lights protected by vapor-proof globes.

The use of open flames or spark producing devices in storage or mixing rooms, storage cabinets, spray booths, or rooms or in close proximity to same should be prohibited. For heating purposes only indirect systems such as steam, hot water or hot air should be employed. It is also important that spray booths or rooms be kept free from all unnecessary combustible material.

The material above was taken from the Report of the Committee on Manufacturing Risks and Special Hazards of the National Fire Protection Association, Boston, Mass., and some of the things set forth are subject to change before the final adoption of the report.

ALSO APPLIED LACQUER OVER OLD FINISH

New York.

To the Editor of Motor Age,

We received a copy of Motor Age of July 23 for which we thank you.

We note that on page 15 of the July 23rd issue of Motor Age, you have inserted a letter from the Sherwin-Williams Co., an extract of which reads:

"There are a number of expensive cars running in New York City today that have been on the road for two years and look practically as good as new that were finished with our Clear Binder and Binder Surfacer by our Mr. Saxe a couple of years ago."

In connection therewith, we advise that in April, 1924, the Holbrook-Hughes Corporation was organized and it succeeded The W. H. Hughes Co., Inc.

From the time of our incorporation in April, 1924, until January of this year, Mr. Arthur Saxe was employed by this corporation, prior to which he was for several years employed by The W. H. Hughes Co., Inc., whom we succeeded in April, 1924, and who then were and we still are manufacturing "Enamo" Pyroxylin Lacquers. During Mr. Saxe's connection with The W. R. Hughes Co., Inc., and the Holbrook-Hughes Corporation, many expensive cars were finished with our "Enamo" Pyroxylin Lacquers and Binder, manufactured and sold by us, and these cars are running in New York today.

As we know that it is your intention to publish interesting facts correctly, we are writing you as above. Always at your service.

HOLBROOK-HUGHES CORPORATION
Albert Farjeon, Vice-president.

New Air Yacht Christened

Marking what may be a new era in transportation, the Goodyear Tire & Rubber Company's new air yacht, "The Pilgrim," was christened recently at tow flying field, Akron, Ohio.

P. W. Litchfield and other officials of Goodyear believe that development of the air yacht has paved the way for future travel in the clouds, both by commercial and passenger craft.

"The Pilgrim" is driven by a 60 h. p. Lawrence radial motor. It consumes no more gasoline and oil than a high powered automobile, according to engineers. Maximum speed is about 65 miles an hour.

The little ship is the smallest blimp ever constructed, being one-fiftieth the size of the Los Angeles. It can be manufactured as cheaply as a high grade automobile, it is said.

The ship is 110 feet long, and the bag is 30 feet in diameter, holding 50,000 cubic feet of gas. Accommodations are arranged for four persons.

Invention of portable mooring masts, to which the small ships may be anchored is expected soon to bring about their general use, according to Mr. Litchfield.

"The Pilgrim" will be in command of J. N. Yolton, manager of aeronautical work at Goodyear, during tests and trips this summer. A. C. O'Neal will be motor mechanic.

The air meet at which "The Pilgrim" was christened was the preliminary event of Akron's centennial celebration week. Many army balloons and fliers took part.

All the tire manufacturing companies entered elaborate and artistic floats in the big parade.

A feature was the float of the Miller Rubber Co., representing a tropical beach scene, with bathing girls clad for the surf. It was mounted on a large truck, carrying three tons of water into which Miss Mary Porter, swimming champion, of Ohio, dived.

WATCH FOR HIM

ATLANTA, Ga., Aug. 1.—Jobbers and dealers in the automotive field over the Southeast are being requested to keep a sharp lookout for a man going under the name of Robert L. Grant, who recently organized at Birmingham a firm known as the Motor Service Clubs, Inc., with branches in several towns and cities throughout that state. Memberships were sold to automobile owners on the promise of a free wrecker service and a liberal discount on tires and other accessories. Grant recently disappeared leaving behind him, it is alleged, a trail of worthless checks.

Longer Chassis and New Bodies Feature Latest Jewett

Adoption of Coincidental Lock on the Steering Gear and Fitting of an Air Cleaner Are Among the Changes Made—Price Reductions Ranging From $15 to $120 Announced

NEW bodies of improved design with more attractive color combinations and mounted on a longer wheelbase chassis, adoption of a coincidental lock on the steering gear, and several minor changes on the chassis including the fitting of an air cleaner, constiute the changes which are included in the latest series of the Jewett Six cars.

Compared with the previous standard equipped models, price reductions ranging from $15 to $120 are made, while five body styles instead of eight comprise the line. As announced by the Paige Detroit Motor Car Company, the new Jewett prices are as follows: DeLuxe roadster $1500; DeLuxe touring $1320; Standard coach $1245; DeLuxe coach $1400 and DeLuxe sedan $1680. While these prices represent the advertised list, all cars are factory equipped with the Paige-Lockheed four-wheel hydraulic brakes for which there is an additional charge of $40.

Increasing the wheelbase by 3 inches to 115 in. with corresponding lengthening of the propellor shaft, frame and running boards, has allowed the bodies to be made roomier and more comfortable, the additional space gained being added to the rear compartments. The new models form a striking contrast with the previous line because of their longer appearance, most noticeable in the cowl lines, built-in sun visors and more colorful finishes, the latter being in permanent lacquer as before. Both the sedan and roadster are finished in the popular two-tone design, while the other three models are of the single tone effect with jet black mouldings and tops.

Steering Gear Lock Provided

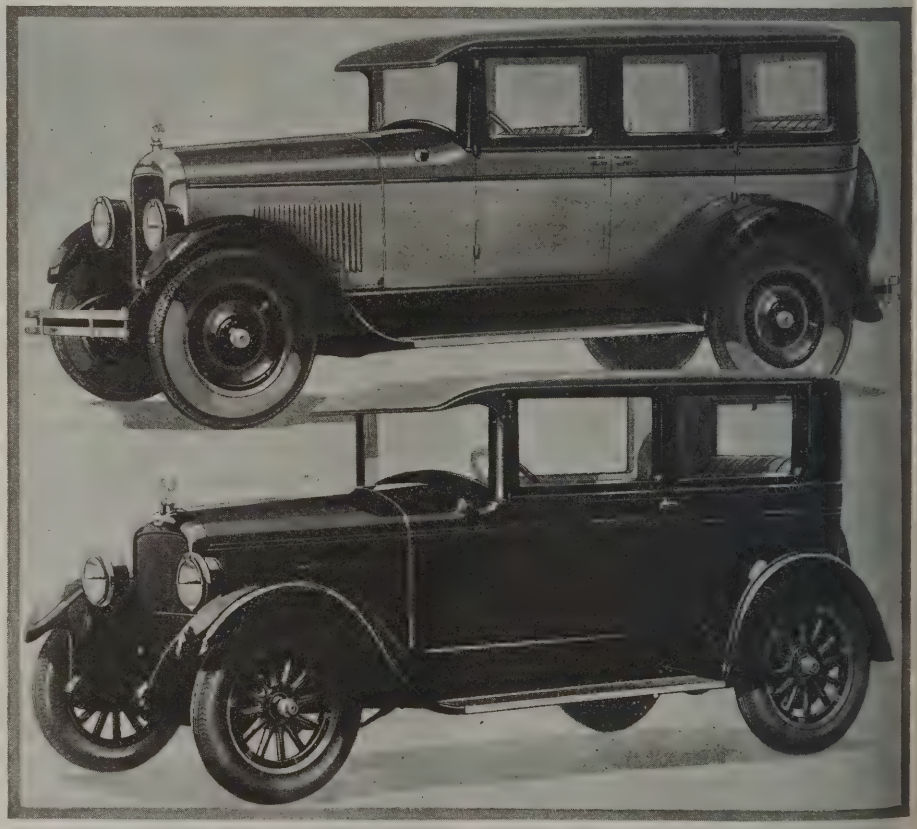
Greater protection from theft has been assured on the new models by the fitting of a "Hershey" coincidental lock which simultaneously locks the steering gear when the ignition switch is turned off. The steering gear is locked by a plunger which engages with the wheel shaft through the lock mounted on the column at the dash in which unit the switch mechanism is also embodied. To avoid locking the wheels when it is desired to switch off the ignition as in the case of descending steep hills, a small press stud is provided on the lock which enables the ignition circuit only to be opened, leaving the front wheels under control. A larger stud protected against accidental operation, locks the wheel and ignition.

An original and interesting feature on the new Jewetts to keep the front compartment free from engine heat in the summer time cold drafts in the winter and eliminate possible rattles, is the adopting of a ball and socket type of clutch and brake pedal action. This style of construction enables the pedal shanks to be fitted very closely to the front floor board, and also prevents the possibility of their binding.

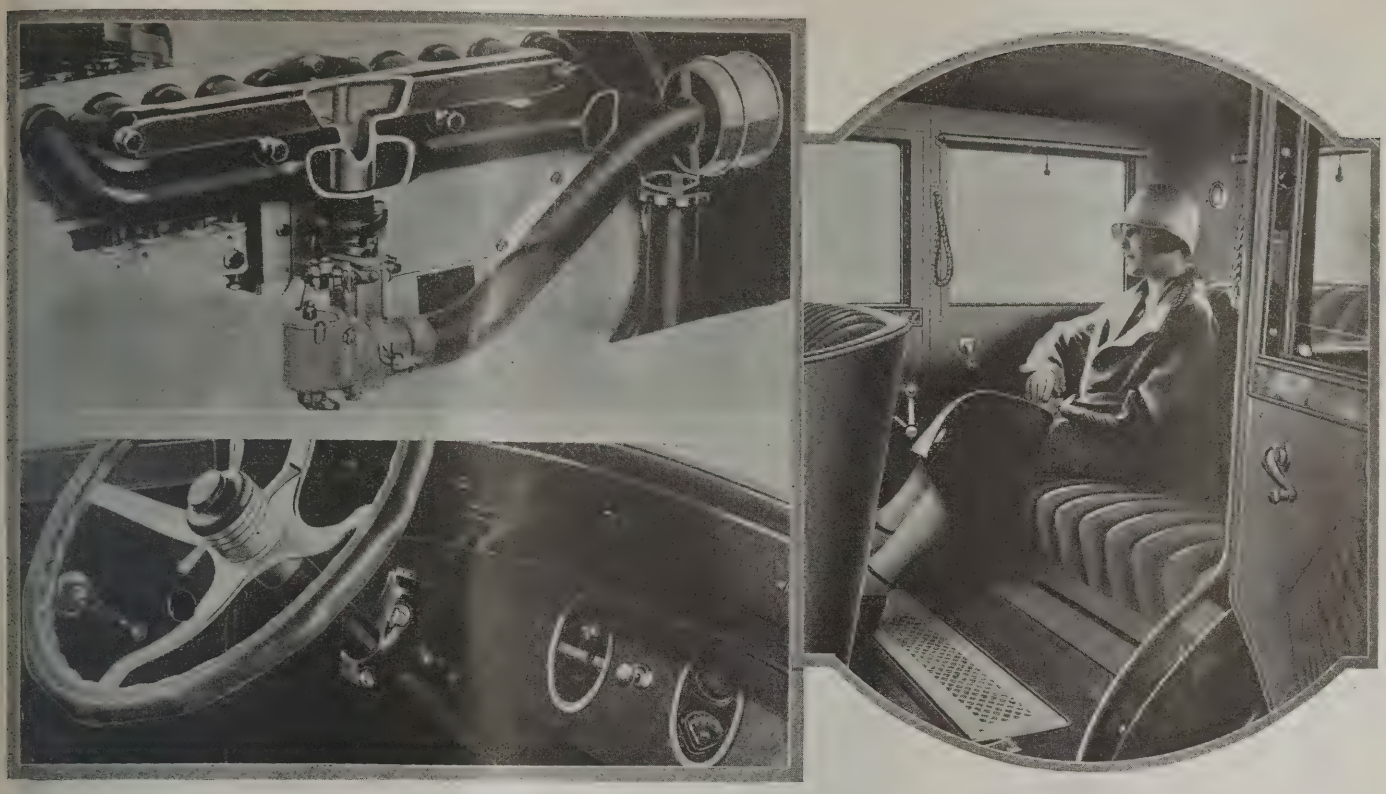
An Ireland and Matthews air cleaner of the inertia type and located just to the rear of the fan is now fitted to the carbureter intake on both the Paige and Jewett cars.

With the exception of a bigger and heavier counter-balanced crankshaft recently adopted on the Paige, no important changes have been made on either engines. On all body models now, the spare tire carrier is located at the rear and in this position adds very little to the overall length because the tire together with the rear quarter bumpers, with which the de luxe models are fitted, do not require as much room as the previous cars which were equipped with the full width type bumpers.

Single lamp headlights employing a bulb with two filaments, one of the latter as a dimmer, are now carried on a heavier and more substantial tie-rod. Where the headlights are attached to the fenders and tie-rod, a casting replaces a pressed steel connection previously used, also with this new style, the headlight wires are hidden from view and insured further protection from possible damage. To make the control of the lighting system more convenient for the driver, the switch has been removed from the dash board and is now mounted in the center of the steering wheel. Other improvements in the electrical system include the addition of parking cowl lamps to match the headlights and an indirectly



Two of the Jewett closed models, the DeLuxe sedan, top, and standard coach



Details of the new Jewett cars. At the top is the air cleaner installation and below it the instrument board layout and steering wheel. Right, rear compartment showing the additional room gained by increasing chassis length slightly

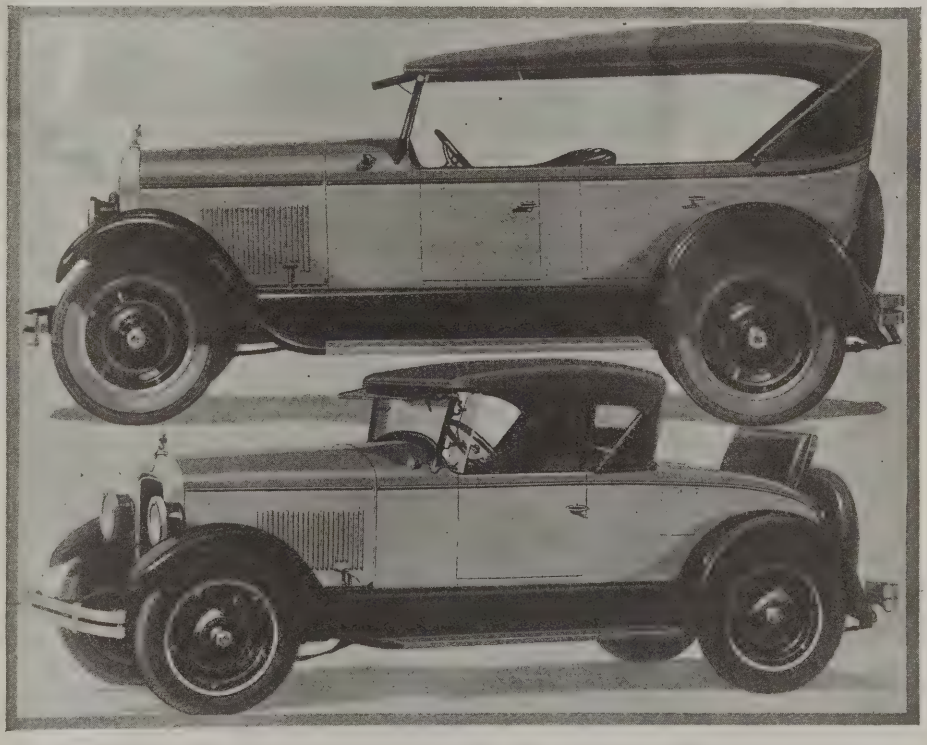
lighted panel on the dash, the latter being of finer design. Larger hub caps of sturdier construction and improved appearance are fitted on the new models.

More Room in Front Compartment

While the moving of the clutch and gearshift levers 3 in. farther forward has allowed considerably more room in the front compartment of all bodies, this change is particularly advantageous in the case of the coach models. Where traffic conditions make it inadvisable to leave the car on the left side, the driver can leave from the right door without disturbing any of the passengers, while, of course, it is possible for passengers to enter the rear compartment without troubling those in the front seat.

Among the body refinements of the enclosed models are the wing type inside door handles, which are very similar to those used on the Paige, a novel feature is the installing of ash trays in the arm rests of the sedan and the built-in visors over the windshields. Both the de luxe roadster and the de luxe sedan are finished in the same two-tone color style, the scheme being Arizona gray with a darker shade, Pueblo gray, above the belt moulding. A cordline stripe of Old Ivory extends below the moulding. The same color scheme is used on the de luxe touring and the de luxe coach, the finish being in Beige Brown and trimmed in ivory stripes set off with jet black moulding. The standard coach is offered in Bolling green finished also with ivory striping with black moulding. Jet black lacquer is employed for the tops of all closed cars while with the exception of the standard coach, all radiators are nickel plated.

Equipment on the de luxe models includes one spare tire with cover and rim; full bumpers front with quarter bumpers on rear; rear view mirror; combination stop and tail-light; automatic windshield wiper; and heaters in the closed cars. Excepting the standard coach which has artillery wheels, all cars are supplied with steel wheels as standard equipment.



Jewett open models consisting of the DeLuxe touring and DeLuxe roadster

European Used Car Plan

An unusual method of hanlding used cars is being successfully employed by one of the leading French dealers in American automobiles, according to the Automotive Division of the Department of Commerce.

When the prospective purchaser of a new car wishes to trade in his old, the dealer enters into a supplementary contract with him, by which it is agreed that in case the old car cannot be sold by the dealer at a fair price and within a specified time (usually two weeks), the purchase of the new car will not be consummated.

The "fair price" is arrived at by agreement between the dealer and the owner of the car to be traded in. Two special salesmen are employed by the dealer as "used car experts" and their efforts figure largely in the successful operation of the plan.

It is stated that not a single sale of a new car has been lost by this method, and that the dealer is always protected against accummulation of used car stocks. The dealer who evolved the plan based it upon seventeen years' experience in selling automobiles in Europe.

CODE OF ETHICS FOR MOTORISTS

WASHINGTON, July 31.—A committee of nationally prominent men to act as a drafting body for a Code of Motoring Ethics, being sponsored by the American Automobile Association, will be named in the near future, President Thomas P. Henry announces here. The code is designed as a standard of conduct for drivers of motor vehicles over here, and is looked forward to as one of the important features of A. A. A. activity in behalf of safety during the remainder of the 1925 season.

"What we need," says President Henry in explaining the need for the code, "is the establishment of an honor system on the roads. The promotion of such a system would be materially helped if there was in existence such a code of motoring ethics such as the American Automobile Association is now sponsoring. Nothing like it has ever been attempted before and there is every reason to believe that a few simple rules based on experience, common sense and common decency would receive an immediate response from the motorists of the country."

Sells Same Make of Automobile 20 Years

(*Continued from page* 11)

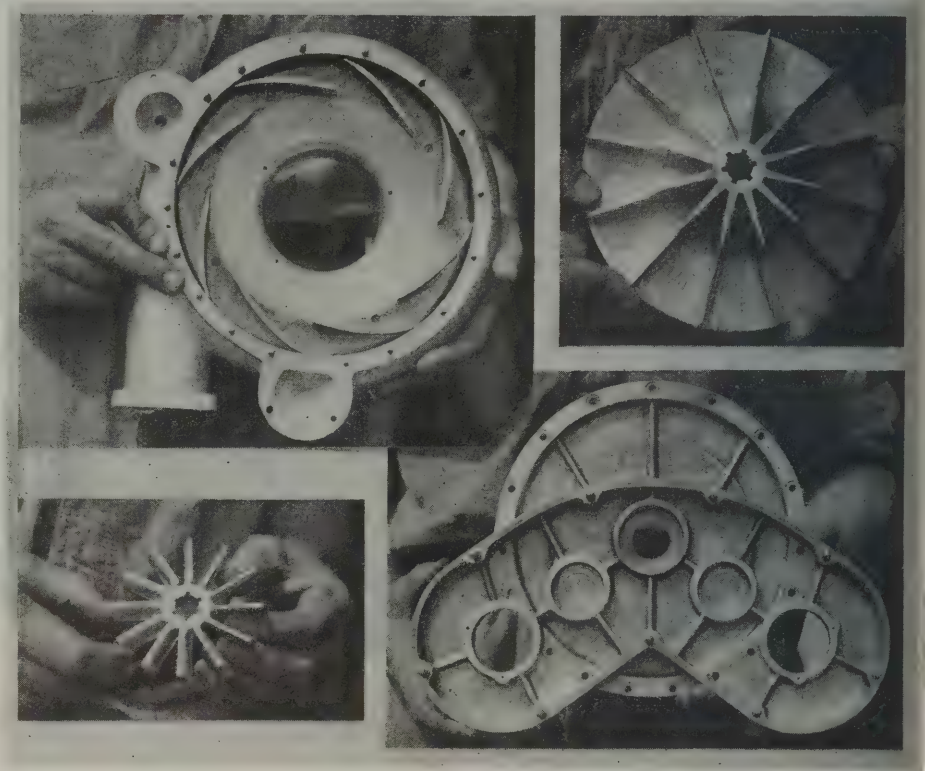
was won by a Franklin car in 1917 and again in 1919. He also was first to drive an automobile up the famous Mt. Wilson road. He participated in all the Franklin factory economy demonstration runs and today has a collection of silver trophies and medals symbolical of his various triumphs that is sufficient to stock a jewelry store.

To provide further opportunities for newspaper publicity, in 1921 he placed a Franklin car exclusively at the disposal of his advertising department. This was known as the Franklin Camel. There have been two successors to this original car and it is probable that more newspaper space has been devoted to stories featuring these cars than any others in the United States.

Several years ago Mr. Hamlin inaugurated a type of advertising new to Los Angeles under the caption "Ralph Hamlin Says." Later the caption became "Franklin Talks by Ralph Hamlin." Each advertisement was a personal expression and usually featured by a picture of Mr. Hamlin and a reproduction of his signature. Other progressive business policies have featured his activities and in 1923 he won the national Franklin sales championship for dealers which was conducted on the basis of population served.

Today Mr. Hamlin is regarded as one of Los Angeles' best known and most representative business men. Never caring for politics or public offices he nevertheless has participated in practically all civic enterprises. He has been a consistent money maker as is shown by his rating with financial agencies. He is an exponent of the possibilities confronting automobile dealers who operate on strictly business methods and do not hide their light under a bushel. He has not sought the limelight but has done things which kept the rays turned in his direction.

Miller Supercharger



Many of our readers have been wondering just what the inside of a super-charger looks like and so we arranged to have these pictures taken of the components making up the supercharger on the Miller racing cars which ran at Indianapolis this year. At the upper left is shown the housing in which the impeller at the right revolves. The latter is made up with diffusing vanes which force the incoming air to the outside of the housing, where it is collected and sent to the carbureter air intake. Below at the left is the apparatus known as the entrance buckets, placed directly in the center of the housing ahead of the diffusing vanes The entrance buckets take in the air without shock. The cover to the housing is shown at the right below.

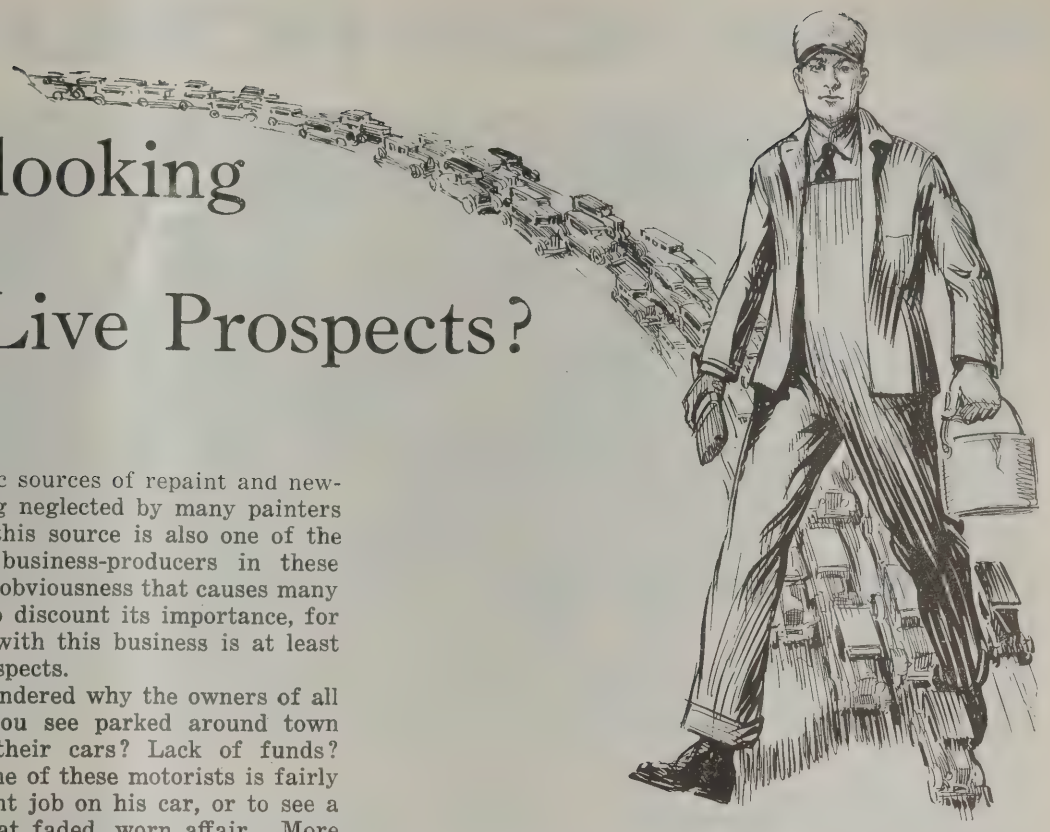
Gives Buyers Free Airplane Rides

Griffin Vance of the Used Car Exchange of Jack Neal Nash company, San Antonio, Texas, evolved another scheme which resulted in disposing of guaranteed used cars.

This time he gave every buyer of used cars a ride above the city of San Antonio in an airplane. In the ten days in which he tried out the plan he showed San Antonio from the air to 35 different persons, the majority of whom were women. That meant 35 used cars disposed of in ten days, and Mr. Vance says they were all sold on the lure of a prospective air trip. Each of the buyers demanded the air jaunt in connection with the purchase.

Mr. Vance declares the plan will be repeated from time to time. Besides selling 35 used cars in the ten days he found 70 prospects for new cars. Mr. Vance is an expert flier and personally conducted buyers on the air excursions.

Are You Overlooking Live Prospects?



ONE of the most prolific sources of repaint and new-top prospects is being neglected by many painters and trimmers. Yet this source is also one of the most obvious and certain business-producers in these lines! Perhaps it is its very obviousness that causes many otherwise competent firms to discount its importance, for nearly every one connected with this business is at least aware of this source of prospects.

Of course, you've often wondered why the owners of all these shabby automobiles you see parked around town don't take more pride in their cars? Lack of funds? Perhaps; but nearly every one of these motorists is fairly "itching" to have a new paint job on his car, or to see a neat new top in place of that faded, worn affair. More than anything, they need a timely and forceful "reminder" from some trimmer or painter. Once that smouldering desire for this badly needed renovating is awakened within the motorist's breast, he will have the work done.

Now, did you ever take a note-book and pencil and put in an hour or so making memorandums of the license numbers of these cars you see parked along the curb downtown? And did you then take or send this list down to the court house to find out the names of the owners—and, after that, get in touch with these people through letter or by telephone? If you have done all these things you know that it pays. If you have been putting it off, you have been passing up one of the most logical channels to increased business that you have access to.

Naturally, there are qualifying angles to this plan. First, there is the matter of selection. In listing these cars, it is well to eliminate the very old and out-of-date models, as the possibility of a successful appeal to the owners' pride is rather remote in connection with such cars.

Next, there is the kind of letter you will write to your selected prospects, if you write to them instead of using the telephone—and the letter is generally the more satisfactory. The other factors are: Following up your letter or call through further letters or solicitation, until you get a response or are reasonably well satisfied that further solicitation would be without result; interviewing those prospects who have responded to your letters; and giving the kind of service on those jobs you secure, that will cause the owners to advertise you favorably to their acquaintances.

Here is a form of letter that has proved effective. It can be re-written according to your requirements:

Dear Sir:

If magic were real and some of your choicest wishes could be granted, I'll bet that one of them would work out something like this: You'd step out of your front door the next sunny Sunday morning the weather man sends us, and see that car of your standing at the curb, all spick and span in a perfect, new dress of paint—ready to take your proud wife and tickled kiddies (or your best girl) out for a ride. (And a newly painted car always runs better anyway, you know!)

Well, the days of magic are not quite so remote after all. That wish can come true, and with surprising promptness and moderate outlay. We can completely refinish your car nicely in two days—or we can take ten days and turn out a super finish that will fairly dazzle you and that will be practically wear-proof.

Doggone. Now I'm all excited about that job myself. I can just see that——of yours all dressed up in a Super-Crystallite Finish that will make you as pleased as we will be to have turned out this job for you. You see, the boys in our shop are really artisans—skilled craftsmen who feel a glow of honest pride over every car that they refinish.

How about dropping in and talking this matter over with us? The writer, personally, will enjoy chatting with you about our different delightful tints and beautiful color-combination suggestions, as well as about our different processes of application. Come in and spend an interesting half-hour or so in our office and shops. Whether you decide to buy now or not, we shall enjoy telling and showing you how we do things here and just why our customers are our best boosters.

Make that wish come true. Drop in some day real soon and let's talk it over together.

Very truly yours,
SMITH & SMITH,
(Signature) TOM SMITH, *President.*

A second and third letter, each somewhat stronger than the preceding one, will frequently bring results where the first one did not. A simple card file of these prospects, with a memorandum of the dates the letters were sent out, make of car and other data, will prove a great help in connection with this business-getting plan.

But the important thing is to not neglect the excellent prospects that these shabby cars represent.

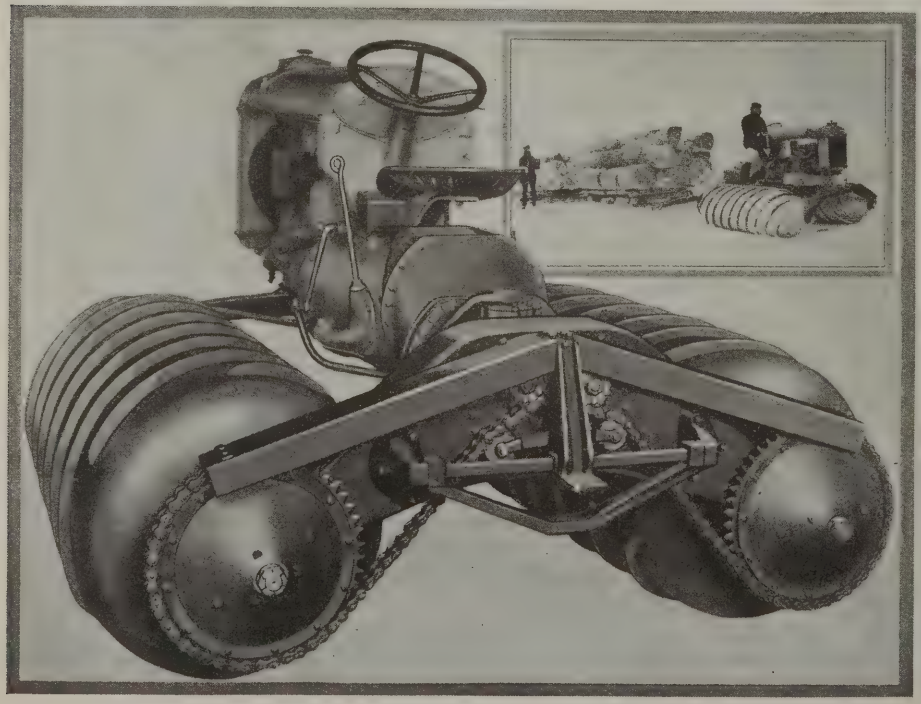
MOTOR AGE'S PICTURE PAGES



IN FAR OFF AUSTRALIA. The International Motor Show held at the Exhibition Buildings in Melbourne in May has been heralded as the most successful ever held in Australia. The attendance was 85,000. As only 55,000 are necessary to show a profit, the money from the extra admissions is pro rated among the exhibitors to reduce their expenses.

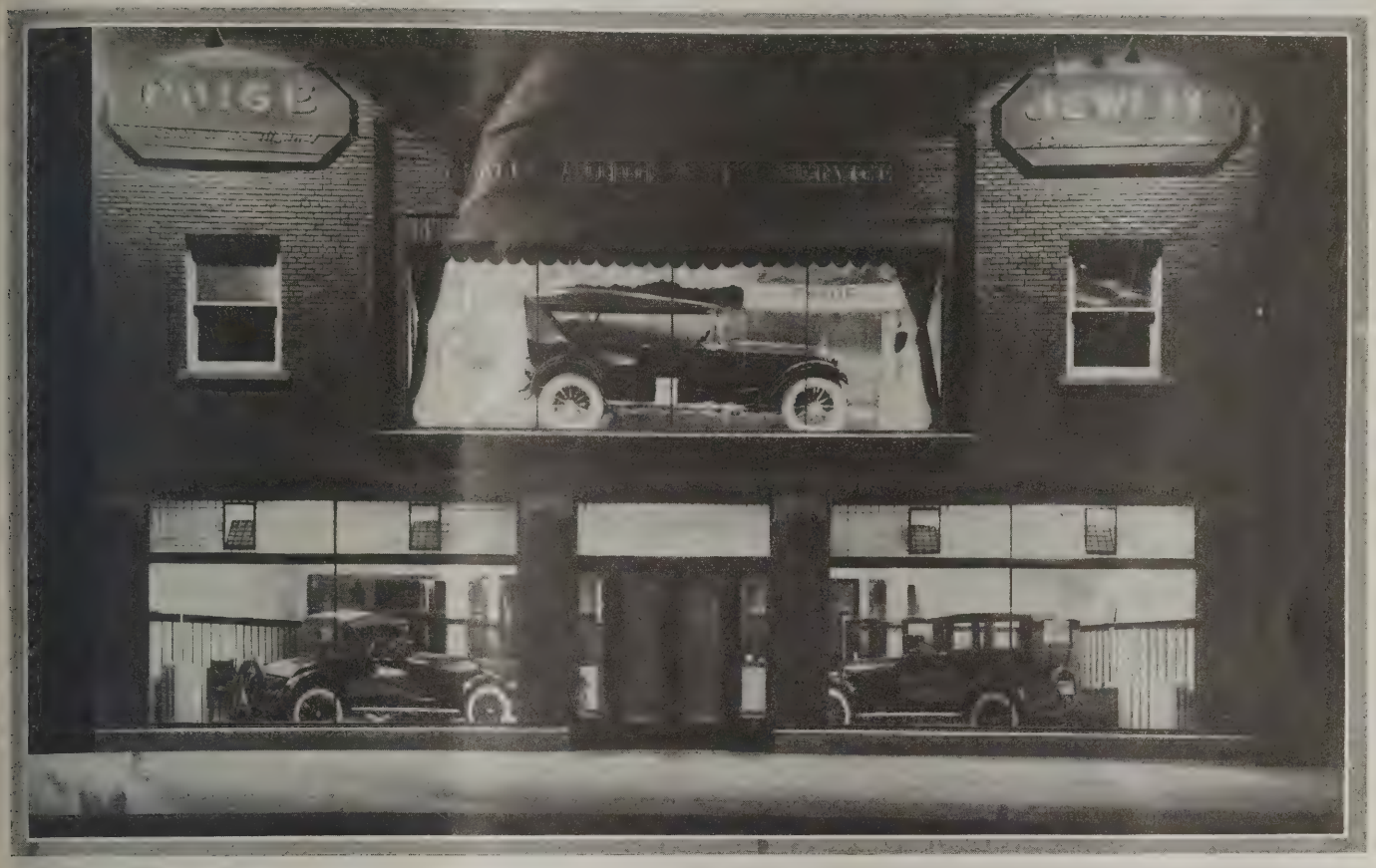


ANNIHILATORS OF SPACE. Air Mail Pilot Lloyd Bertaud is shown with the mail plane he uses in flying between Cleveland and New York, and his new Chandler Comrade Roadster, recently purchased from the Lake Shore Motors Co., Cleveland.

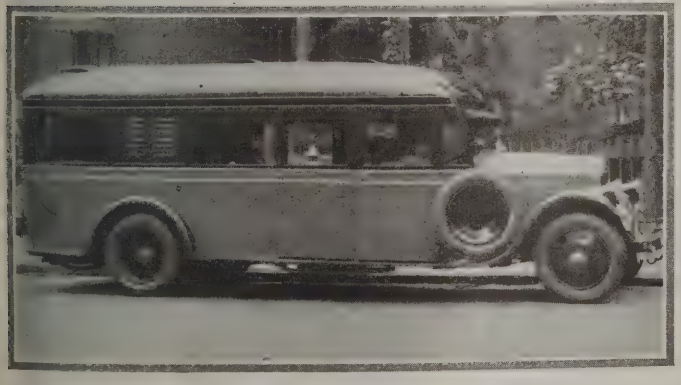


TO AID SNOW TRAVEL. Now comes the Snow-Motor, made by Snow-Motors, Inc., Detroit, designed to increase the scope of usefulness of the automobile by enabling it to travel through heavy snow. A standard Fordson tractor is used for motive power, and plans are being made to produced a motor which can be mounted on any standard make of automobile or truck up to 116 in. wheelbase. The Snow-Motor consists of two torpedo-shaped steel drums or cylinders to which spiral runners or "skates" are welded. These drums, which are chain driven, revolve in opposite directions. The spiral flanges engage positively with the snow or ice and, owing to the balanced thrust of one against the other, a straight course is possible, forward or reverse. Steering is effected by controlling the drive to one or the other of the drums. The idea of the motor is to dig itself out of the snow.

OF AUTOMOTIVE INTEREST



AN INTERESTING DISPLAY. A space on the second floor of the building used by Will F. Hitchcock, Lincoln, Neb., for an automobile sales and service station, has been turned into a large display window and one of the new models handled by the concern is on display day and night. This method of display has attracted considerable attention to the models shown.



ALL THE COMFORTS OF HOME. A traveling home, mounted on a Pierce-Arrow bus chassis, complete even with shower bath and radio, is to be the abode for the next three years of R. Connable, formerly managing director of the F. W. Woolworth Co. of Canada, who, with his family, will tour the United States and Canada, and part of the British Isles.



PRETTY SOFT FOR THE OWNERS. As a publicity stunt, the Willys-Overland Pacific Co., Los Angeles, sent out a crew of five negro boys, all dressed in white overalls, to go about the streets of the city each day for two weeks and shine up every Overland and Willys-Knight car they found parked. Each day a new street was selected and they traveled up one side and down the other with scratchless dusters and soft clean cloths.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Fitting Bearings for Splash and Pressure Systems

Q.—I would like some definite information on adjusting and fitting crankshaft and connecting rod bearings. I have done considerable of this work and yet there are many points on which I am in doubt. Would like information on the difference in design and construction of bearings, crankshafts and rods. Have talked to a great many so-called mechanics and no two of them agree or offer the same advice. What difference is there in allowing clearance in fitting rod bearings for circulating splash system and pressure feed oiling system. Which is given the most clearance? Is it considered proper practice, when fitting or adjusting a complete set of engine bearings to have the engine so stiff when finished that it has to be towed and thrown in gear to crank the engine. Should it not be possible with any engine, if the work is done properly, to start by hand cranking combined with help from the starting motor?

Proper fitting of main bearings begins with checking up the crankshaft to see that the journals are round and to see that the shaft is straight. With the shaft in good condition it should be first fitted to the upper halves of the main bearings, that is those portions which are normally a part of the cylinder block. If in fitting the shaft to the upper halves of the bearings it is found that the shaft touches at two or more bearings and does not make good contact at some other bearing then the mere tightening of the cap would result in springing the shaft, and an engine assembled in this way would soon develop a main bearing knock.

When main bearings are replaced, it is necessary to have them poured and then reamed with one type of bearing while with the replaceable type reaming may or may not be necessary. In some cases the bearings of the replaceable type are so accurately made that no additional work is required. However, should the shaft journals be undersize it necessitates having the shaft replaced. The difference in fitting bearings for splash lubrication and for pressure is that the former may be tightly fitted while with pressure lubrication it is necessary to leave from .002 inches to .003 inches clearance on the diameter. On main bearings a clearance of .002 inches is ample with the pressure lubrication system. Fitting connecting rods for a clearance of this nature is best accomplished by using a mandrel which is oversize just enough to allow for the clearance. The connecting rod when tightly fitted to the mandrel will then be the right size to operate on the crank pin.

The practice of fitting bearings very tightly so that the car must be towed in order to start the engine is a precaution taken to provide against looseness when the bearings have worn somewhat. There is not much question but what this is merely insurance against poor workmanship, although it is doubtless a wise precaution with ordinary methods of repairing. This method, however should never be applied to a car having pressure lubrication and if bearings were always perfectly fitted it would not be necessary with a splash lubrication system.

2.—In working on a Chevrolet 1923 model recently I noticed that the rods each had one more thin shim on the right or camshaft side of the rod than on the left. What is the reason for this?—Wisconsin Bearing Fitter.

There is no particular reason for having one more shim on one side than the other except that in fitting the bearings it is probable that this gave the proper fit while with a shim added to one side the bearing was a little loose and with the shim removed from each side the bearing was a little tight. Theoretically the shims should be the same on each side but practically we doubt if any difference would be noted, especially with very thin shims.

MOTOR AGE'S READERS' CLEARING HOUSE INDEX

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Regarding Eccentric Piston Rings

Q.—Please explain why Ford piston rings are made eccentric and not only why the Ford are, but also why other rings are made eccentric?—Carlos Farris, Tilford, Ky.

We can perhaps learn a lesson from considering the Indian and his bow and arrow. The arrow part of it does not enter into the discussion. The bow was made tapered with the heaviest part in the middle. This not only made the bow flexible but made the strength of the various sections such that there was no more tendency for it to break in the middle than at any other place. In considering the way the bow bends we must remember that the string pulls at the ends while one hand exerts a thrust in the middle. Accordingly there is the greatest breaking strain in the middle.

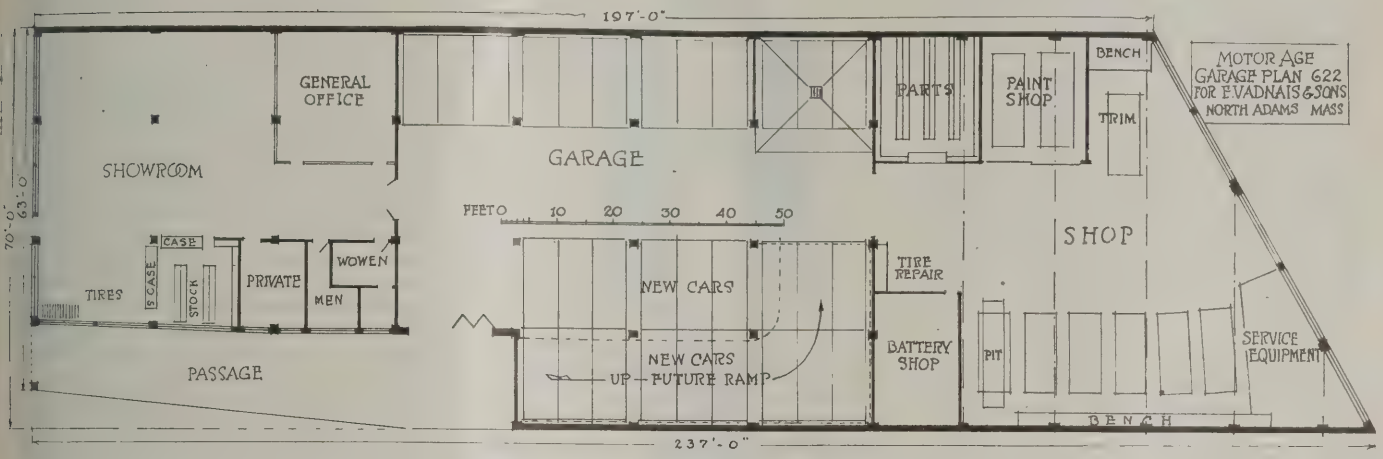
The strain, half way from the middle to either end is only half of what it is in the middle of the bow and the strain keeps decreasing the nearer we get to the ends. For the same reason the eccentric piston ring which is compressed by the cylinder walls will be strained more uniformly at various points in the ring and correspondingly will show a fairly uniform reaction or wall pressure.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Dealer Wishes to Arrange for Addition of Second Story



The Shop End of Building Has a Trussed Roof Carrying Skylights to Insure Plenty of Light

Q.—We have a lot, a diagram of which is enclosed, on which we expect to erect a new one-story salesroom and service station for Buick and Chevrolet cars. The front end of the lot is 63 ft. wide and one-third of the way back there is a measurement of approximately 70 ft. This is the correct measurement as the lot runs wider in the back than in the front. The 10-ft. driveway is to be an open drive, but the front of the building might be extended to the end of the lot making practically a false front of 10-ft. which can be used for the driveway, if in your opinion this would be practical. The plan should include the following departments:

Salesroom, private office, general office, ladies' restroom, gentleman's restroom, parts department, tire, tube and battery department, upholstery department, service station, paint shop, wash stand for two cars and storage space for new cars. We thought of installing one of the new type oil burners for heat and ask your advice on the heat best suited for this building. Also advise us whether brick, cement brick, concrete blocks or tile and brick construction would be best suited for this building. The construction should be strong so that at any time we may add another story if occasion demands. — E. Vadnais & Sons, 62 Center street, North Adams, Mass.

We are still a little doubtful as to the exact shape of the lot, but have followed your instructions and if we have made a mistake we consider ourselves blameless. In this respect those wishing plans cannot be too careful to give us the exact proportions and dimensions of their lot and where irregularities are encountered, as in this lot a survey should be forwarded or at least a copy of one. A wrong shaped plot may throw the plan all out of proportion and make it impossible. Three or four feet difference in the width or length may spoil the whole layout.

Since you think you will be obliged to add another story to this building, it would be best to make it a permanent construction, building in the columns as they will need to be for the support of the second floor and, in fact, it might be well to add the permanent second floor, waterproofing it and using it for a roof. You will note that this construction extends back only about 150 ft. and that from this point to the river, we have a one-story trussed roof proposition which will be more serviceable for shop purposes. Later when you put on your second floor you will probably want to move the shop up to it, but this will not be necessary and it will rest with your personal opinion. If you do move your shop up this rear section would be good either for storage or would make an ideal used car display room, in case you handle many used cars.

We have shown by dotted line how a ramp could be applied to this building after the second floor is put on. This ramp would not interfere with the first floor layout except to the extent of storage of about six cars. The suggestion you make relative to extending the front of the building to include the passageway is a very good one but it would be well to leave this passage open in order to get light into the showroom and accessory department, in case another building should be put up next to you.

We would advise a thorough investigation regarding the cost of oil and coal based on their cost in your vicinity and their relative heat values. Oil runs about 21,000 B.t.u. per lb., while coal varies from 8,000 to 13,000 B.t.u. At 8c a gal., oil would cost $20 per ton but it has about double the heat of average to poor coal. If you install oil a boiler recommended for oil would be preferred to one built for coal.

Any of the building materials mentioned are suitable.

LEGAL QUESTIONS ANSWERED

By WELLINGTON GUSTIN
of the Chicago Bar

GARNISHMENT COURT PROCEDURE

Q.—Will you tell us how to put a lien on a car that has left the shop for about a month, and also how to garnishee a person to collect a repair bill?—C. D. Arledge, Arledge Bros., Urbana, Ill.

This lien for repairs arises with the making of the repairs. Under the statute the lien remains upon the car for a period of sixty days after delivery to the customer at which time it expires, unless within this period the repairman files a statement of his claim for a lien with his recorder of deeds. The statute sets out a form to be filled in by the lienor, giving the information required. This is too long to be given here, but your county recorder can direct you where to secure copies of this printed form.

A garnishment is strictly a court procedure and you will need an attorney to handle such a matter. Briefly, where a customer owes the garageman money, the garageman may get judgment and begin garnishment proceedings against any other person or persons found to owe the judment debtor. The court will then order the garnishee to turn money or property owing the judgment debtor to the satisfaction of the judgment, thereby releasing the garnishee of his obligation. In a few cases garnishment may be started without waiting for a judgment on the original claim of the judgment creditor.

The READERS CLEARING HOUSE

Clearing Up Electrical

EDITED BY A. H. PACKER

A Shorted Mercury Regulator

Q.—On an old Cole, with Delco mercury voltage control solonoid with N. T. C. (negative temperature co-efficient) wire, the solonoid gets hot. The resistance in it does not increase, hence the solonoid lifts the core the full height due to solonoid getting full current. It should keep the voltage down by lifting the required number of resistance coils out of the mercury bath. Now what is the material of this negative temperature co-efficient wire? Has it a trade name? I never got this kink straightened out and I read about it two years ago.—Chicago Subscriber.

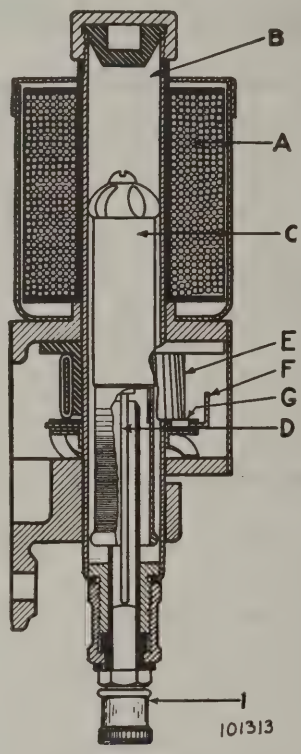
We are showing an illustration of the mercury regulator to which you refer. The carbon filament of the old type carbon lamp has a negative temperature coefficient, but it is very difficult to get metal having such a co-efficient. Usually a mixture or alloy of two metals will have a lower co-efficient than either of the metals by themselves. A common resistance wire is known as Nichrome, presumably due to its having nickle and chromium in it. There are of course other resistance wires going by various names, but this one is perhaps the best known.

The reason for using wire having practically no change in its resistance as it gets hot is to keep the operation the same, with changes in temperature. If the plunger rises due to the attraction of the solenoid and the raising of the plunger does not regulate the current then the device is apparently shorted. This could be due to the two pools of mercury being shorted due to a leakage in the Bakelite tube which separates them or it could be due to a short in the resistance coil itself.

The path of the field current is from one pool of mercury through the resistance coil to the other pool and the higher it is lifted the more turns of this resistance coil are in the circuit. Another reason for using alloy wire of this kind is that it has a high resistance for a small piece of wire.

When a Ford Uses Special Ignition

Q.—Why do the Ford service men change the Red wire from the dash fuse block so it is in contact with the battery connection? We have a new starter type car that has an Atwater Kent ignition system on it. By changing the red wire leading to the switch box it connects direct to the storage battery leaving the magneto wire run up to the fuse block and end there. Our service man here said that if you leave the magneto connected to the switch it would tend to discharge the magnets. Is this true? Can a person use the magneto connection with the Atwater-Kent system or is it just a battery system. Why not sell the magneto on the flywheel if it cannot be used with the system.—Wild Brothers, Springfield, Mass.



In the old Delco mercury regulator the field current goes from one pool of mercury to the other through a partially submerged resistance coil

When any battery ignition system is installed on a Ford car the magneto is no longer required and the only part of the magneto which is still operating is the system of magnets which assists in circulating the oil. Under such circumstances it is possible to do away with the magneto coils and the magnets also. Under such circumstances it is necessary however to make provision to get additional oil to the front of the engine which can be done by using an additional oiling system together with double spools on the brass studs which formerly held the magnets to the flywheel. Anyone who wishes to may sell the magneto if he can find a purchaser.

The reason for changing the wire over is to make it possible for the driver of the car who does not know anything about electrical systems to have the engine operate no matter which way he turns the key. Actually he is operating on battery regardless of whether the key is turned to the Bat. or to the Mag. Position. It is true, as indicated by the mechanic referred to in your letter, that connecting the magneto in such a way as to get battery current to it will probably weaken the magnets as well as take current from the battery.

Does the Generator Charge A Full Battery?

Q.—Is it possible to overcharge a battery in a car by making long drives with the generator charging at normal rate? Also what action does the generator take when the battery is fully charged We have had several arguments regarding this question and would like to have your opinion.—One-One Battery Service, 1107 Sixteenth Ave., East Moline, Ill.

Batteries are rated in ampere hour capacity which in a lighting battery might be at a five ampere rate. For example if a battery will give out five amperes for sixteen hours it is known as an 80 ampere hour battery. If such a battery were 100 per cent efficient then it could be charged by putting in five amperes for 16 hours, but as the efficiency is not 100 per cent it might be necessary to put in five amperes for 20 hours. However, the charging is dependent on both the amperes and the time. Then if five amperes for 20 hours would charge the battery it could also be charged with a current of 10 amperes for 10 hours or a current for 20 amperes for five hours.

This is assuming of course that the current is not sufficient to overheat the battery. We believe that from the foregoing you can see that at the normal charging rate which is usually considered about 10 amperes it would be possible to overcharge a battery for it is only the current taken out which keeps a battery from overcharging. The condition of the battery is of course determined with a hydrometer and it will be found that in touring through the country the hydrometer reading will continue to rise until it gets up to 1,280 at which point it will gas and the gravity will probably rise no higher.

If for example the lights and starter should never be used and no current should ever be taken from the battery it would be possible to overcharge it even if the rate were down to two or three amperes, for we would be continually putting current in and never taking any out. In practice the commonly used type of current control or third brush regulation will actually charge the battery at a higher rate when it is fully charged than when it is discharged. This is due to the fact that the generator is connected to the battery and gets the battery voltage or a certain percentage of it across the shunt field. When the battery is in a discharged condition its voltage is about 6 and the shunt field voltage which would be about 2/3 with a third brush control would be about 4 volts. As the battery becomes charged its voltage rises to 7.5 and the field voltage will come up to about 5, or an increase of 25 per cent. For this reason the average generator does just the wrong thing and charges the battery more when it does not need the charge.

Trouble With Bill Fixit

EDITED BY A. H. PACKER

The READERS' CLEARING HOUSE

Adding Carbureter and Electrical Department

Q.—We would appreciate any charts ch as used for trouble shooting and flat tes. Also carbureter chart. In fact any formation you could give us would be preciated. We are mainly interested in e carbureter and electrical end of the me. Sometimes we do other work in njunction with our repair work. A all shop layout for electrical service ould be welcome, as we are just equip- ng our local shop.—Le'May Klobucher, r. Granite and Turner streets, Man- ester, N. H.

We are showing two illustrations, one which represents a work bench and e other a shop layout for electrical ork. The work bench is for an individ- l workman and is about 3 by 4 feet. It s sides to keep parts from getting lost d the intention is that one generator one starter will be worked on at a ne and taken apart and then assem- ed before any other work is done. At e back of the bench are two sets of st points, one operating through a mp on 110 volts, for locating grounds d the other operating on 6 volts rough an ammeter for testing out field indings and low resistance circuits.

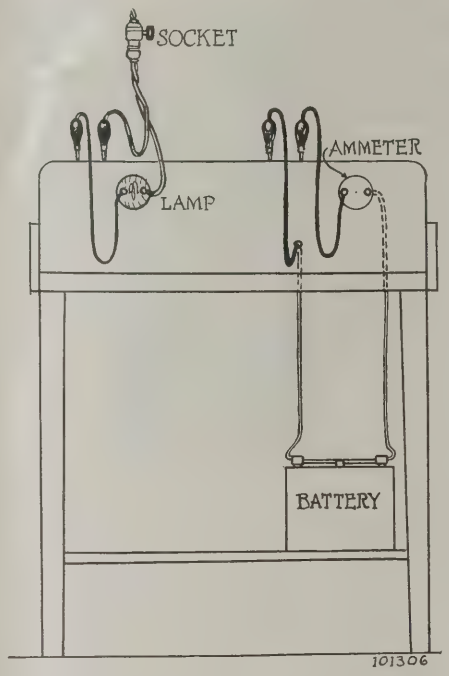
The shop layout is just of a general ature for we do not know that it would nform perfectly to your other shop re- uirements. If it is possible to locate the ectrical shop between the garage and e parts department, it is then easy for en to take the units from the cars to rn them over to the electrician and it is so easy for the electrician to get parts at he requires from the stockroom. lectrical flat rate articles were pub- shed in the June 12th, July 24th and ptember 18th, 1924 issues of MOTOR AGE d in the February 26th, 1925 issue of OTOR AGE. These issues however are t of print so that we are unable to pply you with copies.

It is possible however, that you can re- r to these issues in the public library d another suggestion is that you write r flat rate chart which is put out by the outhern California Automobile Dealers' ssociation, Los Angeles, California. lectrical trouble shooting charts were blished in connection with the May th, 1924 issue of MOTOR AGE.

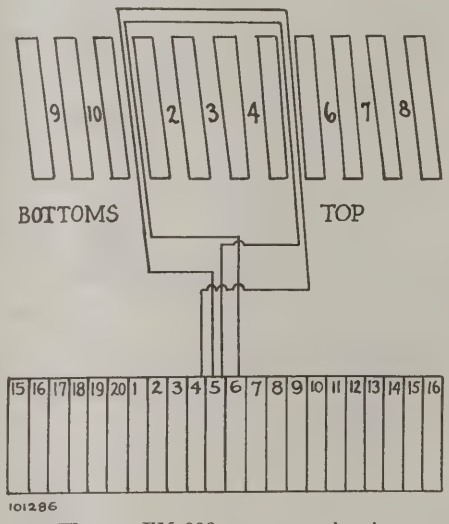
Remy and Wagner Armature Diagrams

Q.—Would like to have armature wind- g diagrams of E. M. 338 Wagner and 7 E. Remy generator.—Canada Sub- riber.

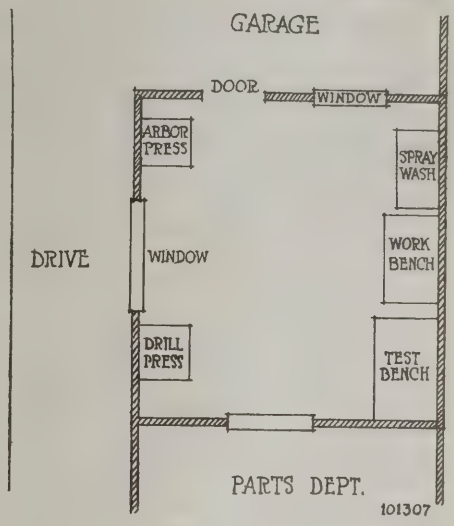
Both diagrams are published in accord- nce with your request. In the Remy rmature each coil contains six turns of o. 17 double cotton covered copper wire, here being two coils per slot wound to- ether, using wires of different color. his winding was used on 1920 and 1921



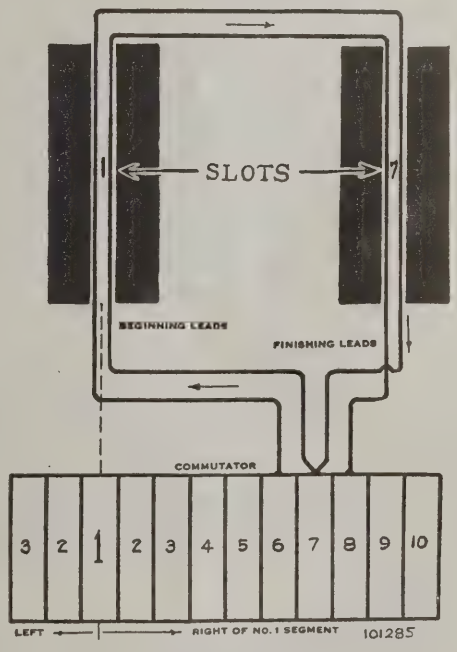
A separate bench for each man is best in the electriacl department



Wagner EM 338 armature circuits



Sandwiched between the parts department and the garage—a good place for the electrical room



Remy 917E armature circuits

Anderson, 1920-21-22-23 Auburns, on 1923-24 Apperson, on 1922-23-24 Jewett, on 1922-23-24 Kissel, on 1923 Mitchell, on 1922-23-24 Oakland, on 1921-22 Paige, on 1921 Scripps Booth, on 1920-21-22-23-24 Studebaker, on 1923-24 Stutz.

On the Wagner armature there are two coils per slot, each coil consisting of nine turns of No. 17 double cotton covered copper wire. This winding is used on 1921-22 Studebaker cars, 1920-21 Nash cars. The Remy diagram is obtained through the courtesy of the Autolectric Publishing Company of San Francisco and the Wagner diagram through the courtesy of Charles L. Chittenden of Kansas City, Mo.

HEY, BUDDY, WHAT'S YOUR NAME?

The MOTOR AGE Clearing House has received a four-page letter from New Zealand, Australia or some such place and the writer does not give us his name, merely signed F. S. H. He hopes to see his answer in MOTOR AGE but as we do not answer anonymous letters he is probably hoping in vain. Moral: Sign your name.

LARD USED FOR TAR REMOVAL

We have found that if tar is greased with lard it will dissolve and not harm the finish of the car.—D. J. Mulvena, "Girl Mechanic," Alpena, Mich.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Flat Rates for Painting, Top and Trim Work

TOO often flat rate is something applied only to work on the mechanical units of a car and little or no thought is given toward the application of it on such work as painting, top and trim.

It is just as feasible to sell such work on a flat rate basis as valve grinding or rear axle work. It is true that in some cases it is difficult to determine exactly what has to be done or how much work is involved in repairing a top or refinishing a car.

Nevertheless, it would seem that much of this work could be handled exactly as was done when the prices for operations on the mechanical units were established for various makes of cars. Much naturally depends on the trouble shooter or the salesman who looks over the job and has to determine the amount of work involved.

It was not so long ago that many said it was impossible to quote a flat price on overhauling a wrecked car, for example. Today however, there are any number of concerns who will quote a customer a flat price for handling such a job and the old excuse of "we don't know how much of a job it is going to be" no longer holds good. The flat rate operations have made it possible, under such conditions to take the job unit by unit and establish a total cost for overhauling that is fair to the customer and still insures a legitimate profit to the shop.

In a paint job certainly a flat price could be established, because the work of cleaning a chassis and body prior to painting has become pretty well standardized and likewise the application of the primer, undercoats and finishing coats are conventional operations on which definite time schedules and resultant flat rates can be established. Many paint shops are working on a flat rate basis for all work and since service of this kind is just as important as work on an engine or clutch, it is highly desirable.

Listing Parts Needed

Albuquerque, N. M.

To the Editor of MOTOR AGE:

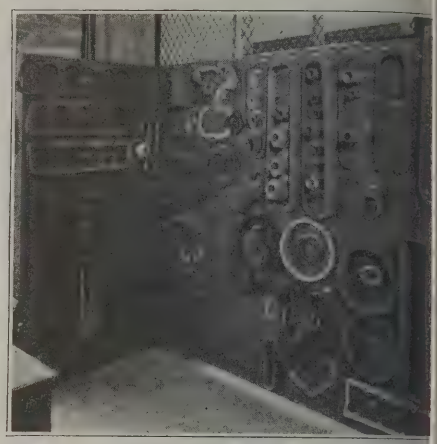
We have been working flat rate on about 75 per cent of the jobs in our shop for about three years. At first we worked on flat rate for labor only and a short time ago we started to work flat rate material as well as labor, making the price for parts after the defective unit had been dismantled and completely inspected.

We find that it is impossible to list all the parts needed without some form or chart to check by, for instance on a complete motor overhaul they forgot to figure all the gaskets that are needed or the bearing shims or the ignition wire or the radiator hose, in fact, there are so many things that can be overlooked and are overlooked in quoting the complete price of the repairs before the work is done that it is a losing proposition to give the parts with the labor on a flat rate pric

We believe that somebody must prin or should print a form listing every pa that could be used on every make of ca giving each unit separate, so you coul go right down the chart and check every thing needed and nothing would b missed.

—A Reader.

We don't know of any company prin ing forms giving the engine items a named by you. No doubt many of ou readers are using such forms which the have had made up for their own purpose and if so MOTOR AGE'S Flat Rate Forum would be very glad to reproduce som of them on this page. There is no que tion but what it is quite a job to list a the parts likely to be needed on a jo such as an engine overhaul. Some o the motor car manufacturers in their fla rate manuals under various operation specify exactly what materials are nece sary and not only that but also state th tools needed for the work. The Olds mobile flat rate manual is a very goo example of this.



THINGS THAT HELP FLAT RATE

Very often a job is held up for some sma part such as a gasket. One of the best a surances a shop can have that the job wi get out on time is to see that there is a goo assortment of gaskets and washers.

Brake Lining Operations Explained

Monmouth, Ill.

To the Editor of MOTOR AGE:

I would like to have the Flat Rat Brake lining operations explained in th July 9th issue. The Chandler price fo the service brake comes to $11.75 and th emergency $19.00. Does this include th material? As I have just started up i business for myself I would like all th information I can get on the flat rat system.—H. L. Clark.

All of the prices given under the Brak Lining Operations in the July 9th issu of MOTOR AGE include the material. Tha is where the price of $11.75 is quoted fo relining the service brakes on a Chand ler; it includes the lining and other ma terial such as the rivets together wit the necessary work involved.

MOTOR AGE'S FLAT RATE FORUM

No. 24

STUDEBAKER FLAT RATES FOR VARIOUS OPERATIONS ON MODELS EK— BIG SIX AND EL—SPECIAL SIX—1922 and 1923

Manufacturer's Official Designation		Charge
N- 1	Burn Carbon	$ 3.54
N- 2	Remove Carbon and Grind Valves	13.04
N- 3	Adjust Tappets	1.50
N- 4	Install Valve	6.32
N- 5	Install Valve Guide	6.41
N- 6	Install Valve Spring	3.10
N- 8	Install Cylinder Head	24.27
N- 9	Install Cylinder Head Gasket	4.04
N-10	Install Piston	14.87
N-11	Install Piston Pin	10.91
N-12	Install Piston Rings	8.00
N-13	Install Connecting Rod	15.99
N-14	Tighten Connecting Rod Bearings	12.11
N-15	Tighten Crankshaft and Connecting Rod Bearings	19.14
N-16	Remove End Play from Crankshaft	13.17
N-17	Refit Crankshaft Bearings	62.52
N-18	Install Front Crankshaft Bearing	65.42
N-19	Install Front Center Crankshaft Bearing	64.92
N-20	Install Rear Center Crankshaft Bearing	65.82
N-21	Install Rear Crankshaft Bearing	66.02

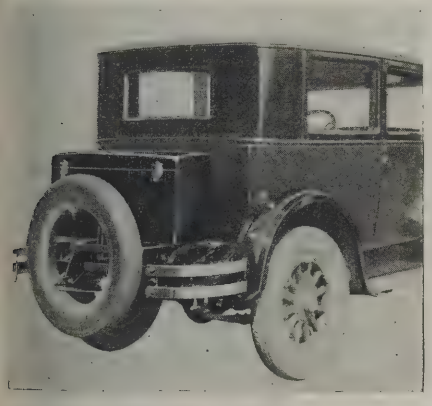
(Prices Include Material)

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Combination Carrier-Bumperetts

N its Dodgette Combination Carrier and Bumperett the Bellevue Manufacturig Company, Bellevue, Ohio, believes it fers the trade an item that will sell ell to automobile tourists as well as ving a strong general appeal. The llevue outfits lengthen the Dodge thers car 12½ inches and can be proied for all semi-ellipitical spring cars. fits the coach, sedan, touring car or adster. The same model carrier fits all r models with either disc or wood eels. Trunk and platform jobs are id not to interfere with gas intake or ge. The attachment is bolted direct to e frame of the car, installation being complished in an hour or less. Shipng weight 146 pounds. No. 780 DB rrier, Bumperetts and No. 950 Trunk t at $60. No. 782 Carrier and Bumretts list at $26. The outfits are also ade for Essex, Ford and Chevrolet.



Bellevue's combination carrier and bumperett

Storm-King Windshield Cleaner

THE Storm-King Products Company, 216 Highland Building, Pittsburgh, ., is marketing the Storm-King Electric indshield Cleaner. The distributors ecommend this attachment to clean full ross the glass under any weather conction, giving the driver proper vision at l times. A feature is said to be its iform speed of operation, the speed beig always the same under various drivig conditions or when the car's engine stopped. At the same time it is said at the Storm-King requires only as uch current as is consumed by a dash parking light. Another interesting ing is the claim that the Storm-King's otor will operate perfectly when suberged in water, its construction makig it impervious to shortcircuiting by oisture. The device is easily installed d there is a size for every type of car. he price of $12.50.



Lincoln arms mascot

Capitalize National Advertising

One way for the accessory merchant to add force to his local advertising is by coordinating such efforts with the national advertising of manufacturers whose products he features.

Watch the national publications especially for the manufacturer's heavy campaigns and tie in promptly with appropriate local display.

Through this plan the local advertisement gains advantage of interest created by the national campaign. The prospective purchaser who has seen the national advertisement is informed immediately where he can go in his home town to buy the particular equipment in question.

A southern accessory dealer features some nationally promoted product in each of his local insertions, following this lead with a list of other accessories he has for sale. He finds that the plan is profitable.



Storm King windshield cleaner

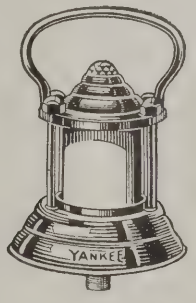
Lincoln Arms Mascot

FULLER-LUCE, Inc., 217 West 57th Street, New York, is distributor of the Lincoln Arms Mascot, a radiator ornament designed especially for the Lincoln car. The heraldic lion mounted on this device supports a shield bearing the Lincoln family coat-of-arms used by Abraham Lincoln's ancestors in England. Lists at $10.

Ship-Shape Parking Light

ONE of the new illumination units is the Ship-Shape Parking Light, introduced recently by the American Auto Lamp Company, of New York. It is a reproduction of the large signal lamps used on ocean going vessels. The lamp is 3¾ in. in height, the base being 2¾ in. in diameter. It is nickeled and has a center cylinder of frosted glass. Half the glass shows red to the rear and the other half, white, shows to the front. On top is an attractive green jewel. Price $1.75.

The same company is marketing a new and novel tail light lens, known as the



Ship-Shape Parking light

Yankee Refleks Lens. This has the appearance of the customary lens but on the inner surface are a number of small cones. The purpose of the cones, or prisms, is to receive the light from an oncoming headlamp and reflect it back to its source. The effect is that even if the tail-light is out the approaching car can see the car equipped with the Refleks Lens and avoid collision. This attachment is made in one piece, having no silver coating which the producers say abrasion and the elements remove. Price 30 cents.

Adjustable Tire Racks and Shelving

ADJUSTABLE tire racks and shelving are offered to automotive storekeepers by the Nichol-Straight Foundry Co., 319-323 Austin Ave., Chicago. The tire rack can be dismantled without demolishing it, being recommended by the makers for its adjustability and storage convenience and economy. Both the tire brackets and shelf arms are provided with removable caps which make it possible to remove, replace, raise or lower or add extra shelves without disturbing other shelves. The fittings for the tire racks and shelvings are interchangeable.

GETTING MORE OUT of the SHOP

Stevens Valve Face Grinder

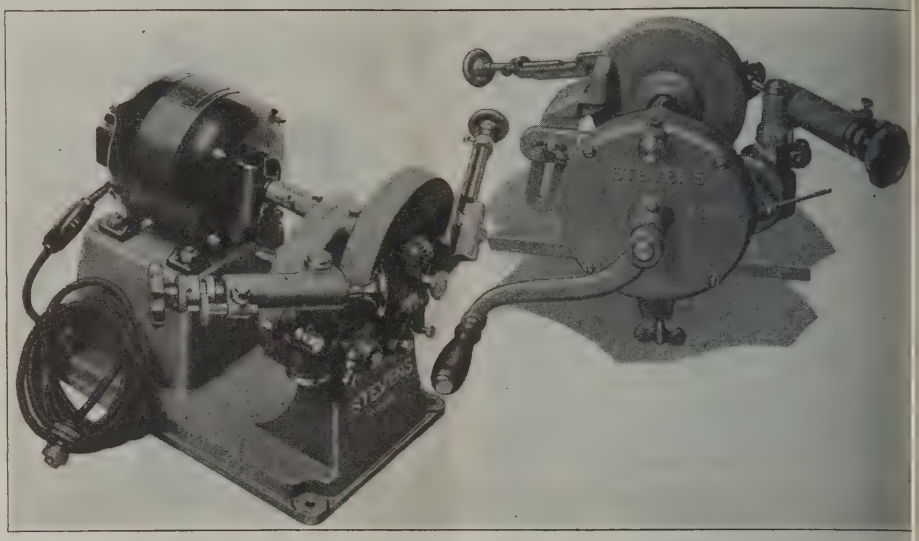
The Stevens valve face grinder made by Stevens & Company, 375 Broadway New York is made in two models, a motor-driven and hand driven type. The same grinding machine and attachments are used in both models and in the motor driven the handle is taken off and the main gear stud is directly coupled with a G-E motor while the grinder is clamped to the base just as it would be fastened to a bench. The handle can be quickly replaced and the grinder secured to a bench for hand driving.

The complete grinder includes an automatic valve chuck, adjustable to any size and angle, a drill holder for grinding drills, a general utility rest for sharpening all kinds of garage tools and an adjustable wheel dresser for the cutting wheel.

The valve chuck consists of an outer holder, an inner barrel and a split collet to grip the valve stem as the chucking handle is tightened. The valve is rotated automatically by the chuck which is worm-geared to the main drive and the feed is regulated by a small knurled screw. The valve revolves once to every 300 revolutions of the wheel.

The drill holder takes drill 1/8 in. to 5/8 in. and the drill is placed in a V slot between the index plate and the feed screw. The holder swivels and is swung as the drill is being ground.

Both hand and power driven machines are regularly equipped with a 6 in. diameter and 1 1/4 in. wheel and two collets one for valve stems 1/4 to 3/8 in. the other for stems 3/8 to 7/16 in. A larger size collet for 7/16 to 1/2 in. can be supplied on order. The motor driven machine is mounted on a substantial metal base and the wheel is driven directly by a one quarter horse power motor through a small universal joint. A 110 volt—60 cycle A. C. motor is regularly supplied. A D. C. motor costs $5.00 extra. Each motor carries 10 ft. of flexible cord with plug and switch. The machine is finished in baked gray enamel.



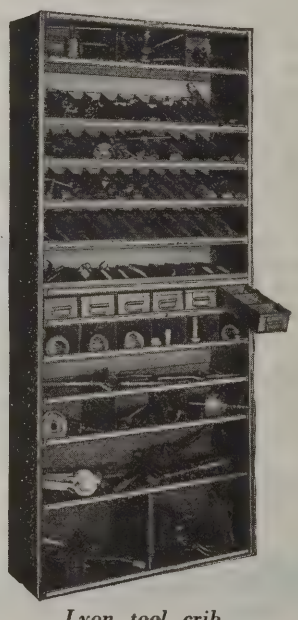
Stevens valve face grinder showing both the motor-driven and hand-driven equipment

Lyon Tool Crib

There are a good many tools in every repair shop that the mechanic does not keep in his tool box. Yet when he does need them, it is often necessary for him to look high and low before they are located.

To avoid this waste of time, and to increase the efficiency of the repair department by providing a place for everything, the Lyon Tool Crib, made by the Lyon Metallic Mfg. Co., Aurora, Ill., was designed.

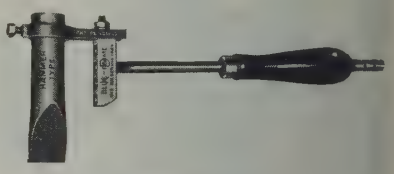
The Tool Crib is 84 in, high, 36 in wide, and 12 in, deep, the same size as all other Lyon auto parts control units. It is built entirely of steel, and finshed in durable olive-green enamel, baked on. Four of the thirteen shelves are sloping and fitted with half-height dividers for the storage of drills, taps, reamers, etc. Six steel boxes provide ample space for a large assortment of bolts, nuts, washers, and miscellaneous small parts. Several large shelves care for the larger tools, not only keeping them where they are easily obtainable, but off the floor and out of the way.



Lyon tool crib

The Blue Flame Soldering Irons

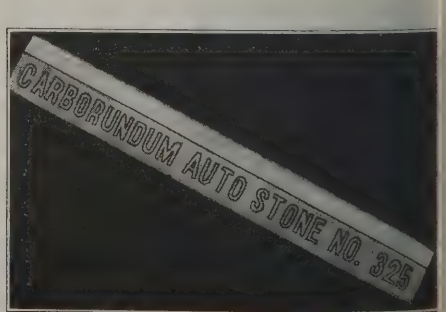
The K-D Manufacturing Co., Lancaster, Pa., has put on the market a new type of soldering iron the unique feature of which is the fact that the burner unit produces a blue flame without the introduction of air. In other words it burns gas just as it comes from the main and incidentally, produces an intense heat, it is stated. A flexible tube attached to the end of the soldering iron connects directly to the gas jet. The iron is called the Blue Flame and is made in several standard sizes some of which utilize from one to four burners. It is stated that the complete iron including the handle is not any larger or heavier than the average electric soldering iron.



Blue Flame soldering iron

Carborundum Auto-Stone

The Carborundum Auto-Stone made by The Carborundum Company, Niagara Falls, New York, can be used for cleaning up spark plug points, breaker points and wherever it is necessary to produce parallel surfaces for which heretofore a file has been used. It is a fine grit fast cutting stone and is furnished fitted with a durable metal holder to prevent breakage and is made just the right length and thickness to enable the user to handle it conveniently and efficiently. It is 4 in. long, 1/16 in. thick and 1/2 in. wide. The price is 50c.



A handy stone for touching up distributer points

EDITORIAL

Accurate Accounting Necessary

THERE comes a time when every business man knows whether or not he is making money. Lack f funds to pay for merchandise and meet the payroll, this condition occurs with any degree of frequency, evidence that the business is not making money. On ie other hand a condition that permits discounting of ills, prompt payment of all obligations, and regular istribution of dividends or profits indicates a prosper- us business.

There may be some merchants who for a time are nable to determine whether or not they are making profit, but this condition cannot long continue. What found more commonly, especially in the automotive ade, is the merchant who knows he is not making a rofit, or at least not a satisfactory profit, but who is nable to tell where or why his deficiency exists.

Proper accounting is the remedy for this condition. Vhen records of business transactions are kept with ufficient detail and accuracy the merchant knows all ie time where he stands with reference to profit and oss. And knowing this he is able at a moment's notice o take steps to correct an unprofitable condition.

The automobile dealer, garage man, repair shop oper- tor, accessory dealer, or other automotive merchant, an well afford to give time and thought to a careful udy and analysis of his accounting system and if it not so simple and clear that he can tell every day ist where his business stands he should not be satis- ed until he has made it so.

Business enterprise and capital investment deserve eir just recompense and the establishment that does pt produce a reasonable return for both these business ctors is not only a failure but is also a hindrance to her legitmate business institutions in its line.

The first duty of the automotive merchant is to make is business a profitable one, in order that it may con- nue as a useful institution of public service. To this nd a simple and accurate accounting system is ssential.

Get the Feminine Viewpoint

WHEN the industry was young the automobile com- monly was regarded as a vehicle of strictly he-man tility. The ladies, gentle things, could ride in them but te double-fisted male of the species had to assume the tremendous responsibility of operation. He was the listle-chinned person of that day who smoked black gars, banged away at ducks and quail with a double- rrel shotgun and—drove the motor vehicle.

The motor vehicle remains a device of he-man utility, tt not exclusively so, by a wide margin. Today we find many a feminine hand at the steering wheel and—importantly—we find that the feminine voice has much to do with the purchase of cars. The extent of feminine influence in this sphere of buying is developing constantly larger proportions.

Dealers who wish to flourish in business face the necessity of acquiring an intimate understanding of woman's automotive tastes and viewpoints. If the automobile merchant knows what they want and what they do not want he will be better prepared to present his case in a manner making for sales and profits.

The Cedar Point Meeting

CEDAR POINT, Sandusky, Ohio, will be the scene of an important gathering of tradesmen Aug. 6-7. It will be the first annual convention of the Ohio Council of the National Automobile Dealers' Association which has succeeded the old state trade association as the chief organization body in Ohio.

In assuming responsibility for trade organization in Ohio the N. A. D. A. is undertaking a program which should result in much benefit to Ohio's automotive merchants. The Cedar Point meeting will be replete with instructive talks and discussions. Ohio tradesmen who fail to attend will miss a rare opportunity to hear and be informed. The N. A. D. A. and the Ohio Council have gone the limit to make the Cedar Point convention a red letter period for all affiliates. The program is one of exceptionally good balance and covers points very vital to the autoomtive merchant's business.

Fear of Competition

MEN who are afraid to die often permit themselves to live—*with fear*.

At the same time living *with fear* is one way to hasten death—and this applies to the business of the automotive dealer.

Fear that a competitor will make a sale that he would like to make drives many a dealer to rashness. Catering to his *fear* the dealer sometimes enters into a trade-in bargain which yields no fair profit and slashes his own throat.

No aggressive, well managed retail organization has to accept unprofitable or inadequately compensating business in order to prosper. No establishment of any kind can continue to accept inadequately compensating business and *expect* to prosper, or even remain permanently in the fight.

Dealers who can banish false fears of competition are well off and on the right road. False fears serve the chief purpose of closing doors and putting up notices for the sheriff.

If the transaction will not pay—let competition have the business.

July One of Best Months in History

Whole of 1925 Expected By Many to Make Record

Stock of Old Models and Used Cars Reported Generally Low—Manufacturers Optimistic

NEW YORK, Aug. 5.—July was one of the best months the automobile and allied industries ever experienced. Sales were not as high as in June but they were better than the previous July, so much so that the prediction is already being made in some quarters that the whole of 1925 will set a new record.

The introduction of new models and the lowering of prices during the last week or two has produced the expected stimulus to the sale of the companies concerned, and an excellent volume of business for August is promised. More than the ordinary interest in new cars has been shown by the public.

Stocks in dealers' hands are in good condition and in only one or two spots in the South and West is any difficulty being experienced in keeping used cars moving. The number of old models on dealers' floors at this time is the lowest yet recorded.

A survey shows a majority of the manufacturers genuinely optimistic and making plans accordingly. Others are not so favorably placed. It might be said with reasonable exactness that the automobile manufacturers who were rushing production the first part of the year are still unable to catch up with orders except to a small degree. Some are still unable to make deliveries within two months.

There is quite a gap between the leaders and those farther down, whose production is now only about 60 to 70 per cent of capacity.

In parts, accessories and service equipment good business is reported, with New England and the Far West particularly strong. The touring season has been especially active in these sections and has had a naturally favorable reaction on sales by dealers and service stations.

On the whole, the sound condition of agriculture seems to be the predominant factor in the automotive situation. Farmers are buying automobiles and tractors as they never have before. They are getting good prices for crops, and crops have been large. This applies with particular force to the truck and fruit farmers of the south and west. General business, while showing the normal seasonal slackening, has yet been good enough to keep the urban population in the market for new and used cars.

The high average of sales is also probably due to some extent to the prevailing tendencies to introduce more liberal terms in the financing of transactions on the deferred payment plan.

Veteran Show Head Recovers

NEW YORK, Aug. 1.—Sam A. Miles, veteran show manager of the National Automobile Chamber of Commerce, is very much improved at his home in Christmas Cove, Maine, following an operation. He is again taking an active part in the plans for the New York and Chicago shows of next winter, and for the chamber's exhibit at the Sesquicentennial Exposition in Philadelphia next year.

50 More Cities to Have Dealership for Ajax 6

RACINE, Wis., Aug. 3.—Announcement is made that the new Nash-built Ajax Six is to be introduced and displayed in more than 50 additional metropolitan cities during August. Since the car was publicly announced May 27 distribution has been limited to Chicago, Milwaukee, Racine and Kenosha.

Among the points to be opened up early in August are: Salt Lake City, Seattle, Portland, Minneapolis, Spokane, Omaha, Kansas City, Dallas, San Antonio, San Francisco, Los Angeles, Oklahoma City, St. Louis, Hutchinson, Kans., New Orleans, Memphis, Atlanta, Salina, Springfield, Mo. El Paso, Independence, Kan., Indianapolis, Wichita, St. Joseph, Topeka, Cincinnati, Louisville, Easton, Philadelphia, Columbus, Toledo, Cleveland, Buffalo, Winnipeg, Pittsburgh, Detroit, Saginaw, Vancouver, Grand Rapids, Calgary, South Bend, Salisbury, Baltimore.

In speaking of the introductory plans for these added cities, George C. Hubbs, general sales manager of the Ajax Motors Company, said: "The reception accorded the Ajax in the four cities in its home territory will go down as one of the greatest ever given a new motor car. And the demand for deliveries set in motion on Ajax Six Inaugural Day is daily gaining volume. However, with factory production taking a strong trend upward we can now begin to carry out our contemplated nation-wide program of distribution. We are turning out five times as many cars in a day at the present time as we were seven weeks ago. Despite this increased output, we intend to adhere strictly to our policy of entering new territories only as we can follow the car's introduction with reasonably prompt deliveries."

COAST RADIO SHOW PLANNED

SAN FRANCISCO, Aug. 1.—The third annual Pacific Radio Exposition will be held in the Municipal Auditorium here August 22 to 28, inclusive. Special attention will be paid to the handling of radio equipment by automobile dealers.

New California Laws Aid in Selling of Accessories

Three New Statutes Now in Effect Materially Advance Volume of Equipment Business

SAN FRANCISCO, Aug. 1.—New laws affecting the use of passenger cars and commercial vehicles going into effect July 24, already have proved of material assistance in advancing sales of automotive equipment. With three night patrolmen working three nights a week in every county in California enforcing headlight regulations, the demand for adjustments, new headlights, new lenses, reflectors and headlight globes has been the heaviest in years.

The campaign opened July 1, and up to July 10, more than 10,000 citations for irregular headlights had been issued in the state, notwithstanding the fact that enforcement was virtually suspended on July 3, 4 and 5 due to heavy traffic over the holidays, and again for a few days during the Santa Barbara earthquake situation.

Another new law which has materially increased the equipment sales is that prohibiting the throwing from a vehicle of lighted matches, cigars, cigarettes or ashes. Violation of this law is defined as as misdemeanor, punishable with a fine of not more than $500, or a jail sentence of not more than six months, or by both such fine and imprisonment. The law applies not only to automobiles, but to street cars, railroad coaches and wagons. The result has been extensive sales of containers for cigars, cigarettes and matches for attachment to automobiles, smoking cars and the smoking compartments of street cars.

The law forbidding the carrying of baggage on an automobile projecting beyond the line of the hub caps on the left-hand side of the car has promoted the sale of luggage carriers to a point never before reached in this state. The law is particularly aimed at campers and automobile tourists whose tents and other equipment frequently project so far on the sides of the car as to make passage of two cars on a mountain road impossible.

NEW HUDSON DEALERS

NEW ORLEANS, Aug. 1.—Paul H. Maloney, president of the newly organized Maloney Motor Car Company, distributors of the Hudson and Essex lines in Southern Louisiana, announce the appointment of the following dealers:

Joseph E. Loeb, Morgan City, La.; J. E. Hollier, Lake Charles, La.; Franklin Garage, Franklin, La.; Frank Jumoville, Plaquemine, La.; Vermillion Garage, Abbeville, La.; Chambers Auto Sales Co., Hammond, La.; W. F. Simmons Auto Co., Bogalusa, La.

ales of New Cars Slacken Slightly in Rochester, N. Y.

Dealers Report Tendency on Part of Buyers to Get Away From Time Payments

ROCHESTER, N. Y., Aug. 1.—New car ales fell off somewhat during the past onth because of anticipation of new odels. The fact that operators licenses ust be renewed this month also served hold up sales somewhat. Used cars re continuing to sell in goodly numbers nd stocks on hand are lower than at ny time during the past year.

Dealers here report a tendency of late n the part of buyers to get away from me sales. While the movement in the irection has only started slightly they ope to see it gain momentum. They elieve that those buyers who are paying ore cash and taking less time to comlete their payments for cars are realizng their extended time payments often rove a serious drawback rather than a elp in the purchase and operation of car.

These buyers have found out that it a good deal harder to make time payents and at the same time meet the perating expense of their car, than it to pay cash or shorten their payments, nd thus have one of these heavy carrying charges off their hands. For the verage buyer the operating expense of car in itself is a heavy enough drain n the pocketbook without taking on me payments in addition.

Accessories, tires, replacement parts nd electrical equipment are moving in air shape, although stocks are rather arge at this time. This is due to the hore or less slack business conditions uring the hot months. August is exected to see a change for the better in ll lines of the automotive business here.

ig Sales Volume Causes Chevrolet Price Reduction

DETROIT, Aug. 1.—Announcement of rice reductions effective August1 on all losed Chevrolet models was made today y R. H. Grant, general sales manager.

The revised price list follows: Coupe educed $40 to $675; Coach reduced $40 o $695 and Sedan reduced $50 to $775.

The benefit of the price reduction also vill extend to more than 8,000 persons olding Chevrolet six per cent purchase ertificates for future delivery on closed odels. The payments and interest on he certificates now will attain the total f a down payment for delivery earlier han would have been the case under the ormer price schedule.

According to Mr. Grant, the record roduction and the phenomenal sale of hevrolet passenger cars enabled the ompany to reduce prices earlier than ad been contemplated.

Finds Stolen Car in Own Garage

OGDEN, Utah, Aug. 1.—After storing an automobile that the police held 38 days until they could find the owner, and just after the supposed owner had been found, the Ogden Motor Co. discovered that the car was its own property. The machine had been stolen, but its loss somehow overlooked until the numbers were checked up after officers said they had found the rightful owner. The company was permitted to keep the car, remitting the $6 due for storage.

General Parts Corp. Buys Haynes Automobile Plant

DETROIT, Aug. 1.—Purchase of the Haynes Automobile Company by the General Parts Corporation has been announced by the latter company here. If a survey to be started in the immediate future shows favorable prospects, manufacture of the Haynes automobile will be started under another name.

With the purchase came the leasing of the service department and grounds of the company. The transaction includes the purchase of the name Haynes, it is said, insofar as its service to products made by the company is concerned.

About 40 men will be employed in the service department with the additional possibility of the General Parts Corporation sending some of its other parts departments to Kokomo, Ind., where the Haynes service is located.

Olds Establishes Factory Branch in Chicago District

CHICAGO, Aug. 1.—A factory branch has been opened in Chicago by the Olds Motor Works, Lansing, Mich., in the plant of the W. V. Faunce Motor Company, Oldsmobile distributor for this territory. The business of the Faunce company was purchased in its entirety, the officials have announced, and dealerships will be handled direct by the new concern.

Oldsmobile business in Chicago and in the great western area served by Chicago has been steadily gaining. The expansion of business has resulted in a number of problems which have resulted in the decision on the part of both Mr. Faunce and the Oldsmobile officials that it would serve the best interests of the company to establish a factory branch here.

Mr. Faunce is also Oldsmobile distributor in the Pittsburgh district, where the W. V. Faunce Motor Company has been established for a number of years. He will continue his business there as formerly. C. H. Hurst has been named manager of the new Chicago factory branch and has already assumed his duties.

Sales Volumes in Salt Lake for July Considered Normal

Used Car Situation Causes Some Concern With Only Higher Priced Closed Models Being Sold

SALT LAKE CITY, Aug. 1.—The automobile business for July is so far regarded as normal. Registrations for new cars for June were 1,288 and trucks 141 compared with 1,659 and 195 trucks in May. In June last year there were 1,581 new cars registered and 186 trucks.

The high price of tires has boosted the vulcanizing business here, and the sale of new tires is unusually good.

Dealers say the new models are causing used cars to be placed on the market faster than they can be absorbed, and that the used car business is good only where bargains are offered. The report of the local public market for used cars maintain by six dealers is to the effect that business is good for cars $500 and up where honest values are offered. Some dealers are more cautious right now in the matter of accepting used cars of the "open" variety because they feel that the growth of the popularity of closed models is going to make it exceedingly difficult to move them except at a loss. This firm reports the closed car business as being 90 per cent of its sales.

The industrial situation is exceptionally good. The outlook for the fall is so promising that the Utah Bankers' Association fears the people will indulge in a spending orgy, and has proclaimed August 9 as Conservation Sunday. Speakers will urge sanity in buying, it is stated, and there is to be an attack on the time-payment plan of buying.

The farmers, who have suffered from crop failures or poor market conditions for the past few years, are specially favored this year. The situation for them is better than it has been for a long time. Fail prices are being received and they have an abundance of everything to place on the market. The sugar industry is in splendid shape.

Franklin Earns $3.90 Net On Common in 6 Months

SYRACUSE, N. Y., Aug. 1.—Net earnings of the H. H. Franklin Manufacturing Co., of this city for the six months ending June 30, after payment of preferred dividends amounted to $3.90 per share on common stock outstanding.

The financial report of the company shows net sales of $11,323,118.52 with manufacturing costs of $9,028,839.30, with a net profit of $1,369,703.56. The current assets of the company total $6,015,304.86, and current liabilities of $496,935.29.

The plant is working at full capacity and has orders ahead which assure capacity operation until late in the fall.

Milton and Kreis Decide to Drive in European Race

De Paolo Will Stay Home and Represent Duesenberg in All A. A. A. Meets in This Country

INDIANAPOLIS, Aug. 1.—Pete De Paolo has finally decided not to go to Europe with the team of Duesenberg cars to be led by Tommy Milton and Peter Kreis to take part in the Monza and other speedway races of the early fall. Stating that he intends to remain in America and take part in all A. A. A. events in competition for the Three A championship, De Paolo does not give other reasons for not going, in spite of the understanding that A. A. A. officials had finally agreed to credit him with all his earned points even if he went.

The two Duesenbergs which are to be campaigned in Italy and France are nearly ready for shipment. The four wheel brakes are fitted and the cars are to be shipped from Indianapolis August 4 and are due to sail for Genoa August 8.

A Duesenberg Victory picnic was given the Duesenberg drivers and factory workers yesterday at Broad Ripple Park, where De Paolo was master of ceremonies in honor of the team that will go across the pond to tussle for the world prize.

Two European cars have ten points each while the Duesenberg is said to hold seven points on this international honor. It is understood that the Monza speedway officials are offering the team very substantial appearance money for the trip, thus reversing form.

Mr. and Mrs. Milton and James McCracken, a companion of Milton's, will sail for Cherbourg, France, July 8, while Peter Kreis will sail with the cars on the Colombo, direct for Genoa on the same day. With Kreis will go his mechanician, James Kemp, and Gene Marsenac, a mechanician of the original Ballot invaders, later with Ralph De Palma and James Lee. With this pit crew the American invaders will have the best serviced team this country has sent across.

SHIP TRUCKS TO DENMARK

DETROIT, Aug. 1.—What is said to be the first motor trucks shipped direct from Detroit to Copenhagen, Denmark, left here July 25 on the S. S. Anders. The trucks are a shipment of Fisher fast freight one and one-half ton chassis from the Standard Motor Truck Company of this city and are being sent to their district in the Danish capital. Shipping by water, it is estimated, will save 48 per cent of the former cost besides a saving of three days in time.

INDIA SALES INCREASE

AKRON, Aug. 1.—An increase of 120 per cent in the sale of India tires in June, over June of 1924, has just been reported by the Uhl Rubber Co. of Visalia, Cal.

GRAY PRICES REDUCED

DETROIT, Aug. 1.—Price reductions, effective today, have been announced by the Gray Manufacturing Company (formerly Gray Motor Corporation) on the Gray touring, three-passenger coupe and sedan models. The new prices, which represent a considerable lowering of former ones, are as follows: Touring car, $595; coupe, $825; sedan, $845, f.o.b. Detroit and tax added. Balloon tires, artillery type wheels and combination stop and tail light have been added as standard equipment without additional cost on these models at the new prices.

Boston Dealers Report No "Seasonal" Slump This Year

Used Cars Cleaned Up and Business in Outside Districts Better Than Before

BOSTON, Aug. 1.—Motor car distributors and dealers in Boston report that July this year did not show the supposed "seasonal" slump, which in past years has been looked for and generally caused salesmen to drop into a rut. While sales have not kept going quite as fast as in some other months there were wavy spasms. Also the distributors say that business in the outside territories has been better, if anything.

July a year ago was unsettled because of a number of new announcements and rumors which this year have been minimized because of the general good tone to the sales.

The dealers have been checking up on the new car registrations, and while they find that for the first six months of this year compared to that same period of a year ago there has been somewhat of a drop, yet it is covered mostly by a few cars, some of which are no longer marketed here.

In the last month the dealers have been working successfully to clean up the used cars so that stocks on hand now with new models being announced will not have a tendency to slow up the activities of salesmen going after orders for the 1926 lines.

Tire sales are reported as being very good at retail, but the dealers as an average are not putting in so many orders at the new July prices. The accessory houses say that sales have been satisfactory.

NEW STABILATOR DEALERS

SYRACUSE, N. Y., Aug. 1.—The Syracuse Watson Stabilator Co., Inc., of this city has appointed eight dealers in the 14 counties which it controls. The new Stabilator dealers are: Hand & Garney Tire & Rubber Co. of Utica, J. B. Lang, Engine & Garage Co. of Ithaca, Frank Alexander of Auburn, Cortland Auto Supply Co. of Cortland, J. N. Benedict of Norwich, H. E. Clemens of Pulaski, K. J. Wendt of Rome, Uhlein Motor Storage Co. of Watertown.

July Business in Louisiana Is Slightly Under June Figure

Dealers Expect Rush to Come After Summer Vacation Season Is Over

NEW ORLEANS, Aug. 1.—Business for July in most automotive lines in Louisiana was quiet and slightly under the good record of June. The month has witnessed a remarkable amount of remodelling and repainting of both distributor and dealer places of business in New Orleans and other cities of Louisiana and Mississippi.

Automotive men are expecting a big rush of business after the summer vacation season. It is stated that a good many are waiting for the new models. There have been a number of new dealers appointed in both states; several lines of cars have also changed distributorships, there being a general movement in the direction of widening and strengthening the organizations in more than one instance.

Copious rains, except in some few sections of northern Mississippi, which continue dry, have made the truck and fruit crops of both Louisiana and Mississippi bring in millions of dollars. Othe crops are in good condition with promise of good returns on all except sugar, the price of which is forecast as low for the new crop.

Car registrations in both states for the first six months of the year exceeded by appreciable margins the same period of 1924. The increased use of trucks is one of the pronounced aspects of the trade. Much new road construction and the improvements of old highways is in progress in both states.

MEMPHIS SALES BETTER

MEMPHIS, Aug. 1.—July has been a good sales month with automobile and accessory concerns. Used car sales have been very brisk. August opens propitiously. Several fine rains have fallen. Cotton has jumped up several dollars a bale and crops in local territory look good. The Memphis Chamber of Commerce sent out the past week a visitation by auto cavalcade to a dozen towns in southeast Missouri. This party found good roads and good crops.

OVERLAND PRICES CUT

TOLEDO, O., Aug. 1.—Apropos of the figures for the first half of 1925 which showed an exceptional increase in production of the company over its peak half year, Willys-Overland announces a price reduction on the Six DeLuxe sedan. The new price is $1095 according to figures just released by Willys-Overland officials. The price cut on the Six DuLuxe sedan follows closely on the heels of the price reduction announcement on the Six Standard sedan which was recently slashed to its new price of $895.00 f.o.b. Toledo.

Manufacturers Expect Last Half to Continue Early Gain

July Is One of Best Months in History for Automobile Maker—Stocks Low to Receive New Models

DETROIT, Aug. 1.—July, from the standpoint of the automobile manufacturer, was one of the best months the industry has experienced. Buying, while not as heavy as that of June, was better than any previous July, so much so that many of the manufacturers are looking forward to the last six months to be as good as the first half of the year.

The used car situation also improved. Never in the history of the industry has the number of used cars on dealers' and distributors' hands throughout the country been smaller. The number of 1925 models at this time is the lowest yet recorded.

A survey shows a majority of the manufacturers genuinely optimistic and making plans along this line. Others are following the same trend but sales reports and indications which are available from time to time do not favor them. It might be said with reasonable exactness that the automobile manufacturers who were rushing production the first part of the year are still unable to catch up with orders except to a small degree. Some are still unable to make deliveries within two months.

This condition is apt to lead those in the industry to believe that the production will be greater than ever before. In this connection it must be remembered that there are only certain manufacturers that are enjoying near capacity output and that the others are producing from 60 to 70 per cent of their capacity output. The trend now shows that the same sales decline, the same decrease in production will take place this year as in the past, but not to the same extent.

The advent of the new models or the 1926 models has not caused the decline in buying that many expected. Reports received by the different manufacturers from their dealers and distributors show that their stock of 1925 cars on hand are the lowest in years and that the introduction of new lines has had no apparent effect on the buying.

Velie Refutes Story of Truck Department Sale

MOLINE, Ill., Aug. 1.—Referring to a news dispatch appearing recently in newspapers throughout the country to the effect that a motor truck company in Defiance, Ohio, has purchased the motor truck department of the Velie Manufacturing Company, Edwin McEwen, manager of the Velie Motors Corporation makes the statement that this report has no foundation in fact.

The Velie Motors Corporation has sold the Century Motor Truck Company of Defiance, Ohio, the remaining quantity of productive material left over from the truck manufacturing division of its business which was discontinued several years ago, but this sale involves no part of the Velie Motors Corporation Truck plant, or plant equipment, Mr. McEwen says.

"The Velie Motors Corporation still retains ample stocks of repair parts for the servicing of any truck product which was put out in the past, and will continue as heretofore to supply such service to owners of Velie trucks," he declared.

Chrysler Promises Owners Saving Through New Service

DETROIT, Aug. 1.—A saving of 20 per cent on the maintenance of their cars is promised Chrysler owners through the introduction of a new service plan, announced by R. C. Reichel, service manager.

Under the new plan, the factory will absorb the government tax and the freight transportation charges on all shipments of parts to dealers and distributors of 200 pounds and over. These parts will be retailed at prices to be listed at the factory, making it possible for the owner of a Chrysler car to purchase a certain part for the same price at any place in the United States.

Figures compiled by Mr. Reichel show that the saving to Chrysler owners in the maintenance of their cars will be approximately 20 per cent.

N.A.C.C. Appoints Insurance Committee for Investigation

A. R. Erskine, President of Studebaker Corp. Is Made Chairman of Body to Survey Field

NEW YORK, Aug. 1.—Marking another step in the campaign of the National Automobile Chamber of Commerce to bring down insurance rates, the board of directors at a meeting last week in Buffalo appointed A. R. Erskine, president of the Studebaker Corp., chairman of the insurance committee. Other members will be named in a few days, when a comprehensive survey of the insurance situation will be started.

The insurance projects launched by the Chrysler Corp., and the General Motors Corp., will be studied closely.

The reports on trade conditions at the meeting showed that although July business is rather slow, a brisk late summer and fall is expected with the coming out of new models. The manufacturers viewed with such satisfaction the results of the first half-year, particularly in the manner in which production had been kept in line with sales, with a consequent favorable effect on the dealers.

Discussion of the foreign trade situation developed the fact that the manufacturers generally are planning to broaden their overseas activities. They are confident of an increasingly large market.

E. E. Haight, 17 Years With MOTOR AGE, Heads New Business Publishing Firm

CHICAGO, Aug. 1.—E. E. Haight has resigned as business manager of MOTOR AGE, after a service of 17 years with the paper, in order to become president of a new publishing company which will publish three business papers in Chicago.



E. E. Haight

Mr. Haight began his work with MOTOR AGE in April, 1908, and his first duties were in connection with the advertising make-up department. In 1911 he became business manager, which position he continued to fill until July 31 this year. During much of this time he was also western manager of the Class Journal Co., now the Chilton Class Journal Co., publisher of MOTOR AGE, Automotive Industries, Motor World Wholesale, and other automotive business papers. He was also a director of the Chilton Class Journal Co.

The new company of which Mr. Haight is president takes over the publication of three business magazines which for a number of years have been well established in their respective fields. They are Concrete, a leading business paper of the cement and concrete industry; Building Materials, devoted to the construction industry, and the Cement Mill Edition of Concrete.

Mr. Haight has for many years been active in business paper affairs, both in Chicago and nationally, having been president of the Chicago Trade Press Association, and is now chairman of the Trade Practices Committee of the Associated Business Papers, Inc.

Quick Recovery Period Is Predicted for Wisconsin

Slump of Sales Checked in Cities and Country Districts Expected to Follow Soon

MILWAUKEE, Aug. 1.—A check in the sales slump and the beginnings of what distributors claim well be a period of quick recovery are the briught lights in the automobile situation in Wisconsin at this time. The slump referred to commenced early in the spring and since then new car sales have compared unfavorably with new car sales for the same period last year. Some months, such as May of this year showed a dropping off of more than 30 per cent in comparison with the same month in 1924.

June however staged a comeback and sales for the month were 8,755 or 219 more than the 8,536 sales for June, 1924. This gain is in line with predictions made earlier in the year when distributors pointed to June as the month when the turn in sales would show a balance in favor of this year.

Expectation that sales for the last six months of 1925 would be greater in volume than sales for the final six months of any of the past three years was voiced by one of the largest distributors in the Milwaukee territory. He based his prediction on the keen interest in motor cars now prevailing, the impetus given to sales by introduction of new models and announcement of price readjustments and satisfactory crop conditions throughout the United States. The latter element was pointed to particularly as being a source of encouragement.

In Ashland country which contains only one city of size, sales in June last year were 106 against this year's 90. Following are the 1924 June figures and those for June, 1925, in counties devoted mainly to agricultural and non-industrial pursuits: Barron, 122-105; Brown, 232-171; Buffalo, 81-43; Clark, 207-136; Marathon, 288-191.

Similarly counties like Milwaukee county, harboring the largest city in the state showed a gain for this June, the comparative figures being 1,996 for this June against 1,317 for last June or a 50 per cent increase. Dane county showed 1925 sales of 376 as against 1924 sales of 292 for the month of June and Sheboygan county, also devoted to industry and containing several cities of some size showed comparative figures of 219 and 183 in favor of June, 1925.

The situation is regarded very favorably by both distributors and dealers in Milwaukee and Wisconsin. It is felt that announcement of price cuts and model changes which had caused deferred buying among those interested in purchasing a car has ceased to constitute sales resistance and that hesitancy on this account is over. Time payments are being met promptly and the general credit situation is satisfactory.

MISSOURI HITS POLICIES

JEFFERSON CITY, Mo., Aug. 1.—State Superintendent of Insurance Hyde in a brief, but important ruling has held it unlawful and illegal for automobile manufacturers to issue, gratis, insurance policies with each car protecting holders against fire and theft. The commissioner takes the attitude that in issuing such policies the auto concerns become insurance corporations within the meaning of the Missouri statute. He said: "It is illegal for unauthorized persons or corporations to sell insurance or transact an insurance business in Missouri. The issuing of fire and theft insurance in connection with the sale of automobiles is transacting insurance business. Unauthorized persons or corporations guilty of selling insurance or transacting insurance business are doing so in violation of the laws and will be prosecuted." The Maxwell and Chrysler dealers were advertising and conducting business on this basis and are preparing to take legal steps to protect their right to continue such a sales plan.

General Motors Changes Some of Canada Personnel

OSHAWA, Ont., Aug. 1. — Several changes in personnel of the various sales organizations of General Motors of Canada, Ltd., at Oshawa, have recently been announced.

J. J. L'Ardiel who for the past two years has been assistant sales manager for the Chevrolet division has been appointed sales manager of Cadillac Motor Car Co. of Canada, Ltd., and of the Olds Motor Works of Canada, Ltd., duties to start immediately. Ross MacKinnon, general sales manager of Chevrolet Motor Co. of Canada, Ltd. has been put in charge of the sale and distribution of the Oakland line of cars in addition to his present duties.

Two new appointments have also been made in the Chevrolet sales department. E. R. Birchard becomes assistant to Mr. MacKinnon in charge of wholesale activities and car distribution, while E. W. Everson will be assistant to the sales manager in charge of sales promotion and retail sales development. Both Messrs. Birchard and Everson are well known in the automotive trade having, been with the Chevrolet Motor Company of Canada, Ltd., for some years.

WHITE PLANS EXPANSION

CLEVELAND, Aug. 1.—A complete rearrangement of the White Motor Co., plant in this city to be made while operations will be closed from August 22 to September 8. Increased production and greater economy in the use of floor space are promised as the result of the rearrangement of the entire factory layout and the installation of new machinery, says Thomas H. White, vice-president and general manager. Benefits will be reflected through the sales and service organizations in accellerating delivery.

Airplane Reliability Tour to Cover Twelve Cities Planned

Detroit Aviation Society Will Test Utility of Planes from Sept. 28 to Oct. 3

DETROIT, Aug. 1.—An inter-city airplane reliability tour, starting at Detroit and covering twelve cities from September 28 to October 3 has been decided upon by the Detroit Aviation Society. Details of the trip were not made public although the possibilities of making it an annual event were discussed. Reliability and utility of the present day commercial plane rather than the speed of the entrants will be the main considerations. The shortest hop will be 225 miles and the longest 400 miles.

Entries are assured from the Laird Airplane Company, the Travel Air Company, Stout Metal Airplane Company, Curtis Aeroplane and Motor Corporation, Glenn L. Martin Company, and A. A. H. Fokker Company. It is also considered likely that planes from the Boeing and Douglas companies on the Pacific Coast will be entered. Only commercial planes will be allowed in the trip.

A trophy will be offered by Edsel Ford to the machine winning the tour under whatever conditions are imposed by the rules committee. It is probable that other prizes of certificates of merits will be awarded to planes finishing with high percentages of reliability and performance.

An exposition of airplanes, airplane accessories, engines and other products connected with the industry will be conducted simultaneously with the meet, it was decided, with all manufacturers being invited to exhibit. The belief that the public wants to see the newest in airplane construction at close range just as new models of automobiles are objects of great public interest was expressed.

Following is the tentative schedule as planned:

September 28: Detroit, Fort Wayne, Chicago.
September 29: Chicago, Iowa City, Omaha.
September 30: Omaha, St. Joseph, Kansas City.
October 1: Kansas City, St. Louis.
October 2: St. Louis, Indianapolis.
October 3: Columbus, Cleveland, Detroit.

CANADIAN TIRES UP AGAIN

TORONTO, Aug. 1.—Prices of tires in all of the larger sizes have been advanced from 12 to 18 per cent, making the third increase since the month of June. The last increase was on June 24 when 10 per cent was placed on the prices of all tires and tubes. The smaller sizes in tires and tubes are unaffected by the latest increase. Tire and tube makers say the increase in the price of raw rubber to the high level is responsible for the advance.

Southern California Sales Ahead of July Last Year

Used Car Stocks Still at Unusually Low Points—Business Conditions Generally Good

LOS ANGELES, Aug. 1.—With few exceptions, confined largely to the low priced field, there has been a very healthy increase in sales during July throughout Southern California as compared with June sales. The impending advent of many new models, which were not presented to the Southern California market until the last week in July had a tendency to cause a temporary quietus in many quarters. Los Angeles distributors, however, are well pleased with the progress of sales this season and look for a continuation of increasingly good business.

Used car stocks remain at unusually low levels, with the exception of a comparatively few dealers who have been "forcing the market." Not for many years has there been such activity in the Los Angeles used car field as during recent months. Two of the largest Los Angeles distributors report that they broke all records in their used car department in the number of used cars sold.

Business conditions generally throughout Southern California are in excellent shape. Agriculturists particularly are reaping good returns. California is expected to produce the greatest crop of fruits and vegetables this year of any state in the country. Crop conditions are excellent and the prices offered growers are the highest for several seasons, particularly for oranges and lemons. These principal products of the Southland are bringing the growers double and in some cases three times the amount per box received for the 1924 crop.

The official registration figures for the first six months of 1925, just announced, afford interesting study. By registering an increase of 22 per cent in June throughout the state, following a similar increase in May, the volume of automobile sales this year has exceeded the first six months of last year by 1134 vehicles, with the remainder of the year looming up very favorably to beat the 1924 record.

California purchased a total of 94,242 passenger cars and 8,665 commercial cars during the six months, an increase statewide of 2 per cent in cars and 5 per cent in trucks. The combined sales of passenger cars and trucks in California in the first half of the year were 102,907, of which 56,195 were in the 11 Southern counties and 46,712 were in the Northern half.

Los Angeles and Southern California, slow to get away in the early part of the year, have displayed a satisfactory "comeback" in that the first six months sales of passenger cars are only 468 machines behind the same period of 1924.

Indiana Sees Prospects for Good Fall Business

INDIANAPOLIS, Aug. 1.—New car sales in Indiana have slowed distinctly from the middle of the month while the early part was less brisk than June. The prospects for a good business in many lines for August and later months is apparent for the city and state, because of splendid farm conditions in all parts of the state with a bumper corn crop and high priced hogs predicted.

Accessories and parts dealers report very good sales while tires have held up their end spasmodically as advance notice of changing prices have in many cases brought extra orders. Truck sales for larger units have advanced due to a large increase in inter-city hauling and dealers and branch houses are optimistic of continued brisk markets in various types of commercial vehicles.

Part of the slowing in new car sales is traced to the new models about to be brought out, and this waiting tendency has effected many lines which are not scheduled for changes but whose prospects desire to see the other new types before they pay for the new job. Even radio wholesalers are optimistic of splendid fall trade and some unusual plans to promote such sales are in the air. There are still rumors of some large used car stocks, but on the whole the used situation seems about as good as at any time during the season.

Congressman Sees Repeal Of Automobile War Taxes

Ohio Representative Believes Strong Public Representations Will Cause Action at Next Session

WASHINGTON, Aug. 1.—Belief that Congress can be prevailed upon to eliminate entirely the war excise tax on automobiles, tires and accessories if the automotive world creates a sufficiently active public interest was expressed here this week by Congressman Martin L. Davey of Ohio.

Congressman Davey is giving evidence that he is willing to do his share by sending out thousands of letters on the subject, attaching the set of resolutions which were adopted at the annual convention of the Ohio State Automobile Association June 20.

These resolutions "request and urge the United States senators and the representatives in the Congress of the United States from the state of Ohio to work and vote for the repeal of the federal excise taxes at the earliest possible date." Congressman Davey says:

"I am definitely opposed to a continuance of the war excise tax on automobiles, tires, and accessories."

25 Years Ago In the Automobile Industry
As Recorded In MOTOR AGE

(From MOTOR AGE of August 9,1900)

New York Automobile Co.

NEW YORK, Aug. 6.—After three months' test of their gasoline automobiles, the New York Automobile Co., Park Row building, expects to be able to begin the delivery of some types of vehicles early in October. The company was organized less than a month ago under the laws of New Jersey. The capital is $200,000, of which $85,000 is said to have been paid in.

Two factories have been secured by the company. One is located at Elizabeth, N. J., and is a two-story and basement brick building 48 by 130 ft., with an L 30 by 50 ft. Here the parts will be made and assembled. A five-story building 50 by 140 ft., on the corner of Fulton and Columbia streets, Brooklyn, will be used for completing and finishing the vehicles.

Looking for Buses

CLEVELAND, Aug. 6.—The Pinesville Automobile Co., organized some time ago by prominent Painesville business men to operate an automobile bus line between that town and surrounding villages, is in the market for several vehicles of large carrying capacity. Early last spring the company contracted with a large New York concern for a simple vehicle which was to be delivered during June, but after repeated promises of delivery the vehicle seems farther from completion than at the start.

Improved Duryea Three-Wheeler

The three-wheel Duryea phaeton weighs 650 lbs. and is strongly built. It has three-inch tries and 36-in. wheels, 1¼-in. spokes, large axle extending through both rear wheels, heavy driving chain of self-oiling pattern and powerful foot brake, which is said to act with sufficient force to slide the wheels in either direction.

The steering is effected by a single lever pivoted to the front edge of the seat, controlling the steering wheel without lost motion. The motor throttle and clutch shifters are operated by the same handle. Being between the riders this handle may be manipulated by either rider at will. A large proportion of the weight is on the driving wheels, insuring effective traction and easy steering.

A New Manufacturing Concern

CLEVELAND, Aug. 6.—The National American Cycle Co. of Akron is the latest bicycle manufacturing concern to take up the manufacture of automobiles. It is preparing a portion of its plant for this work and has completed a model vehicle of the gasoline type.

U. S. Automobile Production Sets Record in First Half

Total of 2,173,360 Cars and Trucks Made in Six Months—June Largest in History

NEW YORK, Aug. 1.—With an output of 2,173,360 cars and trucks during the first six months of 1925, the automobile industry of this country established a new record of manufacture. This total is 5.8 per cent over the corresponding period a year ago and 5 per cent ahead of the first half of 1923.

The June output of cars and trucks totals 402,696 which is the largest June in the history of the business.

Reports from the retail trade at the meeting of the directors of the National Automobile Chamber of Commerce held in Buffalo this week indicated that the activities of the industry are on a conservative basis. Both May and June totals of output were smaller than April. Good summer and fall business is looked for, but there is no disposition to anticipate this by large production programs. The output will be in response to actual demand.

The totals for the six months were as follows:

	1924	1925
January	324,546	241,068
February	376,326	287,215
March	393,423	377,247
April	384,267	439,117
May	321,554	420,017
June	254,075	402,696
	2,054,191	2,173,360

That 1925 will be the most productive year in the history of the automotive industry of this country was shown by a report discussed at the meeting of the National Automobile Chamber of Commerce. A report submitted by John N. Willys, president of the Willys-Overland company, and chairman of the chamber's committee on auto exportation, showed that the exportation of automotive vehicles from this country is steadily growing. In this report it was estimated that by the end of the year 500,000 cars and trucks will have been exported during 1925 as against 386,000 for 1924.

Plans for the World's Motor Transportation Congress were discussed. The congress will be held in New York January 9, 1926, in connection with the national automobile show and will attract thither representatives of all branches of the automotive industries from all parts of the world.

LICENSE PLATES CONTRACTED

NEW ORLEANS, La., Aug. 1.—Contracts for the 1926 license plates have been closed, according to C. F. Bailey, motor registrar in the office of the secretary of state in Baton Rouge. Plates in 1926 will be purchased by the state of Louisiana at a cost of 16 cents per pair delivered at Baton Rouge. An order for 200,000 pairs of plates was given, but will doubtless be increased before date of delivery. Sporty color combinations have been selected for the 1926 plates.

HUDSON-ESSEX SALES DOUBLE

DETROIT, Aug. 1.—With business 90 per cent greater for the first six months of the present year than the same period for 1924, Hudson-Essex dealers for Detroit and Wayne County predict that the sales mark for the present six months will show an even larger volume. Reports being received at the factory here indicate that this condition is the same throughout the country. The closed cars still continue to be about 90 per cent of the total output.

Gabriel Snubber Earnings 3 Times Dividend Requirement

CLEVELAND, Aug. 1.—The Gabriel Snubber Manufacturing Co., which recently was reorganized to permit Clevelanders and others to own capital stock, earned more than three times the dividend requirements in the first six months of 1925. Net earnings for the period were $770,200 or the equivalent of $7.70 a year on common stock, on which dividends at the rate of $2.50 per year are being paid.

Average net earnings of the company for the three year period from 1922 to 1924 were $5.81 a share while earnings for 1924 were equivalent to $5.43 a share. The year 1923 was the best year in the history of the automobile industry in this city, but if the present record is maintained, Gabriel's business in 1925 will exceed that for 1923 by at least $300,000.

This statement by this bumper company truly reflects conditions in the automobile business in this city. Manufacturers have set a new record for six months. Sales in Cleveland in the same period have increased 50 per cent over 1924 and about 30 per cent in excess of the previous banner year of 1923.

Sales of new cars in June, for instance, this year were 4,297 and of used cars 8,590. In 1923 the figures were 3,614 new cars and 6,714 used cars. More than 18,000 new cars have been sold here since the first of the year, while the used cars sales have amounted to 40,000.

NEW GARAGE HAS RAMPS

SAN FRANCISCO, July 25.—Con-Construction has commenced on a seven-story public garage, occupying the site of the old San Francisco Stock Exchange. J. Sheldon Potter, owner. The garage represents an investment of $350,000, and it is the first building of the kind to be erected in San Francisco employing the D'humy motor ramp system of ingress and egress. The entire building has been leased by N. E. North, proprietor of the adjoining Pearson garage for ten years. Plans for the building call for a series of ramps 36 feet long and 18 feet wide with a 13 per cent grade, from floor to floor, enabling cars to pass at any point and to travel through the building at a rate of 12 to 15 miles per hour. It is estimated that it will be possible to park a car on the seventh floor, or to bring it to the street from that floor, in one and one-half minutes.

St. Louis Automobile Output Doubles Value of Shoes Made

Boot Industry Loses First Place in Worth of Product Manufactured in Missouri City

ST. LOUIS, Aug. 1.—St. Louis has long been recognized as one of the chief shoe manufacturing centers of the country and almost any St. Louisan would unhesitatingly say that shoe manufacturing was the chief industry of his city. But a census of the Department of Commerce made public recently disclosed that in 1923 the value of automobiles turned out in St. Louis was more than double the value of the shoes made.

The department's figures, forming perhaps the only authenic census of St. Louis industry, are comparative with the last census which was 1921. The increase shown by the automobile industry was greater than any other in that period, nearly trebling, from $37,800,000 to $107,500,000. The number of workers in the industry is shown to be 3,043 and the amount of their pay $4,570,785. The shoe manufacturing industry, however, continues to employ more St. Louis workers than any other industry and to provide the city's largest industrial payrool.

The output of the shoe industry was $51,930,780; the number of workers 11,686 and the amount of their pay $12,860,899. These figures do not include shoes manufactured by St. Louis firms with factories in small Missouri and Illinois towns. The annual sales of St. Louis shoe companies exceed $110,000,000.

PRESENT WIDTH MAINTAINED

PARIS, July 15.—(By mail.)—Unable to find a suitable type of cross section which will hold down the speed of next year's racing cars to a reasonably safe limit, the International Sporting Commission this week decided to continue with the present minimum width of 31 inches.

Next year's European racing rules therefore will call for a maximum piston displacement of 91½ cubic inches, superchargers being allowed, a minimum weight of 1543 pounds, compared with the present weight of 1,433 pounds, and a minimum body width of 31 inches. While this width gives sufficient room for a two-seater body, only one man has to be carried.

JOHNSON DISTRICT MANAGER

INDIANAPOLIS, Aug. 1.—E. C. Johnson, who has been connected with the automobile industry since 1903 and who is widely known among automobile men throughout the United States, has been appointed district manager in the Southeastern territory for the Nordyke & Marmon Company. As a young man Mr. Johnson was with the White Company and since then has been associated in an official capacity with the Packard Motor Car Company, Reo Motor Car Company and others.

Alabama Tradesmen Meet In Tuscaloosa Convention

Merchandising Methods and Good Roads Feature Discussion at Mid-Summer Meet

TUSCALOOSA, Ala., Aug. 1.—Automotive dealers and distributors representing all branches of the industry in Alabama, with a number of visitors from outside the state, gathered in Tuscaloosa early last week for the semi-annual mid-summer convention of the Alabama Automotive Trades Association, which proved to be one of the most successful and one of the best attended meetings the organization has ever held. Approximately 200 dealers, distributors and salesmen were in attendance, including a number of visitors representing various manufacturing concerns in the north and east.

Merchandising methods and good roads comprised the keynote of the mid-summer session, the principal address being delivered by Arthur Mogge, merchandising director of the Automotive Equipment Association, who spoke at length on the work of this organization, and explained in detail successful merchandising methods to the visiting delegates. Mogge's address was illustrated with motion pictures showing the visiting dealers in tangible way what good merchandising methods will do for their business, an address that proved to be one of the most practical and helpful ever given before any gathering of the Alabama Automotive group, and one that profited every dealer and salesman present.

Kay Johnson, of Montgomery, Ala., chairman of the association's advisory committee set forth the advantages of co-operative associations of this nature as an aid to better automotive merchandising, stating that since the Alabama organization was first formed it has served to greatly improve and elevate the status of the automobile industry in that state.

Following Mr. Johnson's address Congressman W. A. Oliver of Tuscaloosa, spoke, praising the association for the excellent progress it has made in placing the automotive industry on a high plane in the state of Alabama.

One of the principal addresses was by Sidney Bowie, of Birmingham, who spoke on "Good Roads and How to Obtain Them". As the subject of good roads was one of the primary matters before the meeting, due to the fact that the Alabama association is conducting a concerted campaign for adequate good roads building and maintenance appropriations in Alabama, Mr. Bowie's talk was heard with considerable interest.

In addition to Mr. Mogge's illustrated talk other addresses during the first day of the meeting were by H. B. Mathews of New Orleans, Bob Hernandea of Birmingham, Henry Allen, of the Alabama State Tax Commission, and Louis Sevier of Birmingham, president of the Associated Industries of Alabama.

Mr. Mathews and Mr. Hernandea spoke mainly on merchandising topics pertaining to the automotive industry, while Mr. Savier discussed taxation matters as they affect the industry in the state of Alabama.

Following the addresses at the Monday session James Farley of Birmingham, secretary of the Alabama association, delivered his annual report, showing the organization not only to be in excellent condition, but experiencing a steady expansion and growth. He told of the many things helpful to the industry in Alabama and elsewhere that the association has accomplished the past year, and outlined plans of its activities for the coming year.



JAMES B. FARLEY,
Secretary of Alabama Automotive Trades Association

With the exception of the appointment of committees and similar business, Monday afternoon and Tuesday was given over very largely to entertainment, the delegates being taken on a long river trip on a steamer especially chartered for the purpose, returning late Tuesday evening.

President Brownell was authorized to appoint a committee to make a detailed study of good roads and taxation in Alabama, and the simplification of process of paying taxes on automobiles with possibly some changes in the certificates of title law. This committee will be appointed later on, and will make its report on its findings at the annual convention.

Relative to business conditions, dealers and distributors seemed in agreement that 1925 is going to prove a very prosperous year for the industry, and they were particularly optimistic over the outlook for late summer and fall business this year, which gives promise of being unusually good in all automotive lines.

Coast Dealer Sees Profit Only in Good Management

N. A. D. A. Vice-President Believes Efficient Methods of Selling Are Only Way to Better Business

SAN FRANCISCO, Aug. 1.—Profit in the business of automotive merchandising will come from efficient management more than from any other cause in the future, according to William L. Hughson, vice-president of the National Automobile Dealers' Association, and one of the leading dealers of San Francisco.

"Those dealers who are waiting for better times, instead of creating those better times, and who are looking for larger sales, instead of going out and making those larger sales, in the hope of automatically improving their profit situation without doing anything about it, will be among the missing when the 1926 dealer roll is called," said Mr. Hughson. "The good old days in the automobile-selling industry are gone forever. Dealers used to sit back in their chairs and wait for customers to throw orders over the transom, but new conditions, due to highly competitive methods in merchandising, have changed this once-happy condition. Profit in the automobile business henceforth will be derived from efficient management more than from any other cause. It will come from the elimination of waste, and the proper balancing of departmental relations between sales and expenses.

"Automobile dealers are learning today—generally for the first time—what expense-budgeting means. An automobile dealer should have his business so planned that he can tell at the start of the year approximately how much merchandise he will sell, how much profit he will make, and how much money he will have to spend to make this profit. Then he should permit this expense and no more, unless unexpected increases in sales justify an addition to the budget. The record of automobile-dealer mortality indicates that the dealers have just begun to realize the necessity of running their business, and not letting their business run them.

"The Cedar Point, Ohio, convention to be held in August will be an awakening to hundreds, if not thousands, of dealers, who have not carried business management into their places of business, when they learn what successful dealers throughout the United States are doing to correlate expenses, sales and profits."

NEW STUTZ DEALER

INDIANAPOLIS, Aug. 1.—The merchandising department of the Stutz Motor Car Company of America announces the appointment of a new dealer to add to the growing merchandising rolls of this company. The new dealer is A. T. Spinella of Dennison, Ohio.

Along Automobile Row

MONTREAL.—Hamilton Motors, Ltd., representing Rolls Royce cars, have moved their sales and service to the Westmouth Garage, 1040 St. Catherine St., West.

CINCINNATI.—The Mundew Convenient Tire Shop, Inc., has been chartered with an authorized capital of $20,000 to buy, sell and deal in auto tires and accessories.

DALLAS.—The Auto Company of Dallas has been incorporated. The capital stock is $10,000. Newton Flippen, C. Flippen and J. D. Pagitt are among the incorporatorse. The company handles Fords, Lincolns and Fordsons.

LOUISVILLE.—Frank L. Clifford has retired from the firm of Schwarz, Clifford and Scott, Ford dealers, and the company has incorporated under the same name with a capital stock of $100,000. The firm is now composed of John C. Schwarz, Lawrence S. Grauman and Robert A. Scott.

OAKLAND, Cal.—J. F. LaPlace of Chicago, has been added to the sales force of Bell & Body, Willys-Overland dealers in Oakland, according to announcement by Dean Mitchell, sales manager.

NEW ORLEANS.—Raoul A. Ledet, formerly service manager of the Motor Sales & Service, Inc., New Orleans, distributor of Maxwell and Chrysler cars, is now with the Watson-Ledet Motors, Inc., of Baton Rouge, Chrysler dealers.

LOS ANGELES.—The Sperl Motor Company, Southern California Rickenbacker distributors, announces the appointment of Miller & Trekell as Hollywood dealers for the Rickenbacker, with sales and service building at 6250 Hollywood Boulevard.

MILWAUKEE.—Brent L. Van Lent, Inc., Green Bay, Wis., has been appointed dealer for Willys-Overland products in that city. The Green Bay company is one of the largest and best-known automobile dealers in Wisconsin and has represented Ford and Chevrolet in the past.

BALTIMORE.—The Wilson-Nash Company has announced the appointment of the Highland Motor Sales Company, operated by Philip Wienecke & Sons, as agents for the Nash car.

ROCHESTER.—Rabe's Complete Auto Repair Works has been appointed by the Auto Spring Control Company, of Jamestown, N. Y., as western New York distributors for Two-way Hydraulic shock absorbers.

LOUISVILLE. — The Kennedy-Shrader Motor Company, Hudson and Essex subdealer under the Fidelity Motor Company, has increased its capital stock from $10,000 to $50,000.

SEATTLE, Wash.—W. T. J. Powers, for the last few years connected with the Keaton Tire & Rubber Company, has been appointed assistant manager at Seattle.

CHICAGO.—Victor C. P. Dreiske, for nine years with the Locomobile Company and for two years manager of the Chicago branch, is now western district manager for Rolls-Royce of America, Inc., with headquarters at the Chicago branch, 2512 S. Michigan Ave.

WILMINGTON, N. C.—Thomas D. Piner, Studebaker agent here, is building a new home for his business. Office, sales room, repair and parts departments and gas and oil station will be provided for in the new building.

LOUISVILLE.—The George Cole Motor Company, Ford dealers and exclusive Lincoln dealers of Nashville, Tenn., has been appointed exclusive Lincoln sales and service agents and authorized Ford dealers for Louisville. The organization is to succeed Schwarz, Clifford and Scott, former Lincoln dealers and the Don Prentiss Motor Company, Ford dealers.

CHICAGO. — The Votava Motor Sales, Franklin dealers, formerly at 1634 South Crawford avenue, has moved into new salesrooms and service station at 3831-33 Ogden avenue.

OAKLAND, Cal.—The F. A. Brinkman Company has purchased the interests of the East Bay Paige-Jewett Company, and is now the only authorized Paige-Jewett agency in Oakland. W. S. Wright has been appointed manager.

CINCINNATI, O. — The Famous Auto Supply Company, has been incorporated with a $40,000 capital to wholesale and retail automobile accessories.

MIAMI.—S. A. Ryan, president of the S. A. Ryan Motor Company, distributors of Lincoln and Ford Motor cars, has announced plans for a new $500,000 combined Lincoln and Ford display building, garage and service department and Ford assembling plant, to be built at once. When completed the building will be six stories in height and ultimately will include a complete Ford assembly plant.

DETROIT.—Utter & Son, East Lansing, Mich., dealers for Willys-Knight, Overland and Oldsmobile automobiles, are are erecting a garage and sales building near the proposed site of M-16 which is near the Lansing city limits. The building will be 66 by 110 feet and will be of a one-story brick construction.

BOSTON. — One of the most imposing structures given over to the motor industry has just been completed here and taken over by the Autocar Company of Ardmore, Penn., for a sales and service building. The top floor has 30,000 square feet. This will be devoted to service and parts. The second floor has 22,000 square feet and this will have the executive offices in the front and the rear section will take care of storage and used trucks. The first floor will be given over to salesrooms.

MEMPHIS.—The Gay Oil Co., of Little Rock, Ark., has purchased the Memphis Indian Refining Co., plant and oil station. T. J. Gay is president of the company. H. M. Gay will have charge of the Memphis division.

MINNEAPOLIS.—C. H. Dye, leaving the sales department of Anthony Motors, Inc., Minneapolis Packard distributors has been appointed manager of the Duluth branch of the D. A. Odell Motor Car Co., of Minneapolis, selling Pierce Arrow cars.

DETROIT.—O. I. Kreusser has been appointed engineer-in-charge of the General Motor Corporation's proving ground at Milford, Mich., succeeding F. M. Holden who recently joined the Oakland Motor Car Co.

CHARLOTTE, N. C.—B. D. Heath Motor Company of Charlotte has announced the appointment of G. S. Kerlin as retail dealer in Charlotte for the Hudson-Essex line. Mr. Kerlin has been associated with the Heath company's sales department.

DETROIT.—A. J. Nelson, for the past eight years connected with the sales department of the Walter T. Sewell Company, has been appointed sales manager. A branch office to effect the distribution of Sewell cushion wheels, with which the Dunlop line of truck tires will be handled jointly, was recently established.

LOS ANGELES.—Robert Galindo, widely known through many years' association in Los Angeles and San Francisco motor car merchandising, has been appointed sales manager of the Locomobile Company of California.

NEW ORLEANS.—The formal opening of the Anderson Motor Company, dealers in Chevrolet cars, took place in Hattiesburg, Miss., recently. The new company is under the direction of G. O. Anderson, who for the last four years has been assistant manager and treasurer of the Edwards-Butler Motor Company of Biloxi, and the Edwards Motor Company of Gulfport, Miss.

FLINT, Mich.—M. W. Estabrook, formerly of the sales department of the Flint Motor Company, is now assistant sales manager of the Duplex Truck Company, Lansing, Mich.

CLEVELAND.—P. L. Austin, who has been with Petersen Motors, Inc., Jordan distributors, since March 15, 1920, and who for the last two years has been retail sales manager, has been appointed manager of wholesale in charge of the Philadelphia metropolitan territory.

SAN FRANCISCO. — The Caterpillar Tractor Company of California, has moved its headquarters and offices from San Francisco to San Leandro, on the mainland side of San Francisco Bay, where the parent plant of the Best Tractor Company is located

AKRON, O.—Papers have been filed with the secretary of state, chartering the Akron Elcar Sales Company, with a capital of $5,000 to do a general agency and commission business in automobiles.

BOSTON. — G. E. Lyons, new district wholesale sales manager for the Auburn Motor Car Company, has placed agencies here during the week as follows: Providence, R. I., Providence Auburn Company; Spencer, Mass., Oscar De Longchamp; Lowell, Mass., Cheever Street Garage; Fairhaven, Vt., B. S. Hayes; Ludlow, Vt., Edward A. Lockwood.

CHICAGO.—DeHaven Brothers, Chandler and Cleveland dealers, have added the Franklin to their line and will operate a sales and service station at 4614-16 W. Washington Boulevard for Franklin exclusively.

CLEVELAND. — The Weldless Rolled Ring Company, of this city, has been acquired by the Transue-Williams Steel Forging Corporation of Alliance. Under the consolidation the Alliance company has acquired a new and considerably improved process for making rings and drive gears and other circular forgings.

MILWAUKEE. — Harry F. Krueger, prominent for years in motor circles here, has been appointed dealer for Star and Durant cars. The Krueger salesrooms have been remodeled and redecorated and the new machines placed on display in the showrooms.

COLUMBUS, O.—Renner Bros., who operated a sales agency for Davis cars on West Broad street, has given up that line and has organized the Columbus Auto Wrecking and Parts Company, occupying a new building at 1390 West Broad street. The company will carry a complete line of accessories and parts and operate a garage and service station.

MONTREAL.—A system whereby anyone who is able to drive a motor car can rent one at a moderate cost is being established here at 4280 St. Catherine street West and will be known as the "Drive Yourself Montreal Company." The firm here will be a part of the Hertz Drivurself System, Inc., which operates in all prominent cities of North America.

CHILLICOTHE, O. — The Chillicothe Nash Motors Co., has been chartered with an authorized capital of $20,000 to deal in autos and accessories.

SALT LAKE CITY. — The Davis Auto and Machine Company has been incorporated at Price, Utah, and will have a capital of $25,000. The company will do general garage work and auto repairing, and will be agent for the Chrysler car.

BALTIMORE.—Frank M. Radford, for 15 years prominently identified with the automobile trade in Baltimore, has become sales manager for the Motor Car Company. Willys-Overland dealers. Before bcoming associated with this business he was president of the State Motors, Inc., Chandler-Cleveland distributors. He also has been identified with the Haynes and Jordan cars.

CEDAR RAPIDS, Iowa.—H. D. Miller, manager of the Miller Buick Company, has disposed of his auto interests to the Bloom Motor Company of Chicago and will devote his time to his Angus breeding farms, for which he has been widely known among stockmen. The Bloom firm took over the agency August 1.

With the Associations

Tire Shops Close Nights

ST. LOUIS, Aug. 1.—At a recent meeting of the Associated Tire Dealers of St. Louis, a resolution was adopted to close establishments on Sundays, nights and holidays and to make a charge for all tire service. Only three members of the association had raised any objection to the resolution and none of them was represented at the meeting. A committee was appointed to confer with these members with a view to lining them up with the new policies.

Arthur G. Jennings, business manager of the association was instructed to sign up members to an agreement to bulk discarded tires and sell them as junk to the highest bidder. This system had been fully discussed at a previous meeting. A similar plan is used by members of the Ben Franklin Club, an organization of printing establishments in this city, for the salvaging of their scrap paper.

Sample poster stamps boosting the national convention of tire dealers to be held here in November were exhibited by A. P. Woehrle, president of the organization. They are to be affixed to the correspondence of tire dealers throguhout the country and are to be provided by the St. Louis Convention and Publicity Bureau.

Independents Organize

OAKLAND, Cal., Aug. 1.—Following fast upon the formation of the Independent Gasoline and Oil Dealers' Association in Oakland, other independent service-station operators have organized throughout northern and central California, from Redding as far south as San Francisco. Representatives from these local associations of independents held a well-attended convention in Sacramento recently, at which the following five subjects were discussed and acted upon:

"Business Honesty of the Independent Service Station Operator and How to Maintain It"; "Maintenance of Cleanly and Efficient Places of Business"; "Full Measures and Fair Dealing"; "Upholding of Prices and Policies Fixed by the Refiners"; and "The Wrong of Substitution." The independents pledged themselves to better business methods, the uphodling of refinery prices, and the barring of substitution of products in any form.

A. B. Morris has been chosen secretary-manager of the state association of independents, and a blue and white checkered flag has been adopted as the emblem of the organization.

Service Managers Meet

St. Louis, Aug. 1.—Carburetor adjustments and other automobile troubles were discussed at the monthly meeting of the Service Managers' Bureau of the St. Louis Automobile Dealers' Association held last week at Claridge Hotel. Seventy-six managers representing that many automobile concerns attended.

J. W. Miller of the Stewart-Warner Products Service Station, vice-president of the bureau, presided.

Frank Rietz, service manager of the Equipment Service Corporation of St. Louis, talked at length concerning the proper adjustment of carburetors of various makes of cars. Rietz answered many questions asked by managers concerning causes of carburetor troubles.

Ewell Smith, development engineer of the Manhattan Rubber Company discussed methods of brake lining manufacture and the reasons therefor. He also emphasized the necessity for care in brake adjustments.

Herman L. Schnure, president of the Schnure-Buick Co., one of the oldest automobile dealers in the city also spoke. He was introduced by Robert E. Lee, manager of the St. Louis Automobile Dealers' Association.

Cleveland Dealers to Meet

CLEVELAND, Aug. 1.—The fourth annual outing of members of the Cleveland Automobile Manufacturers' and Dealers' Association will be held at Ridgewood, August 4. The program includes a golf tournament with entrant selecting his own handicap and an indoor baseball tournament.

Carolina Meeting Sept. 7

CHARLOTTE, N. C., Aug. 1.—Directors of the North Carolina Automotive Trade Association, in special session here, voted to hold the annual meeting of the association at Wrightsville Beach, September 7-8. Preparation of the program was a task assigned a special committee from the directorate, with C. W. Roberts, of Greensboro, secretary of the association, acting as chairman. Several speakers of national prominence are expected to deliver addresses.

Wisehaupt Meets Tradesmen

BLOOMINGTON, Ill., July 25.—R. E. Wisehaupt, representing the National Automobile Dealers' Association, addressed the members of the Bloomington Automotive Trade Association, and their salesmen at the Association of Commerce recently, speaking upon the subject of salesmanship. He illustrated the difference between success and failure and suggested methods which would have a tendency to produce sales. The speaker pointed out the stiff competition that the motor car salesmen must contend with nowadays, and emphasized the importance of a thorough knowledge of the science of salesmanship and the psychological aspects. The speaker plans to deliver similar talks before all of the automobile dealers' associations of Illinois during the summer and fall months.

Truck Operators Join

NASHVILLE, Tenn., Aug. 1.—Truck operators at Nashville have formed an association, among the objects being to expand, promote and foster the general business of transportation of property by motor vehicles; to co-operate with the state, federal and municipal authorities to the end that motor carriers in Tennessee shall pay a just, equitable and fair proportion of taxes, but no more; to cultivate the good will of the public and to establish motor transportation in its estimation; to assist members in procuring liability, compensation and other insurance with the idea of making collective agreements; to affiliate with other similar bodies.

The officers of the new association are: E. C. Holland, Columbia, president; I. T. Watson, Franklin, first vice-president; M. M. Kirby, Hartsville, second vice-president; C. A. Williams, Nashville, secretary-treasurer.

The membership is composed of the following firms, operators in Middle Tennessee, southern Kentucky and north Alabama.

Jenkins and Kemp Transfer Co., Lebanon, Tenn.; Holland Transfer Co., Columbia, Tenn.; Bryson Truck Line Co., Murfreesboro, Tenn.; Kirby Transfer Co., Hartsville, Tenn.; W. C. Robinson, Smithville, Tenn.; McReynolds and Dunn Transfer Co., Scottsville, Ky.; Pate Transportation Co., Fayetteville, Tenn. and Huntsville, Ala.; Chas. Chockley, Shelbyville, Tenn.; Watson and Blackburn Transportation Co., Franklin, Tenn.; M. T. Hancock, Liberty, Tenn.; Yellow Truck Line, Springfield, Tenn.; Jones Transfer Co., Gallatin, Tenn.

Bus Owners Organize

WRIGHTSVILLE BEACH, N. C., Aug. 1.—The North Carolina Bus Owners' Association held its annual meeting here today, electing officers and discussing policies of the association.

New officers are: H. G. Bales, Goldsboro, president; L. F. Berhard, Greensboro, vice-president; Joel W. Wright, Gastonia, second vice-president; C. H. Best, Newton, third vice-president; J. W. Hester, Oxford, secretary-treasurer and attorney.

The new board of directors consists of: A. B. C. Kirk, Salisbury; W. H. Averett, Oxford; J. F. Martin, Wadesboro; L. A. Love, Charlotte; H A. Ragle, Asheville; T. C. Caudil, North Wilkesboro; R. O. Walters, Concord; H. F. Moore, High Point; M. E. Hart, Raleigh.

Charlotte was chosen as the next meeting place of the association, the meeting to take place the first Monday in July, next year.

Jewel W. Wright of Gastonia, was appointed state representative on the national directorate.

Optimism Still Prevails In Used Car Situation

Despite Price Reductions on New Models Authorities Expect Better Methods to Be Effective

DETROIT, Aug. 1.—Despite the sensational price reductions which have been made by the different car manufacturers and which several manufacturers are now contemplating, those who have made a close study of the used car situation are not pessimistic over the future.

On the contrary, they look for dealers and distributors to make more money during the coming season than they have this year. This also applies to the merchants who deal exclusively in used cars.

However, it will be the era of merchandising, with those merchants who study their problems the closest being the ones to reap the biggest gain. With this "era" will come better trained salesmen, better organization and ways that will enable the merchant to adapt himself more readily to the problems that confront his business.

Some of the manufacturers are inclined to believe that there are just two factors, one, the make of automobile and the man who sells it and second, the organization behind the car. They believe that there is only room for a certain number of cars and that those automobiles whose organizations do not strengthen their positions will be the ones to go "by the boards." Those who strengthen their positions will get the benefits.

To the dealers and distributors out in the field, they advocate better selling organizations, with the salesmen being trained in the best angles of salesmanship. For it will depend a good deal upon the salesmen as to whether his employer is able to sell his quota.

The reduction of prices which have been made and which will be made on different makes in the near future will enable the dealer, the distributor and the used car merchants to make better bargains. The day of one dealer getting a customer by giving him a higher price for his used car than another dealer has passed with a resulting tendency to stabilize the used car market.

WILSON FOUNDRY EXPANDS

PONTIAC, Mich., Aug. 1.—Purchase of the land, plant and equipment of the Michigan Drop Forge Co., by the Wilson Foundry and Machine Co., a subsidiary, is announced by D. R. Wilson, president of Wilson Foundry and Machine Co. The Wilson Foundry Company, makers of all engines for Willys-Knight and Overland cars will use the property for future expansion. The property, located next to the Wilson Co., consists of about five acres, the plant being completely equipped for drop forge work. It ceased operations about a year ago and since then has been idle.

Coming Motor Events

Automobile Shows

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition.

Dallas, Tex. ..... Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis. ..... Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal. ..... Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich. ..... Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla. ..... Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal. ..... Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La. ..... Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va. ..... Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt. ..... Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn. ..... Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago ..... Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City ..... Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

San Francisco ..... Aug. 22-28
Third annual Pacific Radio Exposition in Municipal Auditorium.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina ..... Oct. 3-13
Pan-American Road Congress.

London, England ..... Oct. 3-17
Olympia Passenger Car Show.

London, England ..... Oct. 29-Nov. 7
Annual Truck Show.

Races

Altoona, Pa. ..... Sept. 7

Charlotte, N. C. ..... Oct. 24

Fresno, CaCl. ..... Sept. 30

Laurel, Md. ..... Oct. 10
A. A. A. Race, Baltimore-Washington Speedway.

Los Angeles, Cal. ..... Nov. 26

Monza, Italy ..... Sept. 6
Italian Grand Prix Race.

Syracuse, N. Y. ..... Sept. 19

Salem, N. H. ..... Oct. 12

Conventions

Buenos Aires, Argentine ..... Oct. 3-13
Pan-American Road Congress.

Cleveland ..... Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland ..... Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia. ..... Nov. 12-1
Automotive Merchants' Association Convention.

Montreal, Que. ..... Oct. 7-1
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia ..... Septembe
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa. ..... Oct. 12-1
Pennsylvania Automotive Association Convention.

St. Louis ..... Nov. 17-1
Annual Convention of National Tire Dealers' Association.

Eaglesmere Park, Pa. ..... Sept. 14-1
General meeting of the Automotive Electric Association.

Wrightsville Beach, N. C. ..... Sept. 7-
Annual meeting of the North Carolina Automotive Trades Association.

Montreal ..... Oct. 13-1
Convention of the National Association of Automobile Insurance Companies.

WHITE DECLARES DIVIDEND

CLEVELAND, Aug. 1.—Directors of the White Motor Co., at their quarterly meeting declared a quarterly dividend of $1 per share, which is at the rate of 8 per cent a year. It is payable on September 30 to holders of stock on September 21. This is the thirty-ninth consecutive dividend of the company. For nearly 1 years there has not been a single passin of the quarterly dividend. Promotions o 16 men affecting as many officers of th White Co., have occurred since July Important changes also have been mad in the eastern region in the same perio Six men have been promoted to the man agement of different offices.

British Authority Tells of European Automotive State

Says Industry Has Grown 100 Per Cent in Last Three Years—Believes Duties Will Stand

NEW YORK, Aug. 1.—The current state of automotive business in Great Britain was described at a luncheon here this week by Col. Alfred Hacking, secretary of the Society of Motor Manufacturers and Traders of London, who is making a survey of the American automobile business.

The luncheon was given by the National Automobile Chamber of Commerce. Frederick J. Haynes, president of Dodge Bros. Inc., who presided, extended an invitation to British car and truck manufacturers to visit America at the time of the National Automobile Show and the World Motor Transport Congress in New York, January 9, 1926. He declared that the motor car had won its way to world-wide favor because it has proved a transportation necessity, and he predicted that it would prove a more potent force in bringing the people of the world together than the League of Nations.

Colonel Hacking said that the automobile was making striking progress in Great Britain, the business having grown 100 per cent in three years. Engineering opinion was about equally divided between preference for light high speed motors and heavier American type, but he thought there was no chance for a change in the present R. A. C. bore rating of engines.

He declared that the McKenna duties of 33 1/3 per cent on imported cars would be maintained for at least four years.

A reimposition of a gasoline tax Colonel Hacking thought unlikely, as the British authorities found difficulty with administering the levy.

With regard to the rubber situation, Colonel Hacking said there was little chance of a radical modification of the Stevenson restriction act, as many took the position that high rubber prices were greatly helping England to pay her war debt. But his association as well as others in allied fields had lodged emphatic protests against the present state of affairs. They are in favor of cheaper rubber.

Questioned regarding the time sales situation in England, Colonel Hacking said that about half the cars sold there now were on deferred payments. The sales are financed usually through subsidiaries of insurance companies, and the approved terms are 25 per cent down and the balance in twelve installments. "Most good concerns," he said, "did not approve of more liberal terms."

Among those at the luncheon were H. H. Rice, assistant to the president, General Motors Corp.; M. C. Reichert, export manager, Studebaker Corp. of America; A. L. Viles, general manager, Rubber Association of America; Coker Clarkson, general manager, Society of Automotive Engineers; Alferd Reeves, general manager, National Automobile Chamber of Commerce; Herman Deuster, secretary of the foreign trade committee of the Motor & Accessory Manufacturers Association; other representatives of manufacturers and associations, and editors of automotive trade publications.

SQUEEKS and RATTLES

NO AMATEUR



Kriss: Do you suppose that it will take long for your wife to learn how to drive the car?

Kross: It shouldn't! She had about ten years' experience driving me!

—Judge.

Lonely Enough

Sofia—Joe's awfully absent minded, isn't he?

Omar—Why?

Sofia—Why the other night he was driving his parents over a lonely road and they came to a particularly lonely spot, and before he knew it he had parked the car.

—Penn Punch Bowl.

Famous Last Words

I think that other car is going to slow down.

—Daily Palo Alto.

One Is Enough

"Have an accident?" asked the fellow who arrived at the scene of an automobile wreck too late to be of any help.

"No thanks," replied the victim, as he picked himself up, "I've just had one."

Dogless

"Mose, can you explain wireless telegraphy to me?"

"Yessuh, its like dis: If you-all had a long, long houn' dawg, an' he stretched from Cincinnaty to Cleveland, and you stept on his tail in Cincinnaty, he would howl in Cleveland. Dat am telegraphy. Only in wiahless you does de same thing without de dawg."

—Columbus Dispatch.

A Full Purse

When Mrs. A. T. Miller regained consciousness after lying for three hours pinned beneath her automobile here Saturday, she awakened to learn that in addition to physical injuries, she had suffered the loss of her pocketbook, containing $50, and a spotlight, spare tire and kit of tools.

—Hastings (Neb.) Tribune.

AN EXAMPLE



Mrs. Biggs—Let's go to California in our flivver.

Mr. Biggs—It's too far.

Mrs. Biggs—Why so? These peaches came all the way from California in a tin can.

—Fawcett Fraternity News.

E. H. Wilson Co. to Make Parts for Yellow Bodies

MOLINE, Ill., Aug. 1.—Parts for bodies for the Yellow Truck & Coach Manufacturing company will be made by the E. H. Wilson Manufacturing company (Moline Body corporation) it has been announced by E. H. Wilson, president.

The Moline company has received an order for parts for 1,000 bodies and plans for production are already under way. Jerome Javurek, production man for the Yellow Truck & Coach company is in Moline working with officials of the Wilson company on production plans.

The Wilson company, which has been working at full capacity for months, is building all the bodies for the Velie Motors Corporation of Moline and for the Stearns Automobile Company of Cleveland, Ohio, in addition to producing a considerable number for the Gardner Motor Car Company of St. Louis and for the Pierce-Arrow Motor Company of Buffalo, N. Y. Shipment to the Stearns company alone averages two carloads daily, according to Mr. Wilson.

NEW CLEVELAND DEALERS

CLEVELAND, Aug. 1.—The following dealers have been added to the organization of the Cleveland Automobile Company:

Harrisburg Chandler Cleveland Co., Harrisburg, Pa.; Leon A. Wylen, Philadelphia, W. A. Rutz, New Haven, Conn.; Irvington Auto Service, Portland, Ore.; Pakrose Service Station, Portland, Ore., and the Chandler Cleveland Agency, San Bernardino, Cal.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN		"4"	
------	5-p	Touring	$795
		"6-66"	
------	6-p	Roadster	1,495
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
		"8-88"	
------	6-p	Roadster	1,975
------	4-p	Sport Roadster	1,975
------	4-p	Club Roadster	2,075
------	5-p	Sport Brougham	2,250
------	5-p	Sedan	2,350
BUICK		"Standard"	
------	2-p	Roadster	$1,125
------	5-p	Touring	1,150
------	2-p	Coupe	1,195
------	4-p	Coupe	1,275
------	5-p	4d. Sedan	1,495
------	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
------	2-p	Roadster	1,250
------	5-p	Touring	1,295
------	5-p	Sedan	1,495
------	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
------	3-p	Sp. Roadster	1,495
------	5-p	Sp. Touring	1,525
------	4-p	Country Club	1,765
------	4-p	Coupe	1,795
------	5-p	Brougham Sedan	1,925
------	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
------	2-p	Coupe	$3,045
------	5-p	Sedan	3,195
------	7-p	Sedan	3,295
------	5-p	Brougham	2,995
------	7-p	Imperial	3,435
------	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
------	-----	Roadster	3,250
		(138 in. W. B.)	
------	7-p	Touring	3,250
------	-----	Phaeton	3,250
4400	5-p	Coupe	4,000
4490	5-p	Sedan	4,150
4590	7-p	Suburban	4,285
4655	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3223	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3428	5-p	Sedan 4 d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	675
2110	5-p	Coach	695
2220	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2390	5-p	Touring	$895
2440	2-p	Club Coupe	995
2590	5-p	Coach	1,045
2680	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3040	5-p	Sedan	1,495
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
2990	5-p	Brougham	1,545
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$6,650
4500	4-p	Sp. Touring	6,150
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
------	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
------	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
------	5-p	Phaeton	1,895
3245	5-p	Std. Sedan	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
------	5-p	Brougham	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	885
2695	5-p	Spec. Touring	985
2708	2-p	Coupe "B"	995
2823	2-p	Spec. Coupe "B"	1,095
2995	5-p	"B" Sedan	1,095
3077	5-p	Spec. "B" Sedan	1,195
3020	5-p	Sedan A	1,245
3107	5-p	Spec. "A" Sedan	1,330
2723	5-p	Coach	1,095
2823	5-p	Spec. Coach	1,195
DORRIS		"6-80"	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
------	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
------	2-p	Sp. Roadster	900
2225	5-p	Touring	810
------	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
------	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
------	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
------	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
------	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
------	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
------	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	850
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD			
		Without Starter and Dem. Rims	
1869	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	5-p	Cabriolet	4,400
GARDNER		"Series 5"	
2680	5-p	Coupe	$1,275
2895	5-p	Sedan	1,475
3070	5-p	Sp. Sedan	1,595
		"6"	
2975	5-p	Touring	1,395
2925	-----	Sport Roadster	1,595
3100	4-p	Cabriolet	1,845
3250	5-p	Sedan	1,595
3320	5-p	Sport Sedan	1,895
3300	-----	DeLuxe Sedan	1,895
		"8"	
3175	5-p	Touring	1,995
3100	-----	Sport Roadster	1,995
3300	4-p	Cabriolet	2,245
3550	5-p	Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$630
1880	3-p	Coupe	845
2020	5-p	Sedan	895
2130	5-p	Royal Sedan	975
HAYNES		"60"	
3295	5-p	Touring	$1,600
3650	5-p	Brougham	2,200
3765	5-p	Sedan	2,300

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ		D-1	
3360	5-p	Sedan	$1,695
HUDSON		"Super Six"	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,250
3425	4-p	Brougham 4 d.	1,595
3675	7-p	Sedan	1,795
HUPMOBILE "R"			
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		"23-25"	
------	4-p	DeLuxe Road.	$1,500
------	5-p	DeLuxe Touring	1,320
------	5-p	DeL. Coach 2d.	1,400
------	5-p	DeLuxe Sedan	1,680
------	5-p	Coach 2d.	1,245
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,575
3340	5-p	Touring	2,575
3450	3-p	Friendly "8"	2,375
3625	5-p	Brougham	2,375
3520	4-p	Victoria	2,775
3525	5-p	Sedan	2,975
3470	7-p	Sedan	3,325
3800	7-p	Suburban Sedan	3,375
KISSEL		"55"	
3130	2-p	Speedster	$1,895
------	2-p	Sp'dster De Luxe	2,185
------	4-p	Speedster	1,995
------	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
------	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
------	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
------	7-p	Touring	1,785
------	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
------	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	1,995
------	5-p	Broug. Sed. DeL.	2,685
------	5-p	Brougham 2 d	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
------	5-p	Victoria De Luxe	2,685
		"75"	
------	2-p	Speedster	2,195
------	2-p	Speedster De L.	2,485
------	4-p	Speedster	2,295
------	4-p	Speedster De L.	2,585
------	2-p	Speedster De L.	2,585
------	2-p	Enc. Sp'd'r DeL.	2,985
------	4-p	Tourster	2,195
------	4-p	Tourster De L.	2,885
------	5-p	Phaeton	1,985
------	5-p	Phaeton De Luxe	2,185
------	7-p	Touring	2,085
------	7-p	Touring De Luxe	2,285
------	4-p	Coupe	2,485
------	4-p	Coupe De Luxe	2,885
------	5-p	Sedan	2,395
------	5-p	Broug. Sed. DeL.	2,985
------	5-p	Brougham 2 d.	2,195
------	7-p	Sedan De Luxe	3,485
------	7-p	Berl. Sed. De L.	3,585
------	7-p	Victoria	2,585
------	7-p	Victoria De Luxe	2,985
LEXINGTON			
		"Concord"	
------	5-p	Touring	$1,595
------	5-p	Touring (Enc.)	1,695
------	5-p	Spec. Touring	1,795
------	5-p	Sedan	2,185
------	5-p	Spec. Sedan	2,445
		"Minute Man"	
------	2-p	Roadster	2,145
------	5-p	Touring	2,095
------	7-p	Touring	2,195
------	5-p	Lark Touring	2,345
------	5-p	Cal. Touring	2,495
------	7-p	Cal. Touring	2,495
------	5-p	Royal Coach	2,495
------	5-p	Brougham	2,595
------	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	$4,000
------	-----	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

MOTOR AGE

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For Heavy Interurban Traffic

THIS new Miller-built Model 26-C, mounted on the new Studebaker M-184 Big Six chassis, especially designed for bus service, is ideal equipment for heavy inter-city traffic and feeder lines.

Although rated as a nineteen-passenger job, this bus will easily accommodate as many as twenty-two passengers. Inside dimensions are, length, 192 inches; width, 69 inches; height, 52 inches. The seats are four-passengers wide, with ample knee room between. Individual seats may be had if desired.

Here is a bus that combines smart appearance, economical, dependable operation and maximum passenger comfort—a bus that will increase business and profits for the operator.

Specifications, construction details, prices, etc., on this and other Miller-built bus models may be had from any Studebaker dealer, or from The A. J. Miller Company.

The A. J. MILLER COMPANY

Bellfontaine, Ohio

MOTOR AGE

Vol. XLVIII | Chicago, August 13, 1925 | No. 7

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

HOOVER may take action in crude rubber situation by following Kellogg's note to British with one from Department of Commerce. Page 32.

Joseph J. Cole, pioneer in the automobile industry and founder of Cole Motor Car Co., dies. Page 39.

Goodrich buys patents and manufacturing and selling rights to Rubber Ace puncture-proof tube. Page 32.

Robert Benoist wins French Grand Prix with his twelve-cylinder supercharged Delage. Antonio Ascari, winner of the Grand Prix d'Europe at Spa in June, is killed in this race. Page 34.

Chrysler Corporation brings suit against Wisconsin Insurance department to restrain state from interfering with new policies. Page 43.

Ford Motor Company reports a record July business in all of its divisions. Lincoln deliveries also increase. Page 43.

1925 models and used car stocks are low in St. Louis following action by dealers to concentrate on moving cars on hand before new types are introduced. Page 37.

Boillot wins French touring grand prix with Peugeot car. Page 32.

Fisher plans shortly to undertake the manufacture of bus bodies in quantity. Most of orders expected to come from Yellow Truck & Coach Manufacturing Co. Page 37.

August sales in Toledo expected by dealers to show an increase of at least 25 per cent. Page 36.

Northern and central California report increase of about 30 per cent in sales during July. Page 36.

Motor Wheel Corporation earnings for first six months of 1925 total $1,935,395.04, or an average of about $2 a share. Page 36.

Henry Ford's bid of $1,706,000 for 200 ships of the United States Shipping Board, declared by Chairman O'Connor to be highest offer. Page 35.

Motoring public accepts new models with approval and orders are being taken from those who intended to defer their purchases until next year. Page 35.

Introduction of new models causes slight slackening in Kansas City demand. Prospects plentiful and volume from outside metropolitan district greater than June. Page 42.

Dealers in Louisville report satisfactory business during July with new car sales much better than last year. Page 33.

Coast Tire & Rubber Co. again in good financial condition following reorganization last year. Directors are re-elected. Page 33.

Fall business prospects in Iowa are brighter. July equal to if not greater than last year, although introduction of new models has disturbing effect on sales volume. Page 38.

Seiberling Rubber Co. lets contract for construction of new building, which will allow expansion of production about 50 per cent. Page 38.

Ford obtains property near Boston for plant expansion. Area conveyed is 31.4 acres, and lies four miles from metropolis. Page 38.

In Next Week's Issue—As the Editor Sees the Automobile Business

Experience of a Large Paint Shop With Pyroxylin Finishes

The Automobile Finishing Company of Detroit Uses Lacquer Finishes Almost Exclusively—Building Specially Constructed for Finishing Work—Novel Manner of Merchandising Paint Jobs

By B. M. IKERT

GIVEN the necessary equipment and sufficient working knowledge there is little chance for argument as to the success of pyroxylin finishes on motor cars. Although some new things are being found out about these finishes as time goes on, the experimental work is over and the job now is one of the shop adapting itself to the work.

Any paint shop which turns out good work has no difficulty with pyroxylin finishes and no doubt the majority of cars thus finished are a credit to the establishment. But many shops still have to learn something about merchandising their work, just as the automotive repair shops found out some time ago that it is perfectly possible to merchandize maintenance work of a strictly mechanical nature.

One of the best examples we have recently observed of where a paint shop not only turns out excellent work but merchandizes this profitably is the Automobile Finishing Company, 1839 East Grand boulevard, Detroit. If ever there is a fine example of what can be done to place motor car maintenance on a basis where it commands respect, it is this establishment.

The reason is not hard to find if you visit the place and talk with the owner, Mr. T. J. Gillam. First of all he is a practical painter, having at one time charge of the finishing department of a motor car factory whose production ran over 400 cars a day. He knows pigments, solvents, varnishes, lacquers and all the rest of the things connected with the application of the finish to a car. But on top of all this, he is a business man and to that end knows what it means to properly "sell" the work.

Let's see what he has done to make his business a success.

In the first place he decided a well conducted automobile painting establishment had no business in an alley or some out of the way place. He chose, therefore, a site in one of Detroit's best streets and built a structure especially suited to the needs of motor car painting. The building is 150 ft. long and 60 ft. wide, fire-proof, well lighted, with a finishing room and heating facilities that are the last word in equipment.

There are two entrances, one front and one rear. At the front also are the show room, finishing room, lavatory and office, as well as the finishing room where finish varnish work is done. At the extreme rear is the burn-off and wash rack department and directly opposite this the rack for holding tires and other parts taken from cars while they are being worked upon.

The stair way to the basement also is located here. In the basement is the boiler for producing steam and also the air compressor. The side walls are practically all glass and there is an unusual amount of light inside the



Someone said at one time if service and maintenance were to be placed on a business basis the work would have to be taken "out of the alley" and placed on the main street. It has happened and is happening every day. Here, for example, is the building of the Automobile Finishing Company, of Detroit, located on East Grand boulevard. It is a handsome building and in no way detracts from the appearance of the neighborhood



Several views taken in the building of the Automobile Finishing Company, Detroit. Two of them show the manner of cleaning the car with alkali and steam, the car being previously stripped of tires and fenders and placed on floor jacks. The ample capacity of the building is shown in one of the other views, while the remaining one is of the finishing room, wherein the final coat, striping, etc., is applied

building. A dressing room for the men is located in the basement.

Air lines extend along the wall on each side of the building and air outlets are placed at every other car stall. At the head of the air line is a pressure gage showing the pressure in the tank located in the basement. An air regulator for conditioning the air also is placed at the head of the line. At each air outlet is a drain to collect any water due to condensation in the pipe.

So much for this part of the equipment. No matter how costly the equipment, materials, pigments and processes, they mean little if knowledge of the craft is lacking. There must be a system and the work must be "sold" if customers are to be satisfied and a legitimate profit derived from the work.

And so we come to the methods of doing the work in this finishing shop. The best way to appreciate it is to follow a car through the establishment. Bear in mind this shop does only quality work, for it is on this class of work that its reputation has been built. The customer who wants "just a cheap little job" is turned away. A Ford painted in this shop gets the same high-class finish as the most expensive car. There is but one standard to which the establishment works and one of the things which Mr. Gillam constantly impresses on the minds of his workmen is that the quality of the work ranks above everything else. It cannot be "good enough". Mr. Gillam personally supervises the job on every car and having refinished motor cars, and carriages for over 20 years, nothing gets by his critical eye.

When a car comes in for refinishing the "check-in record" is made out. This is a sort of history card and serves a very useful purpose. Besides listing the usual items such as name of owner, make of car, license, specifications as to colors desired, etc., there is the speedometer reading, amount of fuel in tank, make of tires and spares, lights out of commission, vanity case fittings if any, condition of glass, radiator shutters and many similar items.

The reason for checking these things is simply this: it prevents misunderstanding when the customer calls for the car. The customer may swear up and down there were fittings in the vanity case when the car was brought in. Or, as one customer said before the system of checking-in the cars was adopted "I think you did a fine job of the work but I don't like the idea of using gasoline from my

(*Continued on page* 12)



Merchandising a repaint job. Here is shown the showroom of the Automobile Finishing Company of Detroit, wherein is placed the customer's car just before delivery. It is entirely separate from the other cars in the shop, which adds much dignity to the selling of the work

Ohio Council of N. A. D. A. Formally Launched

300 Dealers at Cedar Point Meeting Perfect Organization as a Division of National Association—Speakers Discuss Merchandising, Service and Legislation

Cedar Point, Ohio, Aug. 8.

MORE than 300 automobile dealers from all parts of Ohio met in two-day session at Cedar Point, inaugurating the Ohio Council of the National Automobile Dealers' Association.

This first general session of this newly organized state council was devoted to discussion of merchandising, service and legislative problems.

Speakers the first day were C. A. Vane of St. Louis, general manager of the N. A. D. A.; Chalmers Wilson, commissioner of motor vehicles of Ohio, and Attorney Frank X. Schaut of Cleveland, who discussed the legal phases of the industry in Ohio.

At the Thursday afternoon session the convention heard C. E. Gambill of Chicago, president of the N. A. D. A., and C. C. Hanch of Chicago, general manager of the National Association of Finance Companies, representing the time payment business of the automotive industry.

Speakers on Friday's program dealt with merchandising and sales work and included Edward Payton of Cleveland, Howard Wisehaupt of Cleveland, A. R. Kroh of Detroit, and Lynn M. Shaw of St. Louis.

The Ohio Council of the N. A. D. A. was formally launched by the election of the following governing board representing districts of the state: Warren Griffith, Toledo; G. G. G. Peckham, Cleveland; F. E. McClure, Akron; Frank Smith, Youngstown; Frank K. Boggs, Dayton; H. E. Coen, Columbus; C. A. Schick, Cambridge; J. W. Tarbill, Cincinnati, and R. A. Brehmer, Circleville.

Permanent headquarters of the council will be at Columbus.

Experience of a Large Paint Shop With Pyroxylin Finishes

(*Continued from page* 11)

tank". One man said, "I see you broke one of my door handles", and still another accused the shop of having used the car. Although these kind of customers are in the minority they must be dealt with and it is easy to see how the check-in record takes care of such situations.

This establishment even goes so far as to put exactly the same tire on the wheel from which it was taken, even as to the direction of travel. Every effort is made to return to the customer his car as received, excepting, of course, that the finish is new, as well as any changes ordered, such as nickel-plating certain parts, painting, monograms, striping and other things.

Having made the check-in record the car goes to the rear of the shop where the tires and fenders are taken off. No time is wasted on rusted fender bolts, as the heads are cut off and new bolts used in reassembly. It saves time and makes for a better job. The tires are stored for the time being and when again applied to the finished car the rims are given a coat of lead. This is done so that when the customer washes his car no rust will be washed down from the rim on the newly painted wheels. Certainly this is a good point for other shops to remember.

In taking off the tires and fenders, the car is placed on two quick acting floor jacks, so it can be rolled easily. It goes to the burn-off and wash rack where the old finish is completely removed (Mr. Gillam, by the way states the only satisfactory procedure with lacquer finishes is to completely remove the old finish on a car) and the chassis is cleaned with alkali and steam.

With the paint removed and the running gear cleaned the car is rolled to a stall along one of the sides of the building where it remains until finished, unless it goes to the finishing room for application of finish varnish, calling for a dust-proof room. The floor jacks are removed from under the car and it is placed on wood jacks. The quick acting floor jacks are too costly to remain idle under a car that remains in a certain place any length of time, hence the inexpensive wood horses or jacks.

Since we have in previous articles dealt with the application of pyroxylin finishes it becomes unnecessary to relate the various steps as done in this shop. We shall only mention that the work is most carefully done and reference to the high gloss on the car in the showroom illustrated herewith will testify to this. It is a lacquer finish.

While the car is going through the shop the fenders are sent out for re-enameling. The same is true of wire wheels and any such parts as lamps, radiator shells. etc., to be nickel-plated. Thus by the time the car itself has been finished these parts have returned and are ready for installation.

One of the outstanding features in connection with the work is the effort made to keep the characteristics of the car so that when it comes out of the shop it is practically a duplicate of the car as it came from the factory. A car may have, for example, a certain design on the lamp rim worked out in nickel plate and black. Some shops would refinish the lamp in an all-black and forget all about the design characteristic of the lamp. But not so in this shop. Even the small leather pads often placed at the extreme lower corner of a hood are kept intact or renewed, but not painted over to save time. Excepting for the tires, it is difficult for anyone to appreciate that a car refinished in this shop is other than a brand new one. Especially is this true if the car is a closed model. All new dust caps, for example, are placed on the tire valve stems, the instruments on the instrument board are gone over and all told the car is about as nearly a duplicate of the original factory job as it is possible to do so.

As a final good point in merchandizing this work, the car, when finished is rolled into the showroom where the customer can inspect it in much the same manner as he looks over a new car in the dealer's showroom. It is away from the other cars and surrounded by an atmosphere of orderliness and cleanliness. It makes a hit with the customer and marks a fine point in the selling of a repaint job.

The capacity of the establishment is about four cars per day and Mr. Gillman states that the work runs about 97 per cent pyroxylin finishes as against varnish jobs.

Speakers on Program at Ohio N.A.D.A. Meeting



Left to right, top row: Lynn M. Shaw, assistant general manager, N. A. D. A.; C. A. Vane, general manager, N. A. D. A.; A. C. Faeh, field manager, N. A. D. A. Second row, left to right: Edward Payton, market analyst; A. R. Kroh, sales promotion adviser, N. A. D. A. staff; C. E. Gambill, president, N. A. D. A. Bottom row: Harry T. Gardner, manager Cincinnati Dealers' Association; C. C. Hanch, general manager, National Association of Finance Companies; F. E. McClure, former president, Ohio Automobile Trade Association; and Howard J. Wisehaupt, merchandising specialist.

IGNITION TESTING on the Car

BILL FIXIT STORY NO. 9

PREVIOUS installments in this series by A. H. Packer were published March 19, April 2, April 16, May 7, May 21, June 18, July 9 and July 30, 1925.

SYNOPSIS: Bill Fixit's electrical trouble shooting men start on a trip in a Speedway car. They stop at various places along the way and at the Welsh mines are requested by Sandy, the foreman, to help out in fixing up a gasoline pumping engine. While there the money they had is stolen from the car, so they are forced to seek employment in Coal City with Jake Penders, the local electrician.

While at Jake's place a customer buys a tire, paying for it with a bill that Red afterwards recognizes as one stolen from them. Red goes after a job of wiring trouble that Jake had previously fallen down on, fixes it and then tells how it was done. At other times he explains electro-magnets, ignition principles, condenser construction and methods of testing.

The Red Head Has Occasion to Use His Knowledge of Trouble Shooting Under Harrowing Circumstances

By A. H. PACKER

THE Red Head snapped his trout fly into the whirlpool below the rapids and watched it spin around with the whirling waters. As he was about to retrieve the lure for another cast there was a faint noise in the shallow water behind him. Red half turned his head, but the turn was never completed. The sky changed from blue to yellow, then from yellow to red, while myriad toy balloons floated before his eyes.

When the Red Head's brain again began to function, he found himself lying in an evil smelling bunk, while through a haze of smoke and liquor fumes, there came to his singing ears the voices of quarreling men.

"Let 'im fix it, then turn 'im loose," said one.

"Fix what?" thought Red.

"Dump 'im down the dead mine shaft," said another, and Red's heart began to thump violently.

But saner counsel prevailed, much to Red's relief. It was trouble of some sort that Red was to fix. Through half closed eyes he saw a burly fellow in miner's garb coming toward him. A rough shake at first brought no response for Red thought it the part of wisdom to conceal the fact that he had been listening in. Then as the shaking continued Red opened his eyes.

"If yer know much about trouble shootin', now's the time to prove it if yer want to save yer neck," hissed the burly one.

* * * * *

It was a very much relieved Valve Grinding Fiend that ran to the door of Jake Pender's garage as Red drove up, after his eventful fishing trip.

"You must of had good luck to stay away in the woods all night," remarked Valvy.

"Good luck, me eye," said Red, feeling of the back of his head, where a good sized lump was still in evidence, and then as Jake came out, Red told of the experience he had had.

Valvy was for going after the whole bunch with his twenty-two rifle without further delay, while Jake advocated calling the sheriff and getting out a posse, but Red advised against any hasty action.

"Better get in touch with Sandy on the quiet and see what he knows, then listen in each night with the long wave attachment and see what additional evidence we can get. If we hurry we may scare them away and if we go slow we may be able to trap the whole gang.

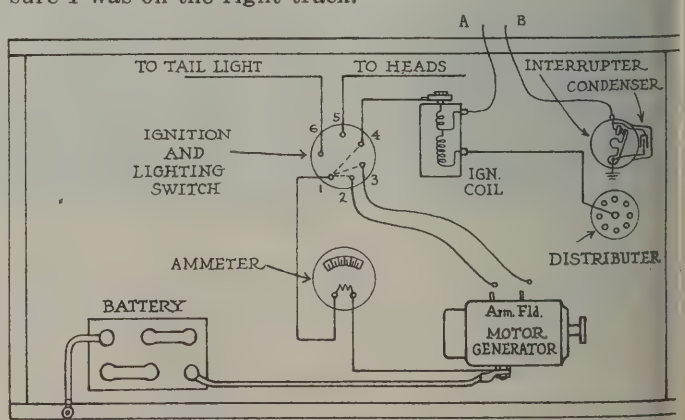
"But you didn't tell us how you were able to fix up their bus without any tools or anything," said Valvy. "What kind of car was it any way?"

"It looked like a truck," said Red. "But you should have seen the engine. A big brute, looked like an aviation engine and I bet that wagon could haul a ton of the stuff sixty miles or better.

"They told me they would turn me loose if I could make it run, seems like they had had trouble with it the night before and didn't dare get in touch with a legitimate service station, so they knocked me out when I wandered into their part of the country and figured they would get the job done no charge and without undue publicity.

"I got into the driver's seat to see what the ammeter would indicate and they bawled me out, said I wasn't there to take a ride but to get under the hood and get busy. Then I had to fuss around with the plugs and wires to make 'em think I was workin' and when they got tired watchin' I managed to see what the ammeter indicated.

"First I turned on the ignition switch to see what would happen. The ammeter showed ten amperes, so I knew that either there was a whale of an ignition current flowing or else that they had installed one of the Delco type motor generators. This proved to be the case. Then I decided to sketch the circuits as far as I could trace them to make sure I was on the right track.



Ignition circuits of the car the Red Head worked on in the ruffians' stronghold.

"After getting the heavy current reading I went back to the engine again and disconnected the two small wires on the motor generator so that the generator part of the machine would not take current when I was trying to check the ignition. Then I tried the switch again and watched the ammeter. This time there was no reading, at least it seemed that way. Then I tried it again to make sure.

An Oversight

"I thought I had the trouble, either in a broken wire or a burnt out ballast resistance on the coil, but I had forgotten, with all those roughnecks around, to look at the interrupter points. These happened to be open, which accounted for my getting no ammeter reading. When I closed the points by turning the engine over a bit, there was a reading of about six amperes, for the coil had to take care of eight cylinders which accounted for the rather heavy current draw.

"The next thing that occurred to me was the possibility of a shorted coil or burnt out condenser and I figured it was 'down the shaft for yours truly' if the coil was shot, and they wanted me to fix the job then and there. Luck was with me, though, for the condenser proved to be the trouble.

"It wasn't badly shot at that, for if it had been I could have easily seen a flicker of the ammeter hand when I turned the switch on and off, but in the dim light where I had to work I couldn't be sure. One of the birds wasn't quite as hard boiled as the rest and found a piece of wire for me; that was the only tool I was able to scare up, but it did the trick."

"And how were you able to use a piece of wire to find a leak that the meter didn't show?" Valvy wanted to know.

"The old tongue test," said Red. "It's a human voltmeter that every electrician has but few know how to use."

"I'm always afraid to put the wire in my mouth," said Valvy, "especially when its 110 volt current."

"Then you keep on bein' afraid, or I may have to ship you back to Bill Fixit in a big black box. The test is O.K. on 6 volts but would knock you cold on higher voltage. I tried it on 12 volts once and sure got a jolt.

"The wire A in my sketch was connected to the interrupter terminal, while the wire B was the one the fellow found for me. I connected it to the interrupter and brought the two ends of wire out from under the hood where I could put them on my tongue. At first I couldn't taste anything but dirty wire. Then I remembered I had turned the switch off. After snapping it on I got the test all right, a sort of acid taste, some say it's salty, but you can tell it without any trouble. If in doubt just turn the switch on and off while the wires are on your tongue.

"The next thing to do was to fix the trouble, and here again I would have had a mean job if the condenser had been in the coil or if it had been wax impregnated. Luckily for me it was in a little case at the outside of the interrupter and made of this stiff crinkly waxed paper. I think they call it glassine paper.

"I unrolled the condenser until I found a black hole burned through. On either side of this hole I put a piece of paper, rolled 'er up again, and that was that. When I got the wires connected again, and started up the engine the gang all let out a howl and the fellow who had found the wire for me nearly broke my back congratulating me with his brawny fist."

"Spose somethin' else had been wrong with the ignition system, you'd a bin out o' luck without your test outfit, wouldn't you," said Valvy.

"Well, that all depends," answered Red. "Meters are sure needed in the shop to make sure of each job, but in a pinch the meter on the car can be used, and in fact, just the way it's connected you can make a whole bunch of tests while sitting in the driver's seat and even before you lift the hood."

Jake thought this sounded a little fishy so the Red Head explained.

"There are several possible ammeter readings that we can get when turning on the ignition switch. With the Delco single unit system we disconnect the two small wires at the motor generator, while with other systems we just go ahead and test. That's the only difference in the case of the two different systems.

Best Method of Testing

"The best method of testing is to observe the ammeter reading when the ignition switch is on and the starter is cranking the engine. I'll make out a list of the possible readings and what they mean." And Red proceeded to tabulate the results of ignition tests that can be made in this way.

"The 5-ampere reading shows points stuck or some such condition which gives continuous current through the coil. A reading much higher shows a short in the circuit before we get as far as the coil. With no current flowing we have an open circuit, of course, and a test lamp or a piece of lamp cord can be used to locate this.

"The normal reading is a flickering indication of one or two amperes, but there is still the possibility of the condenser being either shorted or open, or of there being a puncture in the distributer arm, which lets the high tension spark leak away. The last test, for shorted condenser is made with the engine standing and points open, this being the test that can be checked with the tongue test I was telling you about."

Ignition Tests Made With Ammeter on the Car

Method of Testing	*Meter Reading*	*Nature of Trouble*
Ignition switch on and starter operating.	5	Points stuck. Interrupter shorted. Wire from coil to interrupter grounded.
Ignition switch on and starter operating.	Over 7 or off scale.	Ground between switch and coil.
Ignition switch on and starter operating.	None	Open in primary circuit.
Ignition switch on and starter operating.	1 to 2 unsteady.	Primary circuit normal. (Trouble might exist in condenser or high tension circuits)
Interrupter points open. Starter not operating. Ignition switch turned on and off.	Bare movement of needle.	Shorted Condenser.

Oldsmobile Offers More Power and Lower Bodies

Six Styles at Reduced Prices Constitute New Line. Engine Has Lighter Pistons, New Valve Arrangement and Other Changes

By LESLIE S. GILLETTE

IN the new series of the Oldsmobile cars, the current trend toward lower prices, finer bodies, improved engine performance, numerous chassis refinements and reduced number of body models which has characterized each of the recent announcements by several of the car divisions of the General Motors Corporation, is again shown.

By concentrating production on three body styles with the choice of either standard or de luxe equipment, and improved quantity manufacturing methods, the Olds Motor Works has reduced prices ranging from $15 on the open cars to $260 on the sedans. Six models instead of ten which formerly comprised the line are priced as follows:

STANDARD:	
Touring	**$ 875**
Coach	**950**
Sedan	**1,025**
De LUXE:	
Touring	**$ 980**
Coach	**1,040**
Sedan	**1,115**

As in the case of the other recent reductions in price by the General Motors companies, the greatest cuts have been made on the closed cars. Comparing the touring model with the coach, the difference in price existing between these two cars is now only $75 as against $185 on the former line.

Changes in the springs, shackles and wheel dimensions, together with the new body lines, give the latest models a decidedly low hung appearance. The general appearance of the bodies is improved by slightly reducing the height of the roofs and the use of a moulding strip extending from the radiator entirely around the car while on the closed cars, this moulding accentuates the double belt effect which is now the popular vogue. Two color Duco finish with attractive and contrasting striping is used on all models, and the upholstery is a heavy cord plush on the closed styles and on the touring cars a genuine Spanish leather.

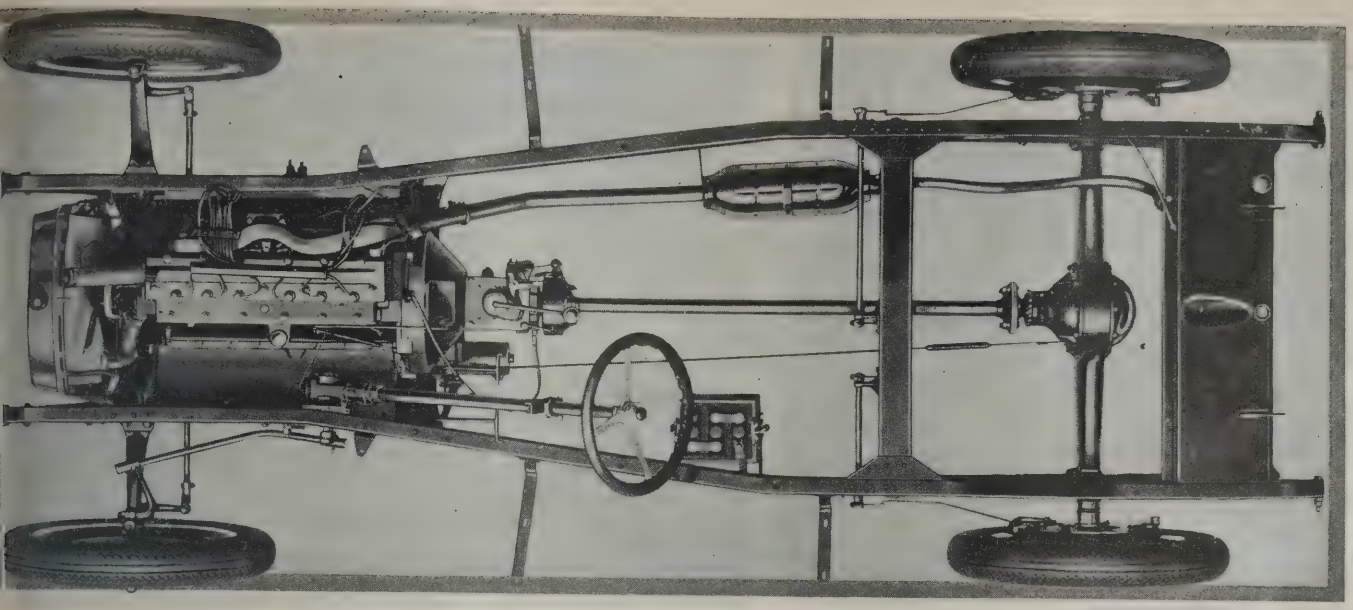
Without making any radical changes in the engine except the adoption of a chain drive at the front end in place of the former combination gear layout, the power output of the engine has been increased over 12 per cent by alterations in the valve mechanism, reduction in piston weight, more effective piston ring arrangement and improvements in the oiling system.

Substituting a Morse chain for the triangular front end drive instead of the helical gears has necessitated minor changes in the crankshaft and camshaft to accommodate the sprocket mountings with corresponding changes in the front end cover and cylinder block. Chain adjustment is accomplished through radical movement of the generator which has elongated slots in its support flange and an accessible adjusting screw and lock nut.

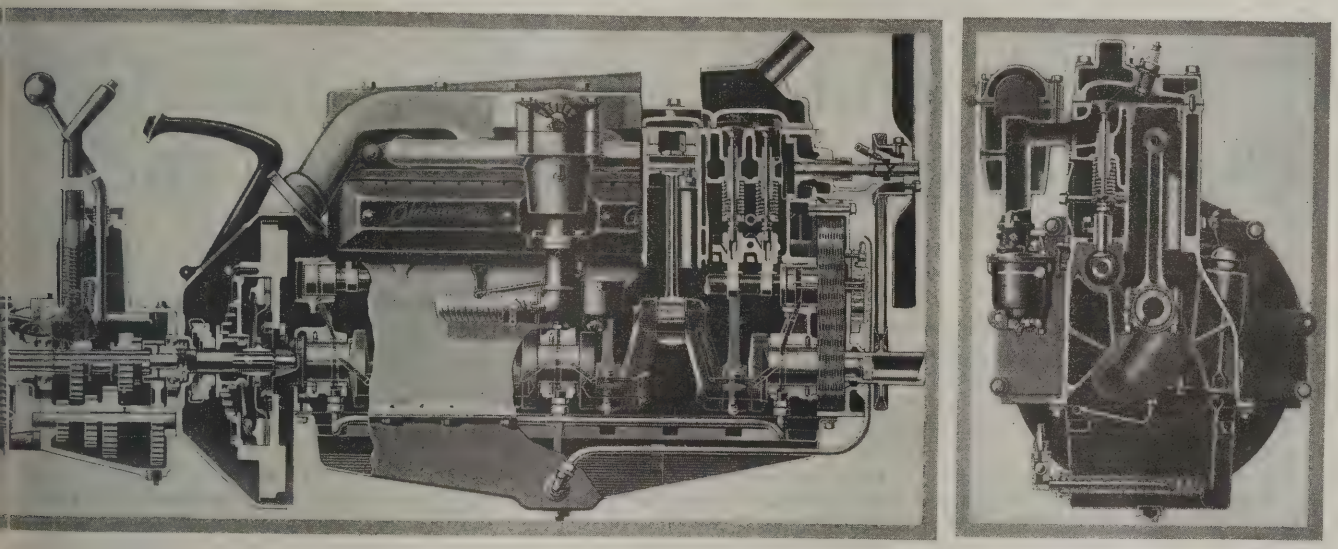
To the important changes in the valve mechanism may be credited most of the increased power that the new engines are developing. By enlarging the diameter of the inlet valve head from $1\frac{5}{8}$ in.



Oldsmobile Six touring car, standard coach and sedan which sell respectively for $875, $950 and $1,025



Oldsmobile Six chassis in which many refinements have been made



Two cross-sectional views of the Oldsmobile Six engine, in which a rearrangement of the valve mechanism has resulted in an increase of power. The oiling system also has been changed

½ in., not only is the engine able to rw in a heavier charge of vapor, re- ing in greater power strokes, but the ufacturing and service problems ae been simplified as both inlet and xaust are of the same size and con- equently now interchangeable. Length- g the valve lift by 1/32 in. and in- rasing the rate of the valve opening ae been obtained by changes in the ai contours which are now nearly e:ed.

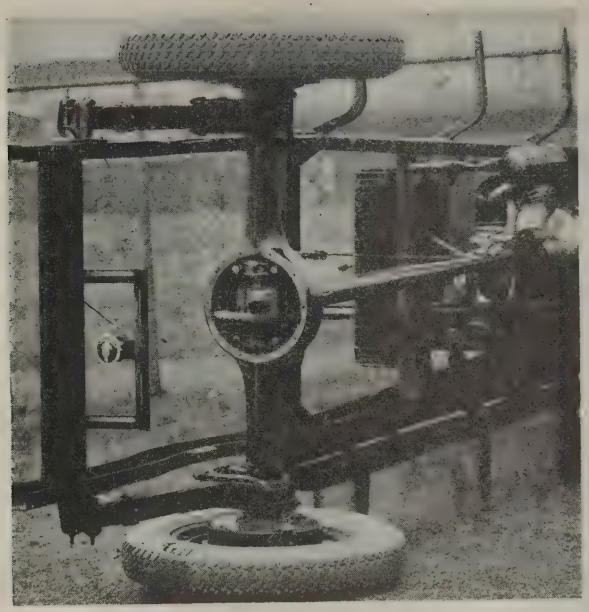
addition to the revisions made at nefront end, the center and rear bear- g of the camshaft, instead of being f onze as used on the previous models, re now of cast iron and correspond it the front bearing which has been f his material for some considerable m. Concurrent with these changes, all eadings have been made removable he the diameter of the center bearing ournal has been increased to $1\frac{13}{16}$ in. hevalve lifter bracket, which supports six lifters in a nest, has been simplified through the elimination of two locking screws formerly employed in retaining the bracket to the upper portion of the crankcase so that the new bracket is held by the remaining three screws which enter the cylinder block base.

Besides the changes on account of the employing of a chain drive front end, the oil return grooves on the rear end of the crankshaft have been shortened to prevent entrance of dirt into the oil pan, while the oil outlets in the crank-pins are moved from the inner to the outer side of the pins to accelerate the flow of oil to the cylinders. Including the changes at the front end, the crank-case has been altered to provide a better seal against dirt working into the rear main crankshaft bearing by improving the design of the oil fling pocket. Because of the reverse rotation of the gears due to the adoption of the chain drive, several changes have been made in the oil pump which is now considerably more effective. The location of the pump itself has in no way been altered and is still carried on the outside of the timing chain cover.

Through careful design, the weight of the cast iron pistons has been reduced from approximately 16 ozs. to 14 ozs. Three step-type joint compression rings of $\frac{3}{16}$ in. width formerly employed are now replaced by two ⅛ in. rings with a third or lower combination oil regulating and compression ring of $\frac{3}{16}$ in. width. The functioning of the wider ring is supplemented by a series of holes drilled through the piston behind the ring. Although the total length of the piston has not been changed, the use of two narrow compression rings has reduced the depth of the land portion of the piston, leaving a proportionately longer skirt.

Other changes include reducing the

(Continued on Page 19)





Left: Rear of the Chevrolet 1-ton truck, showing the spiral bevel axle gears which now are used. Service operations have been greatly simplified on this model; right: Front view of Chevrolet showing the heavy tubular member placed between the lamps

Chevrolet Announces Passenger Car Changes and New One-Ton Truck

By LESLIE S. GILLETTE

IN ADDITION to several improvements on the passenger car models following closely the recent price reductions ranging from $40 to $50 on the closed cars, the Chevrolet Motor Co. also announces this week a new 1-ton general purpose truck chassis.

Changes in the passenger car models are confined to improving the method of mounting the headlights, redesigning and strengthening of the radiator and engine splash pans, the placing of the throttle and spark controls on the dash, new colors on the open models, new upholstery on the large closed cars and several other changes.

On the new truck chassis which lists at $550 and supersedes the previous Utility Express model, a heavier frame on a longer wheelbase is employed carrying semi-elliptic springs all round, a half-floating spiral bevel rear axle of entirely new design and large heavy duty tires. The radiator, engine, clutch and transmission are the same as used on the passenger car chassis.

Referring to the car chassis, the changes include the carrying of the headlights on a heavy tubular steel tie-rod placed between the front fenders instead of being secured to the fenders themselves as previously, which allows a more rigid mounting, easier adjustment and eliminates the necessity for left and right lights. This arrangement also serves as an additional brace for the fenders and provides a convenient place for carrying the license plate. The headlights are of new construction employing a more simple method of locking the lens rim by means of a clamping screw at the lowest point of the rim.

Below the radiator, a slight outward crowning effect is given to the splasher to provide extra stiffness. An interior reinforced plate is now employed between the radiator core and the shell which together with the channel brace running from either side of the shell and a heavier larger diameter tie-rod between the cowl and the radiator has resulted in a much more rigid mounting. In addition heavier and stronger hinges are employed on the hood. Besides strengthening and redesigning the engine side pans, the latter are now secured on three sides only leaving a space of approximately ⅜ in. between the outer edge of the pan and the side of the engine. As the pans are no longer attached to the engine, it is possible now to drop the oil pan without disturbing the side shields which also makes for easy and more simple service operations.

Improved Appearance

By removing the throttle and park controls from below the steering wheel and placing them in the same fitting which clamps the steering column to the dash, a more simple arrangement as well as improved appearance has been obtained. The levers are of neat design and short dimensions, and in their closed or retarded positions both point upwards. A walnut finish steering wheel with notched finger grips on the inner diameter replaces the former plain mahogany type. In the center of the spider of the new wheel, an aluminum hub is now employed, while the horn button has its retainer also of aluminum to match the hub. To make for easier changing of the gears, the gear lever has been lengthened by 3 in.

Doubtless the most noticeable change on the new cars is the finishing of the open models which is now in Duco gun metal gray. The upholstery is a gray leather fabric to match while the gray inside top lining combines with the upholstery. Also slight changes have been made in the rubber mats. In the closed models, a more luxurious grade of upholstery is now employed. Instead of a fine broadcloth material on the coach, a finer grade of corduroy is used while on the sedan a superior type of velour to that on the previous models is employed. Finally in place of the vibrator type horn, a motor driven Klaxon, model H, warning device is now used.

Continuing to be known as the Utility Express model, the new one ton truck chassis is specially designed for general service and can be equipped with a number of bodies strictly developed for the Chevrolet chassis.

In place of the quarter-elliptic springs used on the front axle, 36 in. by 1¾ in., semi-elliptic springs are fitted, while those on the rear axle are of the same type as formerly except that they are 1¾ in. longer. In conjunction with the longer wheelbase which has been increased from 120 in. to 124 in., the fran

(Continued on page 39)

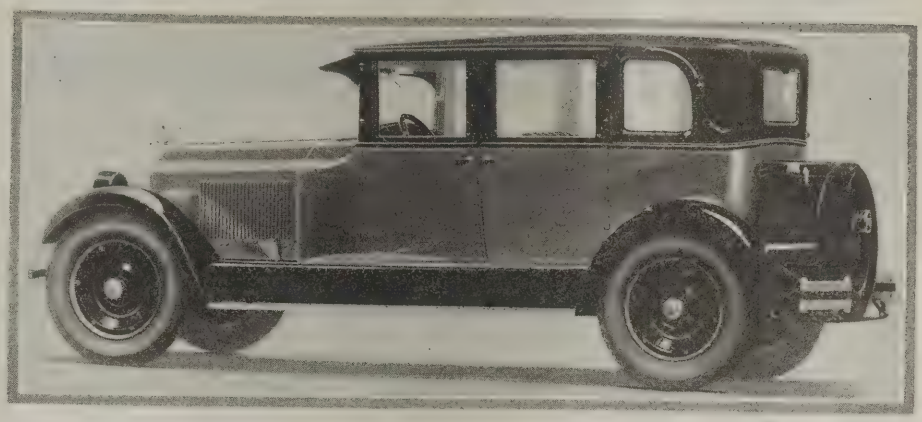
New Five-Passenger DeLuxe Sedan Announced by Paige

A NEW De-luxe five-passenger sedan listing at $2,395, the lowest priced sedan ever mounted on the Paige 1-inch chassis, is announced by the ige Detroit Motor Car Company.

Coincidental with the showing of the w body model, Lockheed hydraulic ur-wheel brakes are standard equipent on all Paiges, without extra arge. An air cleaner is now fitted to e carburetor intake while a new counbalanced crankshaft, weighing 105 unds, adds appreciably to the smoothss and power of the engine, it is ated.

The chief distinguishing feature of the w sedan are the "D"-shaped windows the rear quarters with landau braces, ur doors each 28⅞ in. wide and an ameled metal trunk mounted at the ar.

Exterior finish is in Cobalt blue having aw color striping with the belt moulding and upper body section in black. ld backed mohair upholstery covers e seats and serves also for the head ing. The front seat which is 46½ in. de and the rear 47½ in., have in each se a depth of 19½ in. Built-in arm ts add to the comfort of the rear seat



Paige five-passenger DeLuxe sedan, showing the D-shaped rear windows and landau irons

passengers while silken ropes at the rear doors facilitate entrance and exit for women passengers. Ample tonneau room is provided by having a clearance of 21½ in. between the front and rear seats.

A windshield of the one-piece type, metal sun visor, cowl ventilator as well as a complete set of shock absorbers are provided. Standard equipment includes the following, five 33 by 6.75 balloon tires, four-wheel brakes, nickeled radiator shell, full front bumper with quarters at the rear, automatic windshield cleaner, rear view mirror, motometer, flush type heater, transmission lock and stop light. Included in the regular instruments carried on the instrument board is an electrically wound clock and a gasoline gage.

Oldsmobile Offers More Power and Lower Bodies

(Continued from Page 17)

tch pedal pressure so that the pressre on pedal pad now ranges between 2 lbs. and 30 lbs., making for softer dal action and easier operation. At e same time the clutch release operas on a special patent graphite bearig which is self lubricating, noiseless d requires no attention. Also the gear ift lever has been lengthened 4 in. and e fulcrum point lowered 1¼ in. to proe easier shifting.

Lower center of gravity for the car d improved riding comfort have been ained by shortening the spring ckles by ½ in., reducing the camber the springs and smaller diameter eels, the last mentioned carrying 30 4.75 in. tires in place of the former e of 31 by 4.75 in. The rear springs all models are ⅜ in. shorter from e center line of the axle to the rear ing eye and the leaf spring gage on e chassis for the sedan models has en slightly increased. These changes e resulted in a total drop in frame ght of ⅞ in. in relation to the road.

To provide greater rigidity for the frme, the wide flat pressed channel mmber forward of the engine is replced by a tubular cross member which eeves the engine of practically all tains through the weaving of the frne. The only other changes on the ssis are the shortening of the steerin column by 1 in. to give more comfortable driving position for the driver and a simplified rearrangement of the controls at the base of the steering post.

In addition to the lines of the new bodies, the general appearance of the cars has been changed by carrying the hood louvres in a vertical position instead of at an angle and the employing of new fenders of enlarged crown, increased width and deeper lips. The rear fenders as well as the wheel housings have been lowered by ½ in.

On the open models only one strip of moulding is used, this strip extending from the radiator entirely around the body. Above the moulding, a moleskin gray is employed, blending with the general color of the car which is an attractive shade of Russia brown. Red striping is used just under the belt line, on the hood louvres and on the spokes of the artillery wheels.

All closed bodies are enhanced by a panel or belt 4½ in. wide and formed by two beadings which run from the cowl around the body, the lower moulding extending on to the radiator. One inch has been taken from the overall height by lowering the roof, which does not in any way affect the amount of head room in the interior. Doors of the sedan have been widened by $1\frac{3}{16}$ in. while those on the coach have been widened by 3½ in. Further, the inside overall length of the latter model is longer by 1½ in. while the front seats of all closed cars have been tilted back at a slightly greater angle.



Front frame cross member on the Oldsmobile Six

Both coach models are finished in Buckingham gray Duco with black Duco employed on the upper body panels. A fine green striping sets off the panel, hood and wheels. Aquamarine blue with white striping and black upper structure is the 5 color scheme on the sedans. Heavy cord upholstery of a neutral shade is employed for the upholstery on the closed cars.

De luxe or sport models are regularly equipped with disk wheels, trunk rack, black enameled trunk, luggage rails, bumpers, kick plates, motometer, rear view mirror, spot light, etc. The sport touring has windshield wings, and natural wood wheels are optional. The equipment on the "standard" models is the same as previously employed except that on the sedan and including the de luxe sedan a K-S Telegage is mounted on the dash for showing the amount of fuel in the tank.

Radiator Hose and Fan Belt Sizes on 1925 Passenger Cars

MAKE AND MODEL	ENGINE	RADIATOR HOSE				FAN BELT	
		Upper		Lower			
	Make Model	Length (In.)	Inside Dia. (In.)	Length (In.)	Inside Dia. (In.	Length (In.)	Width (In.)
Anderson.....41	Cont.....7U	13½	1½	3	1¼	38	1
Anderson.....50	Cont.....8R	10	1¼	9½	1¼	32⅞	1¼
Apperson.....6	Own.....6	14¼	2¼	14½	2¼	40	5/8
Apperson.....V8	Own.....V8	12	3	16¾	2	40	5/8
Auburn.....43	Cont.....7U	12¾	1½	5	1¼	40¼	1
Buick.....Master	Own...Mas	7	1¼	13	1¼	29⅞	1¼
Cadillac.....V63	Own....V63	8	1¼	4⅞	1¼	N	N
Case.....Y	Cont....6T	5	1¼	9	1¼	44⅝	9/16
Case.....X	Cont....8R	5	1¼	10¾	1¼	32½	1¼
Case.....JIC	Cont....8R	5	1¼	10¾	1¼	32½	1¼
Chandler.....SS	Own.....SS	6⅝	1⅜	7¾	1⅜	45½	5/8
Chevrolet.....K	Own.....K	7½	1¼	5⅜	1¼	29¾	21/32
Chrysler.....Six	Own.....6	4¾	1½	6¾	1¼	39⅛	5/8
Cleveland.....31	Own.....31	10⅜	1¼	3½	1⅛	40¾	5/8
Cleveland.....43	Own.....43	12	1⅛	3½	1⅛	40½	5/8
Cole.....Master	Nor.....311	22½	1½	3¾	1½	44	3/4
Cunningham....V6	Own.....V6	5½	1¼	2¾	1¾	N	N
Dagmar.....6-60	Cont....8R	6	1⅜	10	1⅜	46	5/8
Davis.....90	Cont....7U	12	1½	12	1¼	38⅝	1
Davis.....91	Cont....8R	11	1¼	17	1¼	33	1¼
Dorris.....6-80	Own....6-80	3	1¼	6	1½	41⅝	1¼
Duesenberg..8"A"	Own..8"A"	8	1½	7½	1½	33¼	33/64
DuPont.....D"	Lyc.....Y	6½	1¾	12	1¼	33	5/8
Durant.....4	Cont...Spec	4½	1¼	15	1¼	38½	9/16
Elcar.....4-40	Lyc.....CF	9	2¼	21	2¼	35 11/16	1¼
Elcar.....6-50	Cont....7U	12	1½	21	1½	35 11/16	1¼
Elcar.....8-80	Lyc.....H	12½	1½	12½	1½	29⅜	1⅝
Essex.....6	Own.....6	5½	2¼	14½	2¼	35⅞	.....
Flint.....40	Cont....6W	6	1¼	3¼	1¼	40¼	23/32
Flint.....55	Cont...Spec	8	1½	13¼	1¼	49¼	23/32
Ford.....T	Own.....T	4	2	2¾	1¾	26⅝	1⅛
Gardner.....4	Lyc.....CE	8½	2¼	15	2¼	36	1¼
Gardner.....8	Lyc.....H	12	1½	11	1½	28¼	5/8
Gray.....O	Own.....R	9	2¼	2¾	1¾	34¼	1
Haynes.....60	Own.....60	14¼	1¼	8½	1½	37⅜	1
H. C. S.....6	Own.....6	4	1¾	3¼	1¼	36⅛	5/8
Hertz.....D1	Cont....7U	14	1½	3½	1¼	43	1 1/16
Hudson.....6	Own.....6	7	1½	5¾	1½	34⅞	1
Hupmobile....R14	Own.....R	5¾	2½	9 1/16	2¼	24⅞	5/8
Hupmobile.....E	Own.....E	7⅛	1½	3	1½	41¾	5/8
Jewett.....23-25	Own...23-25	12	1½	5½	1 7/16	31 11/16	1
Jordan.....A	Cont...Spec	12½	1¼	7⅜	1¼	43	5/8
Jordan.....K&L	Cont...Spec	11	1¼	9½	1¼	44½	9/16
Kissel.....55	Own.....55	8⅝	1¼	11 5/16	1¾	34 3/16	1
Lexington, Concord	Anst.....M	6½	1¼	4½	1¼	42 39/64	9/16
Lexington....MM	Anst.....F	6½	1¼	4½	1½	42 39/64	9/16
Lincoln.....8	Own.....8	16¼	1¾	11¼	1¾	33¼	1
Locomobile.....48	Own.....48	2¾	1⅜	5	1⅜	51 15/16	5/8
Marmon.....74	Own.....74	3⅞	1¼	2 13/16	1¼	50¼	9/16
Maxwell.....25	Own.....25	3½	2⅛	7¾	2⅛	36½	5/8
McFarlan.....SV	Wis.....Y	6	1¼	10½	1¼	33	5/8
Moon.....Newport	Cont....7U	14	1½	4	1¼	40⅛	1
Moon.Metropolitan	Cont....7C	8½	1¼	10½	1¼	33½	1¼
Moon.....London	Cont....8R	10	1¼	12	1¼	31	1¼
Moon.....A	Cont....7Z	12	1½	4	1¼	38½	1
Nash....Advanced	Own....161	7 3/16	1½	4	1½	44¼	3/4
Nash.....Special	Own....131	13	1¼	4½	1½	32 5/16	1
Oakland.....6-54	Own...6-54	8¼	1¼	9¼	1¼	33 5/16	17/32
Oldsmobile.....30	Own.....30	10¼	1½	9¼	1½	33 31/32	.644
Packard.....6y	Own.....6	3⅞	1½	6¼	1½	37	5/8
Packard.....8	Own.....8	3⅞	1½	6¼	1½	37	5/8
Paige.....21-24	Cont...10A	9	2	10	1 11/16	33 15/16	1¾
Peerless.....70	Own.....70	12½	1 5/16	7⅞	1 7/16	23	5/16
Peerless...Equip.8	Own.....67	7	1 13/32	12	1 9/16	.....	5/8
Pierce Arrow....33	Own.....33	3	2	14¼	1½	43	5/8
Pierce Arrow....80	Own.....80	3¼	1¾	3¼	1½	35¾	21/32
Reo.....T6	Own.....T6	12	1½	8¾	1¼	37¾	3/4
Revere.....M	Mon.....M	8	1¼	7	1¼	31	1¼
Revere.....25	Cont.....6J	11	1½	11	1½	34	1¼
Rickenbacker....D	Own.....D	9¾	1	14¾	1¼	43	9/16
Rickenbacker....8	Own.....8	9¾	1¼	12½	1¼	43	9/16
Roamer....4-75-E	Dues....G1	8	1½	16	1½	32	1¼
Roamer....6-54-E	Cont 12XD	10	1½	13	1¼	37½	5/8
Rollin.....G	Own.....G	7⅛	2¼	3¼	2¼	39½	5/8
Rolls Royce..40-50	Own..40-50	2	1	5	1½	44	5/8
Star.....4	Cont...Spec	4⅝	1¼	3¾	1¼	37	1
Stearns Knight..C	Own.....C	6½	1⅜	9	1⅜	36¾	1
Stearns Knight..B	Own.....B	6½	1⅜	9	1⅜	36¾	1
Stearns Knight...S	Own.....S	6½	1⅜	9	1⅜	36¾	1
Sterling Knight...6	Own.....B6	3⅜	2¼	3⅜	2¼	40	1
Stevens Duryea..G	Own.....G	4¾	1½	4½	1½	47½	1⅛
Studebaker...Sta.6	Own....Std	8	1	2½	1	25¾	3/4
Studebaker...Sp.6	Own...Spec	10½	1½	8¾	1½	40	1¼
Studebaker...Big 6	Own....Big	10½	1½	8¾	1½	40	1½
Stutz.....693-4-5	Own....695	6½	1¾	10	1 5/16	36½	5/8
Velie.....60	Own.....50	9	2¼	12¾	2¼	30½	1
Westcott.....44	Cont....8R	7½	1¼	12	1¼	36	1¼
Westcott.....60	Cont....8R	9	1½	9½	1¼	36	1¼
Wills Ste. Claire A,B,C,68	Own.....68	5¾	2¼	5½	2	N	N
Wills St. ClaireW6	Own....W6	5½	3¼	5½	2¾	N	N

ABBREVIATIONS

Anst—Ansted
Cont—Continental
Dues—Duesenberg
Lyc—Lycoming
Mo^n—Monson
Nor—Northway
N—None
Wis—Wisconsin

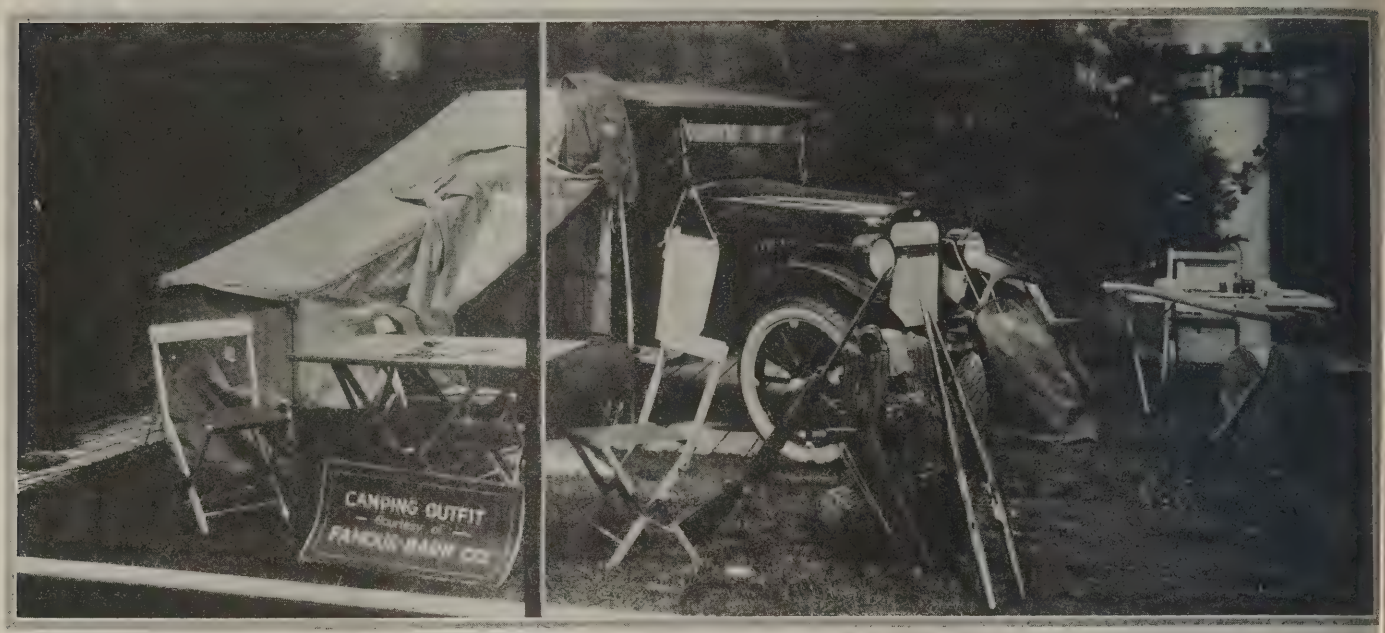
Capacities of Crankcases and Radiators and Exhaust Pipe Sizes on 1925 Passenger Cars

MAKE AND MODEL	ENGINE		CAPACITIES		Exhaust Pipe Outside Diameter (In.)	MAKE AND MODEL	ENGINE		CAPACITIES		Exhaust Pipe Outisde Diameter (In.)
	Make and Model	Number of Cylinders	Oil Crankcase (Qts.)	Water Radiator (Gals.)			Make and Model	Number of Cylinders	Oil Crankcase (Qts.)	Water Radiator (Gals.)	
American...D66	H. Sp...91	6	7	6	2¼	Lincoln.....8	Own.....8	8	10	7½	2¼
Anderson.....41	Cont....7U	6	6	4¾	2	Locomobile...48	Own....48	6	7	8	2¾
Anderson.....50	Cont...8R	6	6	4½	2						
Apperson..... 6	Own.....6	6	6	8	2¼	Marmon.....74	Own....74	6	12	5½	2½
Apperson....V8	Own....V8	8	8	9¾	2	Maxwell.....25	Own...25C	4	4	3½	1⅝
Auburn.....43	Cont...7U	6	6	5	2¼	McFarlan....SV	Wis.....Y	6	6	8	3
Auburn.....8-88	Lyc.....2H	8	8	6½	.....	McFarlan....TV	Own...TV	6	6	8	3
						Mercer.....6	Own.....6	6	6	7	3
Buick Standard	Own....Std.	6	5	3¼	1¾	Moon..Newport	Cont...7U	6	5	5	2
Buick....Master	Own..Mas.	6	6	4½	2	Moon..... Metropolitan	Cont...7C	6	6	5½	2¼
Cadillac.....V63	Own...V63	8	8	6	1¾	Moon...London	Cont...8R	6	6	5½	2
Case.....Y	Cont...6T	6	7	4½	.....	Moon...Series A	Cont....7Z	6	5	5½	2¼
Case.....X	Cont...8R	6	6	3½	2½						
Case.....JIC	Cont...8R	6	7	4½	.....	Nash..Advanced	Own...161	6	8	5½	2
Chandler.....SS	Own....SS	6	8	4¾	2¼	Nash....Special	Own...131	6	6	4	2
Chevrolet.....K	Own....K	4	4	2½	2 1/16						
Chrysler.....Six	Own.....6	6	6	4	2	Oakland....6-54	Own...6-54	6	4	3	2¼
Cleveland.....43	Own....43	6	6	4½	2	Oldsmobile...30	Own....30	6	6	3½	2
Cole.....Master	Nort...311	8	5	5¾	2⅝	Overland...91-92	Own....92	4	6	3½	2
Cunningham V6	Own....V6	8	10	10	2¼	Overland.....93	Own....93	6	6	3	.....
Davis.....90	Cont...7U	6	5	4	.....	Packard.....6	Own.....6	6	6	4¾	2¼
Davis.....91	Cont...8R	6	6	4	.....	Packard.....8	Own.....8	8	8	6	2¼
Dodge Bros...25	Own....25	4	5	3	2	Paige.....21-24	Own.21-24	6	7	5¾	2½
Dorris.....6-80	Own...6-80	6	8	5	2½	Peerless.....70	Own....70	6	8	4¾	1⅞
Duesenberg St.8	Own.....8	8	6	5¼	2⅜	Peerless Equip.....8	Own....67	8	8	7	.....
DuPont.....D	Wis.....Y	6	7	4	2¼	Pierce Arrow. 33	Own....33	6	10	7½	2⅛
Durant.....4	Cont. Spec.	4	5	3¾	1½	Pierce Arrow..80	Own....80	8	6	5¼	.....
Elcar.....4-40	Lyc....CF	4	5	4½	2¼						
Elcar.....6-50	Cont...7U	6	6	4¼	2	Reo.....T6	Own....T6	6	7	3¼	2½
Elcar.....8-80	Lyc.....H	6	8	5½	.....	Revere.....M	Mon....M	4	6	7	3
Essex.....6	Own.....6	6	4	4	1¾	Revere.....25	Cont....6J	6	6	7	3
						Rickenbacker.D	Own....D	6	7	4	2¼
Flint.....40	Cont...6W	6	5	4	.....	Rickenbacker..8	Own.....8	8	8	4¼	.....
Flint.....55	Cont. Spec.	6	6	4¾	.....	Rollin.....G	Own....G	4	6	3	1½
Ford.....T	Own.....T	4	4	3½	1½	Rolls Royce40-50	Own 40-50	6	6	10	3
Gardner.....4	Lyc....CE	4	5	4¾	2¼	Star.....4	Cont. Spec.	4	4	2	.....
Gardner.....8	Lyc.....H	8	8	6	.....	Stearns K'ght.C	Own.....C	6	10	4½	2¼
Gray.....O	Own....R	4	4	3¾	1¾	Stearns K'ght.B	Own.....B	4	8	5½	2¼
						Stearns K'ght.S	Own.....S	6	10	4½	.....
Haynes.....60	Own....60	6	7	5½	2⅜	Stevens Dur...G	Own....G	6	12	5½	2½
H C S.....6	Own.....6	6	7	6	2¼	Studebaker St. 6	Own..Std.	6	6	4¼	2
Hudson.....6	Own.....6	6	7	4½	2¼	StudebakerSpec.	Own.Spec.	6	6	4½	2
Hupmobile..R14	Own....R	4	4	6	1¾	StudebakerBig 6	Own...Big	6	6	4¾	2
Hupmobile....E	Own.....E	8	8	8½	.....	Stutz....693-4-5	Own 693-45	6	10	7½	2⅛
						Velie.....60	Own....50	6	6	5	2¼
Jewett.....23-25	Own. 23-25	6	7	4	.....						
Jordan.....A	Cont. Spec.	8	7	4½	2¼	Westcott.....44	Cont....8R	6	6	4¾	2¼
Jordan.....K&L	Cont. Spec.	6	6	5	.....	Westcott.....60	Cont...8R	6	6	3½	2¼
						Wills St. Claire A&B68	Own...B68	8	7	7½	2
Kissel.....55	Own....55	6	8	6¾	2¼	Wills St. Claire W6	Own...W6	6	10	8½	.....
Kissel.....75	Own....75	8	8	7½	.....						
Lex'gt'nConcord	Anst....M	6	6	4½	2	Willys Knight 65	Own....65	4	6	5½	2
Lexington..MM	Anst.....F	6	6	4½	2	Willys Knight 66	Own....66	6	8	5¼	.....

ABBREVIATIONS

Anst.....Ansted
Cont.....Continental
H.Sp.....Herschell-Spillman
Lyc.....Lycoming
Mon.....Monson
Nort.....Northway
Wis.....Wisconsin

MOTOR AGE'S PICTURE PAGES



A CAMPER'S EDEN. Camping display window used by the St. Louis branch of the Willys-Overland Co. A large department store in the city co-operated with the automobile people in the decoration to mutual advantage.



AID IN RESCUE WORK: Motor equipment rendered valiant service in dislodging debris to permit searching the ruins following the Santa Barbara, Cal., earthquake. Because of their speed, trucks proved superior. From the ruins of the San Marcos building shown two bodies and an injured woman were removed

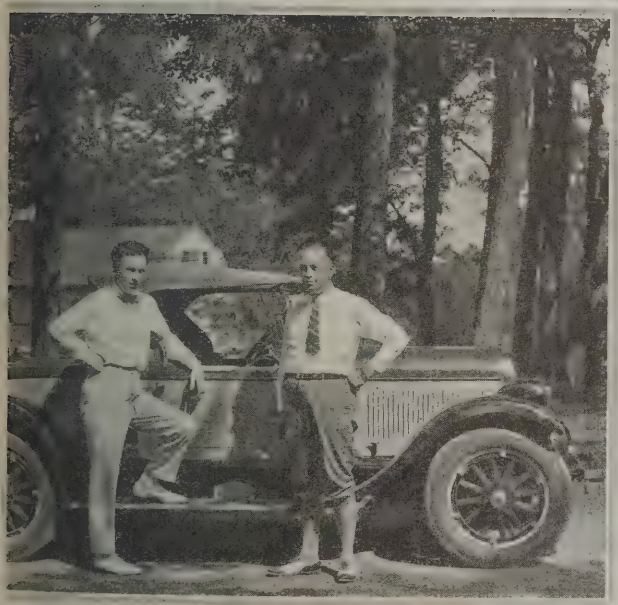
THIS MADE 'EM RUBBER. Below is shown the principal float of the Firestone Tire & Rubber Co. in the industrial parade held in Akron, Ohio, recently. This 50-ft. display, drawn by tractor, is a replica of a section of the company's rubber plantation near Monrovia, Liberia, West Coast of Africa. It depicts actual foliage and vegetation, the huts of the natives, the laborers themselves and the overseer inspecting the tappings.



OF AUTOMOTIVE INTEREST



A NIFTY DISPLAY. At first glance this might be taken for the interior of a foreign showroom, judging from the lines of the automobile. However, it is one of the new Franklin sport type roadsters which were shown extensively during July. Dealers throughout the country have reported a goodly number of prospects.



TALKING IT OVER. Thomas Meighan, screen star in Paramount pictures, has had a special model car built for his wife. He is shown at the left with Walter P. Chrysler, motor car manufacturer. They are friends and neighbors at Great Neck, Long Island.

CHILDREN AS SALES INFLUENCE: Conrad Welling, sales manager of the Ernest J. Krause Motor Car Co., St. Louis Moon dealer, believes in interesting children as an aid to sales on the ground that they exercise more influence over their parents than is generally believed. Below is shown a parade he staged, led by a miniature Moon car, designed especially to appeal to children.



The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ^ ELECTRICAL ^ FLAT RATES
SHOP ^ LEGAL ^ PAINT & TRIM ^ ACCOUNTING

Bent Frame Produces Shimmy

Q.—Inform me what the cause is of wheel shimmy on a model 91 Overland sedan. Every time the car hits a bump or gets out of the track it starts to shake and will do so until you pull it quick to one side or the other.—George Kleim, Worthington, Ia.

We have been advised by the local Willys-Overland maintenance station that a frequent cause of wheel shimmy is a bent front frame connection. The connection referred to is in reality the front frame cross member, as indicated at Fig. 224.

If after you have removed the mud or splash pan in front and have checked frame as O. K., then inspect the king bolt bushings and all ball and socket joints in the steering mechanism. All excessive clearance and back lash must be removed from these parts in order to damp out the oscillations that produce the shimmy.

TIMING IN DEGREES AND INCHES

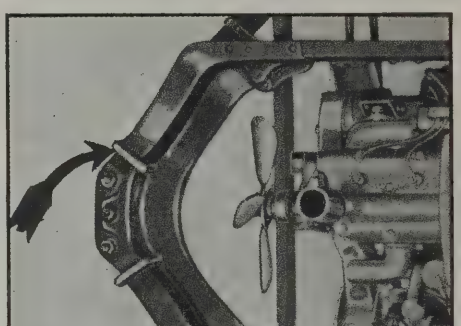
Q.—Give operation necessary for replacing the chain on a late model Hudson and Essex sixes. How much piston travel would there be per degree in an Essex six? The exhaust valve closes 8 degrees after center and I cannot get at the flywheel to measure it accurately.

We regret that we cannot give you the exact procedure on removal of the chain but believe that after you have removed the radiator that you will be able to discern the next step to take in order to get at the chain and remove it. Although we have no definite figures covering the valve timing you will find that on an engine with a flywheel of 12 to 16 inches in diameter and with a connecting rod of average length that 8 degrees will equal from 1/64 to 1/16 of an inch on piston travel past top dead center. If you will set the exhaust valve so that it closes when the piston is not more than 1/32 of an inch past top dead center and if with this piston setting the chain will mesh without turning the camshaft or piston you will have the correct timing. In other words one tooth of the chain will so effect the piston travel that it will be very noticeable.

RAISING COMPRESSION TO 100 POUNDS

Q.—How much higher should the top of the piston be in a Chevrolet 490 to increase the compression to 100 pounds. J. F. Miller, Service Manager, Edgewood Automobile Co., Edgewood, Texas.

We estimate the compression at present as being 65 pounds which with a stroke of four inches gives a space above the piston of about 1.14 inches. On the basis of 100 pounds compression we have a compression raito of approximately 7 which gives a necessary space above the piston of .67 inches. Subtracting .67 from



The Overland front spring is attached to the cross member

1.14 inches we have .47 inches or approximately ½-inch which the height of the piston will have to be increased in order to get 100 pounds compression. As this calculation is entirely theoretical would suggest your checking up with the measurements of the engine to see if any interference is encountered and to see if the figures are approximately correct.

The Readers' Clearing House

THIS department is conducted to assist dealers and maintenance station executives in the solution of their problems.

All questions are answered direct by letter, so the name and address should be given in full. This saves waiting for the answer to be published, which sometimes occurs several weeks late, depending upon the space available.

Readers' names will not be published with articles, if a request to this effect is received with the letter.

Inquiries not of general interest will be answered by personal letter only. Emergency questions will be replied to by letter or telegram.

Also state whether a permanent file of MOTOR AGE is kept, for many times inquiries of an identical nature have been made and these are answered by reference to previous issues.

Addresses of business firms will not be published in this department but will be supplied by letter.

Technical questions answered by B. M. Ikert, P. L. Dumas and A. H. Packer; Legal, by Wellington Gustin; Paint, by G. King Franklin Architectural, by Tom Wilder; Tires, by a Practical Tire Man; General Business questions, by MOTOR AGE organization in conference.

Knock in Loose Valve Assembly

I would like to offer our experience o a similar case of a knock on a Studebake light six with reference to the story i MOTOR AGE under the heading "Last Re sort in Locating Knock," which appeare in the November 20, 1924, issue on pag 28. We found this sort of a knock to b one of the valve rocker arm assemblie The bolts work loose and allow rocke arm casting to work with the motion o the valves and knock. These assemblie are bolted to cylinder block over the cam shaft and cannot be noticed by the ey when they are a little loose and yet loos enough to cause a knock.—Billy Hesc Classon Machine Shop, Santa Fe, Ne Mexico.

Mr. Hesch's contribution is of value fo readers who have had trouble in determir ing the cause of abnormal engine noise We are passing on this experience to ot readers with thanks to the contributor.

BABBITTING AN ALUMINUM CRANKCASE

Q.—We tried to pour babbitt in a aluminum crankcase for bearings and w noticed air pockets seem to form und the babbitt. When machining the bearin these holes are uncovered and appear t be larger underneath than they are on th surface. In pouring babbitt in steel ca the work turned out all right.—Trouble

One possibility is that when you tri to pour the babbitt in the aluminium th you had the babbitt too hot. We assun that you are familiar with the test ma with a pine stick, the stick being insert in the melted babbitt and the temperatu being considered o. k. when the stick ju begins to char. Another possibility that the aluminum is slightly porous a contains moisture. It would be well pre-heat the crankcase if possible to a proximately the temperature at which t babbitt is poured. If the temperature at least above the boiling point of wat it will drive off any moisture whi otherwise would tend to produce bubbl in the babbitt.

TO GET MORE STEAM OUT OF TH COLE

Q—How much would be safe to remo from the cylinder head of the 1920 C Eight to increase the compression ra so as to speed up the engine. We w informed that 3/64 inch would be corre This seems such a small amount that wondered if we understood correctly. also wondered if it would pay to ha this done, as the amount to be remov seemed so small.—Richard E. Saunde Charlton, Mass.

We believe that the figure given about correct. If too much metal is moved the compression will be so hi that trouble will be experienced w detonation and possibly with blowing cylinder head gaskets.

Planning Your New Building

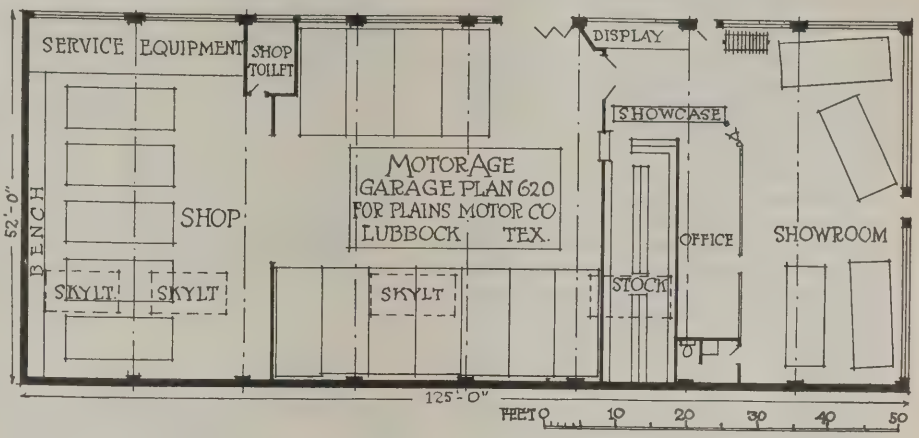
By TOM WILDER

The READERS CLEARING HOUSE

A Sales and Service Building With No Space Wasted

Q.—We are at this time planning construction of a building 52 by 125 ft. We would appreciate very much any suggestion which you may see fit to give us regarding the arrangement of shop to better service for the Chrysler and Maxwell automobiles. This will be a one-story building, built on the northeast corner of the block facing the east, with main entrance to shop on the north.

We would appreciate any suggestions which you may see fit to give us regarding the equipment needed to properly service cars. Should you have a plan that would be adaptable to this lot, we would be very glad to have you forward it to us. This 52 by 125 lot will also include our salesrooms, office, parts rooms, storage and service department.—Plains Motor Company, Lubbock, Texas.



We consider this a very well balanced plan which could be used most anywhere for a medium sized sales and service building

The plan we have prepared for your sales and service building is quite ordinary, and, in fact, any change from this general layout would be hard to make with a lot of this size. You might reverse positions of your shop and garage and if you were in a northern state we might recommend this as being easier to heat, because it would be more centralized and therefore easier to operate in the winter. In Texas, however, the heat problem need not be considered and it is better to have the garage separate the sales department from the service, even though it is not a great separation. It may be argued that in this plan the stock room is too far from the shop. While this is true, in an organization of this size, it would not be advisable to have two stock rooms and it is better to have one stock under the supervision of some person who handles accessory and parts sales and acts as stockkeeper, than to have a stock for sales and one for shop also with no supervision over the latter. At most a mechanic would not have to walk more than 75 ft. to get a part from the stock window, and this is not as great a distance as is sometimes encountered in large shops where the stock room is in the center.

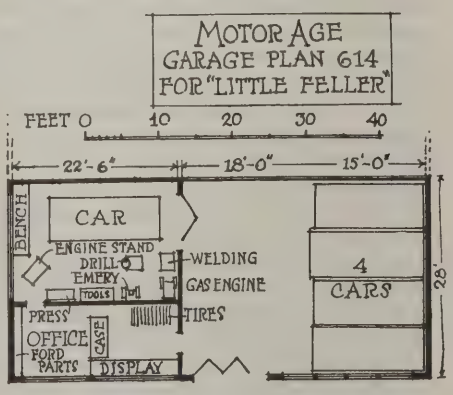
Regarding the equipment needed for your shop, this will be found on pages 19, 20 and 21 of the Chrysler flat rate book. It would be a good plan to supply one of the car spaces shown in our plan of the shop with a pit suitably arranged for crankcase work, greasing and oil draining, and for the fitting of bearings. It will of course be an advantage if the rear wall is so situated on the alley that windows can be installed and light obtained from this side, but if this is not the case, skylights should be installed to make up for the deficiency and it would be as well to install the ones we have indicated whether there are windows or not.

The roof of this building should be carried on trusses as indicated to avoid the use of columns and posts.

PLANS FOR A ONE-MAN SHOP

Q.—I must build a new garage and shop. Have looked through several years of old MOTOR AGES, but cannot find any thing as small as I want. I want a one man shop with storage room for 4 or 6 cars, shop to be partitioned off for one car and tools. Press, drill, engine stand bench, floor stand grinder and gas engine for power. If you have floor plan that would help out "little feller" it would be appreciated.—Little Feller.

We have assumed that although you are small now, you expect to grow, and have laid out your plans with this in view. Also, as you have given us no definite lot size, we have not been bound by any definite proportion. By making the broad side of the building toward the front with the car entrance in the middle, you can have storage at one end of this building and your one car shop and office at the other, leaving a space 18 feet wide just inside the door for quick service, tire changes and so forth.



This building is laid out with a view to future expansion

Later, as you need more room, the building can be extended toward the rear, giving space for another car in the shop or for more storage, or both, as the case demands.

When building the room over this building, it would be well to support it on the end wall and on the shop partition, so that if the back wall is moved the roof will not be disturbed.

Install as many windows as you can on both sides of the shop. A small skylight over the section containing the machine tools would help out a lot.

LIEN IS LOST

Q.—I would like some legal information as to how I can collect a bill for repairs done on a car last July (1924). Part of this bill has been paid in small payments. Can I place a lien on this car, or must I have it in my possession to do so?—John Monroe, Allentown, Pa.

You have lost your lien on the car in question. Having parted with possession on promise of payment, the lien at common law does not arise again by its coming into your possession again, nor do additional repairs by you give you a lien that would include the old charges for repairs. The common law lien as you have there is good only by retaining possession of the repaired article.

COUPONS BOOST BUSINESS

A novel plan for increasing sales recently was put into operation in Nashville, Tenn., by the Automobile Electric Service Co., Inc., wherein the company offered a coupon with each purchase of five gallons of gasoline entitling the holder to one free battery recharge. The coupons were good from May 1, 1925, until May 1, 1926, and it is said that the scheme materially helped business.

Clearing Up Electrical

The READERS' CLEARING HOUSE

EDITED BY A. H. PACKER

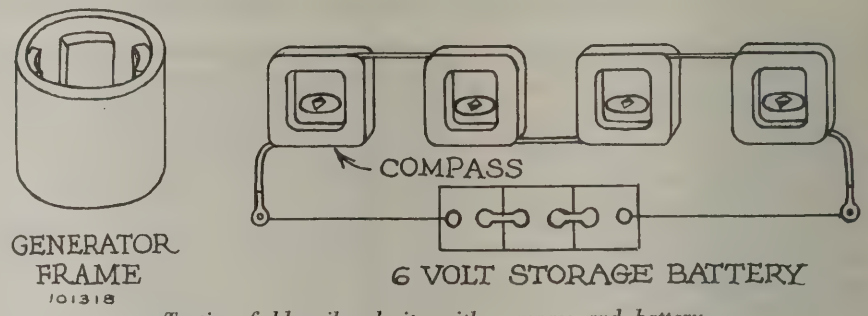
Correct Connection for Fields

Q.—Please explain method of putting field coils in a generator. Is there any particular way that the north or south pole should be located.—Montana Subscriber.

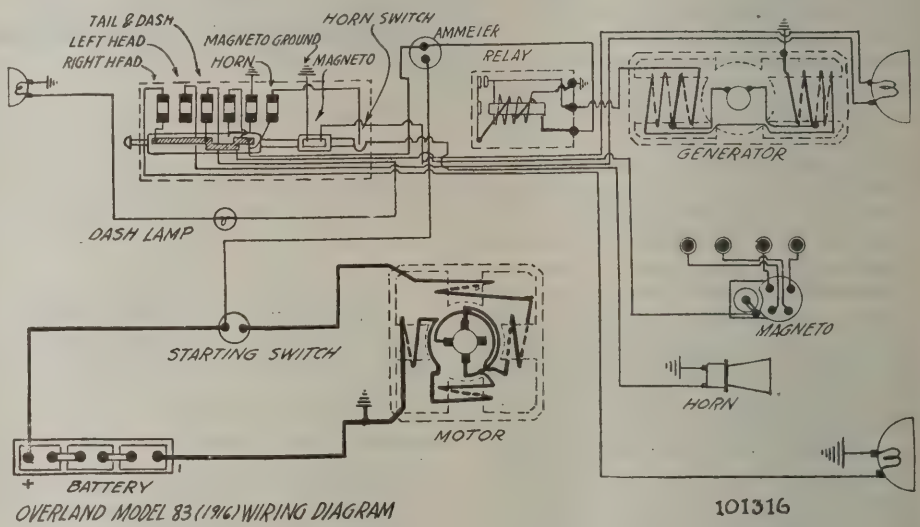
In tracing around the field frame of a generator the magnetic poles should be alternately north and south. As this polarity is determined by the field coil it is essential that the field coils be properly applied. It is possible to make a mistake and get a field coil in wrong when applying only one coil or when putting in a new set of coils. Assume for example that we have a generator with four poles and when the field coils are removed they have the general appearance shown in the illustration. If a whole new set is taken out of stock and put in a generator, it is advisable to test the polarity. A battery may be connected as indicated and a magnetic compass used at the center of each coil.

The coils are stood up on edge in making this test and the compass is held horizontal. In the center of one coil the needle should point in one direction and in the center of the next coil it should point in exactly the opposite direction. It should reverse at each coil. In case only one coil is replaced it is necessary to make the same test to make sure that the coil is not reversed.

If the poles are alternately north and south, but the coils are on wrong so that the north poles are found where the south should be, then it will be found that the machine will only generate when driven in the wrong direction. This condition can be corrected by reversing the field leads after the coils are installed, if it is not easy to replace the coils on the proper poles.



Testing field coil polarity with compass and battery.



Internal circuits of the Autolite G. D. generator are shown in this diagram.

Sticking Brushes in Motor Generator

Q.—On the new Northeast starter generator on Dodge Brothers cars we find that the third brush forms a coating of some kind on its face which insulates it from the commutator. We take sand paper and touch up the surface of the brush which makes contact with the commutator and this corrects the condition. It only charges two or three days, however, and then the job must be done over again. We tried changing brushes and found it necessary to try two or three brushes, before we found one that would keep on working. What we want to know is, can we put something on the commutator (say Sperm oil), to keep the brush in contact or is there some certain make or kind of brush that will cure the trouble. Sand papering the commutator does not help.

On recent Dodge Brothers starter generators known as model GA, a box type brush holder has been used. With this type of holder carbon dust rubbed off of the bottom of the brush by the action of the commutator is thrown up between the brush and the holder and, combined with a slight amount of oil from the bearings, makes a paste which sticks the brush in the holder. This can be remedied by removing the brush and lightly sand papering the sides of it, so as to make it fit freely in the holder. The condition as you describe it, however, is one which we usually attribute to excessive lubrication which permits oil to work out of the bearings and get on the commutator.

This oil is then soaked up by the brushes and forms an insulating film between the brush and commutator. Sand papering removes the film but then additional oil works out of the brush and the film soon forms again. The first condition mentioned with box type brush holder has been overcome by a change in brush holder where guides support the brush and leave space for carbon dust so that there is no tendency for brush to jam and fail to touch the commutator. The suggestion of using oil on the commutator is working in just the wrong direction for oil is an insulator and causes the trouble you are trying to overcome. If the brushes are free in their holders and do not get full of oil, we believe you will have no trouble.

Q.—We would also like to know the speed of the generator when the car is traveling 20 miles per hour.—Marx & Stampa, Cedarburg, Wis.

At 20 miles per hour the generator armature is rotating 2860 r.p.m. This data is figured on the basis of 32-inch wheels, rear axle ratio of 4.54 and motor generator speed three times engine speed.

TAKE THE CURRENT AS IT COMES

Q.—Supply wiring diagram showing external and internal circuits of the model G.D.—two brush—Autolite generator, also method of regulation.—John H. Wilson, 672 35th steet, Oakland, Calif.

The diagram is published at Fig. 101316 in accordance with your request. Regulation is by means of a reverse series winding in the generator. This system of regulation does not permit of any adjustment.

Trouble With Bill Fixit

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Replacing Old Regulator On Maxwell

Q.—As subscribers to your magazine, Motor Age, we would ask if you could supply us with wiring diagram which will show how an ordinary generator cut-out could be used to replace the cutout on the back of the switch panel of the 1917 Maxwell. — Motordrome Limited, 10131 103rd street, Edmonton, Alta, Canada.

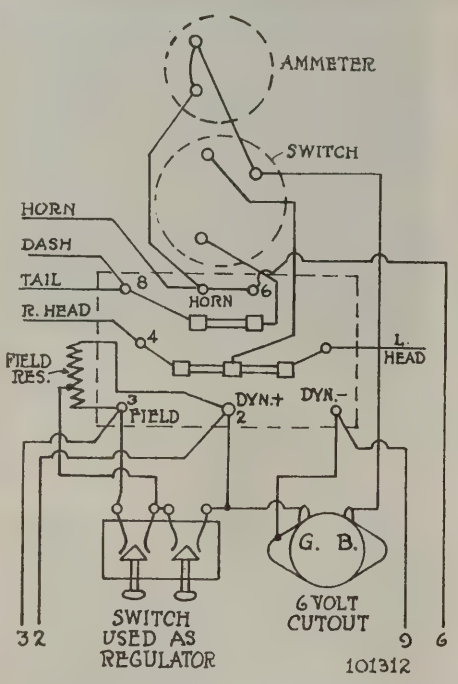
We are showing a diagram in which the combination regulator and cutout which is regular equipment on this Maxwell car has been replaced by a two-gang lighting switch and a conventional 6-volt cutout. There is no change required in the wiring of the car, the only change being needed at the instrument panel. If the field resistance coil is in good condition it may be connected across the two-gang lighting switch as shown and a connection, tapped in one-third of the way from one end of the coil, should be made to the center point on the regulating switch.

If this coil is not in good condition then a resistance of iron wire such as stove pipe wire may be wound up and the portion across one part of the switch should be twice as long as the portion across the other part. The 6-volt cutout should not have its base plate grounded except by means of a connecting wire which goes to the dyn.-terminal. From this terminal the No. 9 wire goes to a grounding contact which is operated in connection with the regular starting switch so that the base plate of the cut-out is grounded when the engine is running normally, but the ground connection is broken while starting.

The No. 3 and No. 2 wires run to the generator field terminal and positive generator brush terminal as formerly and the No. 6 wire goes to the battery connection on the starter switch, as formerly. In operating a car with this system it would be desirable to have both buttons of the regulating switch pushed in and then pull out either button or both in order to regulate the charging current. This means that the ammeter indication would have to be watched more closely than with the automatic type of regulator.

Measuring Battery Cell Voltage

Q.—State if a battery with one or two bad cells will cause interference on the electrical system of a 1919 Maxwell car using a straight 12 volt battery. This seems to be my present trouble as the generator has been overhauled twice and two new panels installed in less than a year's time. The generator goes bunk in a short time. I have no available 12 volt battery to try out and the present battery is in good shape as far as satisfactory service is concerned.



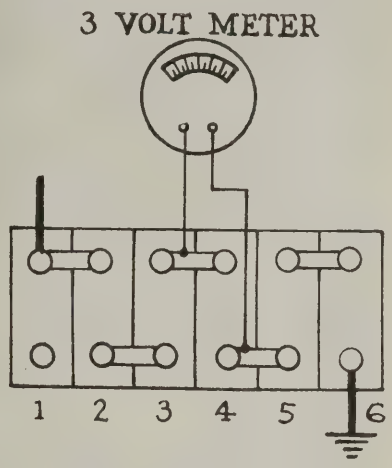
Simplified regulator for 1917 Maxwell

The battery charges up o. k. in twenty-four hours from outside current and retains its charge a reasonable length of time without getting current from the car generator. The battery man states there is a bad cell in the battery. I am of the opinion that a battery will very easily affect the generator and cause trouble on the 1919 Maxwell with combination reverse series field and vibrating regular unit. Is this possible?—Sidney Topness, Taylors Falls, Minn.

We believe that the battery man is mistaken about a cell being in bad shape for if a battery will operate the starter it is usually O. K. If the battery man has any equipment at all, he will have a voltmeter with a scale of 3 volts and we would suggest your having him make the test indicated in the illustration. You do not have to take the battery out of the car. Merely connect the voltmeter across one cell at a time and step on the starting button. Take the voltage at all 6 cells.

As shown in the illustration the meter is measuring the voltage of cell No. 4. The voltage should be about 2 before you step on the starter button and should not drop lower than 1.8 if the battery is fully charged, while starting motor is being operated. A variation of .1 or .2 volts would be nothing to worry about, but if any cell shows a voltage around 1.1 volts or 1.2 volts or lower, it indicates serious trouble in that cell.

We doubt, however, whether any condition in the battery which would not affect the starting motor would cause any trouble in the generating system.



Testing individual battery cells while starter current flows

Using Magneto As Battery Charger

Q.—Is it possible or practical to charge batteries from the Ford magneto after making alterations or additions to the magneto?—R. F. Ogden, Great Mills, Md.

It is impossible to practically revise the Ford magneto for use as a battery charger. This magneto delivers alternating current and in order to convert it to a D. C. machine, it will be necessary to provide a commutator which would run the expense way beyond the price of a machine built for the purpose.

Q.—Would two sets of magnets and two magneto coils hooked up in series produce 32 volts at a given speed?

The output characteristics of a single magneto are 8 to 24 volts. You could secure 32 volts by hooking two Ford magnetos in series providing you have the second one exactly synchronized with the first one. In other words, it will be necessary to have the connecting shaft carefully machined so that the relation of the magnet to the field coil on one magneto will be in exactly the same relative position on the second one. This latter synchronization is necessary due to the fact that the current is alternating with 16 oscillations per revolution, and if one magneto should be delivering its peak at a certain time and the other one not, they would neutralize each other and no current would flow.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

What Flat Rate Did For One Concern

FROM a loss in the service department of $215 in the first three months of 1923 to a profit of $243 in January, February, and March of 1924—this is the record of an automobile company in Galveston, Texas, according to George K. Marshall, manager of the concern. The gain is due to the installation of the flat rate system for running the business, including both the customers and the mechanics, Mr. Marshall told the convention of automobile dealers which was held in Austin, Texas, a short time ago.

"We have always given our service department a great amount of thought and study in an effort to avoid losses each year, but we had no success until we installed the flat rate to mechanics," he said.

"The first experiment decreased losses, but still the service department was thought a necessary evil. In this experiment, instead of charging each customer a different price for work because of negligence or because of little knowledge of the business, pains have been taken to maintain the same price for all. To do this it is necessary to estimate the cost of working per hour and then to know from experience how long a given job takes. With this knowledge it is easy to keep the flat rate for customers."

It was the second experiment that brought the deciding results. In 1925 instead of salaries, it was decided to pay each mechanic 40 cents out of every dollar for the actual work that he did. Success was astounding, Mr. Marshall said. Two men can now do the work of four men of the old system—and they do it efficiently and well. Realizing that the mechanics might unduly rush the work, the originator of the plan made the rule that if a job is so badly done as to merit complaints from the customer, the laborer has to do the work over without charge and without pay. This insures good work.

One man who formerly received $25 a week, now often draws checks for $50 a week. "Even if we wanted to, we would not return to the old salary basis, because the employees would refuse to do so," Mr. Marshall said.

The company of which Mr. Marshall is manager does a $250,000 business a year, including both the service sales and new car sales department. Forty per cent of the gains from the service department goes to the mechanic; of the remaining, 50 per cent is used for operating expenses—rent, salary of the foreman, power, light, office equipment, incidentals—and 8 per cent is profits to the service business.



THINGS THAT HELP FLAT RATE

Flat rate operations for straightening front axle I beams call for special equipment. Here are shown two husky vises holding the axle while it is being straightened with a large pipe wrench. The steel bars in the yokes are used for sighting across to line them up.

Tools for Flat Rate

Houston, Texas.

To the Editor of Motor Age:

I have been in business repairing cars for several years and have come to the conclusion that I ought to place my business on a flat rate system. I have a pretty good line of equipment, but would like some information on the things you think a small shop ought to have. I have a lathe, drill press, grinder and cylinder boring machine as well as a good assortment of hand tools. What ought I concentrate on?—K. V. S.

When you say you have a good assortment of hand tools, we presume you mean such things as wrenches, sockets, etc., which no doubt are invaluable in any kind of automotive repair work.

We would suggest, however, that you make sure to get as many as possible of the special wrenches and devices for rendering maintenance work on certain makes of cars. For example, there are many wheel pullers, gear and sprocket pullers, bushing drivers, etc., which are most useful when it comes to working on certain makes of cars.

Really after all, unless you are doing a general line of repair work such pieces of equipment as a lathe are not as useful as the smaller tools. In flat rate work one of the most essential things is to be able to tear down and reassemble a job in the shortest time possible. That is why certain wrenches or pullers are to be preferred when it comes to selecting tools for a shop doing its work on a flat rate basis. A complete set of socket wrenches, S wrenches and other open end wrenches are probably the first things you ought to check up on. See that you have sizes from the smallest bolt to the largest and select them well, that is, make sure they are of good quality.

MOTOR AGE'S FLAT RATE FORUM

No. 26

DURANT FLAT RATES FOR WATER PUMP, FAN AND RADIATOR OPERATIONS

Manufacturer's Official Designation		Charge
149	Water Pump—Remove, disassemble, reassemble and reinstall	$ 3.05
149-A	Water Pump Rotor—Replace	.75
149-B	Water Pump Shaft—Replace	1.75
149-C	Water Pump Housing—Replace	4.50
149-D	Packing Nut—Replace	.55
149-E	Radiator Hose (Outlet)—Replace	.50
151	Fan Belt—Replace	1.90
153	Fan—Remove, disassemble, reassemble and reinstall	1.60
153-A	Fan Blades Complete—Replace	1.75
153-B	Fan Spindle—Replace	2.30
153-C	Fan Hub—Replace	2.10
155	Body Hood Ledge Moulding and Hood Lacing (One Strip) Replace	2.00
157	Radiator—Remove and reinstall	2.50
157-A	Radiator—Complete (Black Enamel)—Replace	40.00
157-B	Radiator Shell—Black Enamel—Replace	6.80
157-C	Radiator Complete (Nickel Plated)—Replace	42.00
157-D	Radiator Shell (Nickel Plated)—Replace	8.80
157-E	Radiator—Repair	4.00
157-F	Radiator Hose—Replace	.30

THE MARKET'S NEW OFFERINGS

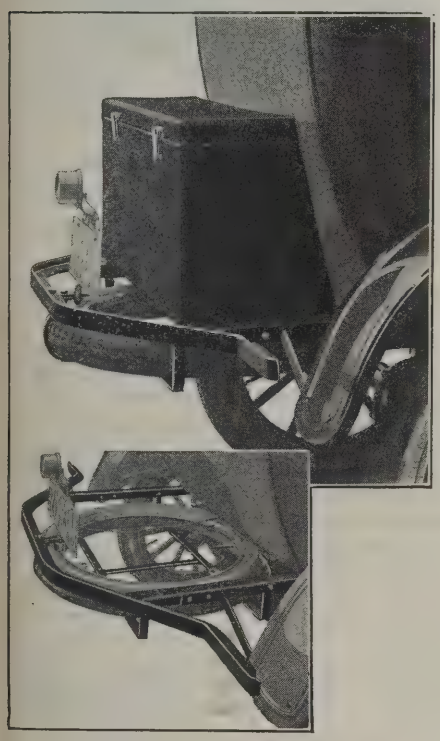
Accessories—Equipment—Supplies

Halladay Fender Guard

DESIGNED to give deep cushioning action when struck from any angle and giving complete fender protection in the fact that they extend the full width of the fenders the Halladay Fender Guard is offered to the trade by the Biflex Corporation, of Waukegan, Ill. These fender guards are held rigidly to the frame by especially secure fastening. Curved-back ends prevent hooking or engaging other objects at close quarters. The fender guards are said to be as light as protection requirements will permit without a heavy cross bar. List prices range from $17.50 to $19.50, depending on the car for which the guards are ordered.



New Halladay fender guard



Marquette Trunk

(Cut Shown Above)

A TRUNK providing commodious luggage room and which combines with a tire holder, fender brace and bumper, all in the same equipment, has been placed on the market lately by the Marquette Manufacturing Company, St. Paul, Minn. It is for Fords. Besides adding to the appearance of the car the equipment protects the vehicle against rear collision damage. The Marquette Trunk is of steel construction, with two locks of nickle-plated brass, equipped with toggle pressure catches. A cover arrester holds the cover wide open but away from the body of the car, thus preventing scratches. The trunk is 36 in. long, 16 in. high with width at top 9½ in. and width at bottom 15 in. One model fits all Ford cars. List price No. T-1 is $29.50.

Don't Trust Memory for Store's Wants

Stocks in an accessory store can not be kept up efficiently without maintaining a record of the store's "wants."

It is surprising how often you run across small accessory dealers who, instead of jotting down a "want" the minute a depletion is noticed, try to carry the "want" in their heads.

Every accessory store should keep up attentively a "want" record so there will be no slip-ups on items for which there is likely to be demand. "If you have not got it you certainly can't sell it"—is something to remember. If the clerk who notices the depletion is too busy at the moment to run back to the "Want" record he should make a memorandum in some form which later could be transferred to the regular "Want" record.

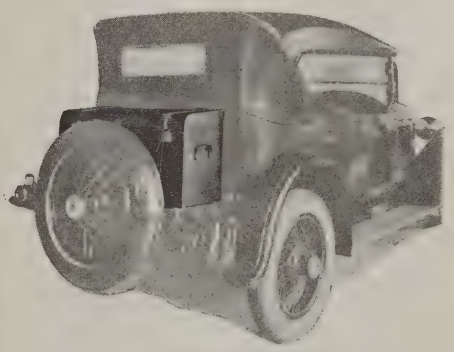


Majestic clutch control

Stefco Motor Luggage

STEFCO MOTOR LUGGAGE, made by the George V. Steffens Company, St. Louis, Mo. have been so standardized that the manufacturers can meet all requirements of the trade, according to a company announcement. Six grades and models of rear deck trunks at six different prices which can be furnished without cases, with one case or with two cases—listing from $20 to $50—are offered. These six grades or models are made in 40 sizes. For cars not equipped with trunk decks and where the owner desires to carry luggage in the rear the company carries in stock 16 sizes of racks which can be put on without special drilling and which provide for spare tire carriers now on such cars. Each of these racks will accommodate any of the six models of rear trunks.

In addition to racks, only, the company furnishes complete assemblies—for the rear of all Ford models, Chevrolet 1925, all Essex models and all Dodge Brothers models—consisting of trunk rack, tire carrier attachment, fender guards and trunk. List, $35 to $60. The company also offers Fender Trunks complete with suit cases, storm covers and the attaching devices. These units do not interfere with entrance into the car. Prices from $35 to $75. A Custom Built Department is maintained to meet any peculiar wants of the market.



Stefco Model C rear trunk

Majestic Clutch Control

SIMPLIFICATION of pedal operation for drivers of Ford cars is declared to be attainable through use of the Majestic Clutch Control, which is being produced by the Majestic Engineering and Manufacturing Company, 206 Amsterdam avenue, New York. This is a device which automatically throws the Ford clutch into neutral when the foot brake is partially applied, making it unnecessary to throw the clutch into neutral with the other foot. The control is said to prevent engine stalling, eliminate excessive wear of transmission gears and add longevity to the transmission bands. It does not interfere with regular Ford equipment or floor boards and installation requires only a wrench and screwdriver. Price $3.50.

GETTING MORE OUT of the SHOP

New Piston Grinding Machine

Following a policy of building production stamina into service and maintenance equipment, the Van Norman Machine Tool Company of Springfield, Mass., has developed a new piston grinding machine, the No. 96, which is considerably heavier than its predecesser, the No. 2 Re-li-o grinder. Individual electric motor drive for the grinding wheel spindle and headstock is retained although the first motor also drives the table traversing mechanism. In the case of the new machine, the motor sizes have been increased so that a one-h.p. motor drives the grinding wheel while ½-h.p. drives the headstock. A swivelled tool holder is placed alongside the grinding wheel and arranged that pistons in stock sizes can be turned preliminary to the finish grinding operation.

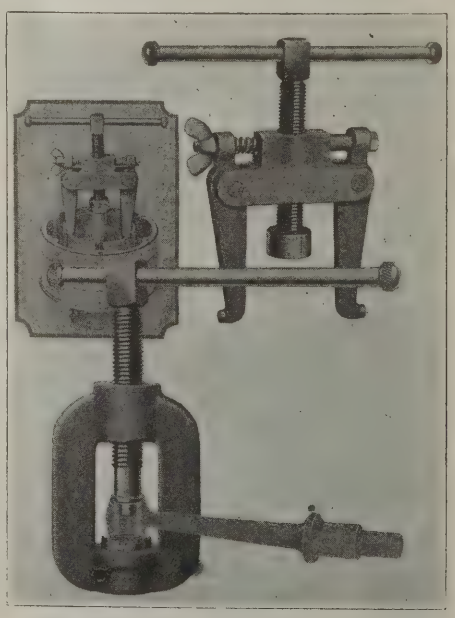
In addition to handling pistons, the new machine will grind piston pins, shafts of reasonable length and many other classes of cylindrical grinding. Like production machines, the new grinder is fitted with a cooling pump and mechanical feed which is controlled by stops. In addition to these features, the work head spindle, the wheel spindle and table slides and feeding mechanism are designed to the same standards that control the production machines made by the same company. The automatic feed mechanism allows for six changes in speed ranging from two to 18 in. per min. in either direction. As shown the machine requires a floor space of 64 in. by 40 in. and is completely self contained. While this machine is designed primarily to fulfill the requirements of the maintenance and regrinding shop, the makers assert that it is fully capable of handling parts on a production basis.

As an adjunct to the grinder or rather the process of grinding replacement pistons to the size required by the cylinder bore of an individual engine, the same company has also developed a device known as the Kor-ek-tor. In this device a cast iron frame carries a cutter head on its base which is lined up with a weighted center mounted in an overhanging arm at the top. The upper center is free to move up and down in order to accommodate pistons of varying lengths while the distance between the center of the cutter head at the bottom and the frame is sufficient to accommodate pistons of more than 6 in. dia. The cutters are set an included angle of 60 deg. which corresponds to the angle of the centers on the grinder.

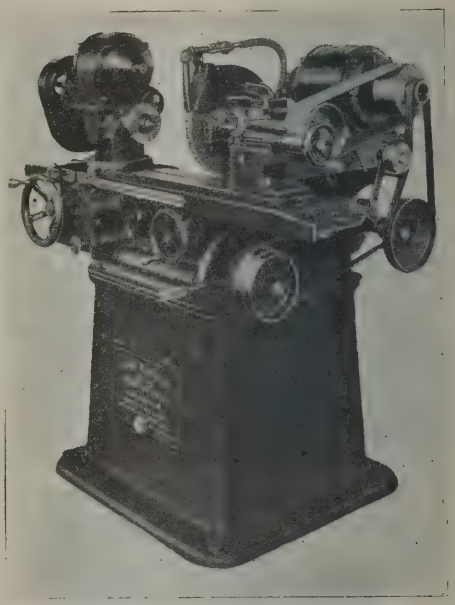
In the ordinary course of events, pistons which have been rough machined and then stored for some time are subject to some distortion which throws them out of round and affects the grinder set-up. Where the Kor-ek-tor is used, these pistons are first placed in this device. The weighted upper center is placed in the center hole in the piston head and the weight at the top provides sufficient downward pressure for the proper contact of the cutters at the bottom. The operator then gives the piston one or two turns which is sufficient to provide a center bearing at the bottom of the piston. Due to the length and angularity of the cutters, pistons ranging from motor cycle sizes to the largest truck sizes can be handled with equal ease. Only a narrow land inside of the counterbore at the bottom of the skirt is machined to form the centering surface.



Van Norman Kor-ek-tor, in which pistons in stock sizes are centered prior to the replacement turning and grinding operations



Above: Stevens transmission clutch drum puller; below Force-out for use on steering arm bushings.



Van Norman No. 96 piston grinder which is self-contained and designed to meet needs of the maintenance and regrinding shop although capable of being used as a production tool

Stevens' Transmission Clutch Drum Puller

The transmission clutch drum puller is made for the Ford transmission and regardless of how much pressure is applied, the device cannot slip, it is stated, because the thumb screw spreads the jaws so the pins are engaged securely in the holes provided in the drum. A swivel cup washer on the lower end of the pressure screw fits over the end of the shaft and consequently there is no chance of slipping and injuring the latter. For ordinary work the long handle gives sufficient leverage, but where the drum is unusually tight the large wrench can be applied to the squared portion of the pressure screws. It is made by Stevens & Co., 375 Broadway, New York.

The Stevens steering arm force-out is made with a hardened steel pilot screw at the lower end which quickly forces the bushing out through the aperture below. A sliding handle provides sufficient leverage, but for a particularly obstinate bushing in the steering arm a wrench can be used on the head of the hardened steel pilot screw. The tool is made for the Ford steering arm bushing.

N. T. D. A. CARDS ISSUED

NEW YORK, Aug. 8.—Traveling identification and courtesy cards have been issued to National Tire Dealers' Association members who in turn present them to their customers. The idea back of the cards is that when a member dealer's customers are touring and have cause to make a tire replacement or secure service they can go with confidence to N. T. D. A. member.

EDITORIAL

Association Activities

AMONG the legitimate activities of a trade association is that of warning its members against the imposters and swindlers who, from time to time, prey upon its members. The automotive industry is an unusually attractive field for the confidence men who go about the country garnering dishonest dollars. The fakers who prey upon this industry are by no means confined to any one type.

Among the more common are the organizers of this or that type of automobile club or tourists' service. These men sell signs and maps at fancy prices and assert that the purchaser will immediately begin to pile up wealth from the tourist trade that will be thrown his way. Disillusionment usually follows. Just remember, Mr. Dealer, that the legitimate and well known map publishers of the country furnish complete road maps of every state at reasonable prices and that the motor traveler usually stops where night or fatigue overtakes him.

Another type of swindler working in the automobile field is the man who wants to give his check for the purchase of a new car and appears to have the best kind of credit references. He usually is clever enough to fix up his credentials to suit himself and too clever to be caught.

Then there is the counterfeit salesman who goes about offering desirable merchandise at an extraordinary discount. He may be identified by the fact that he usually demands and gets a substantial deposit on the orders he signs up, thereby ending the transaction unless the police are able to overtake him in the next town.

Trade associations should be constantly on the alert to warn their members and the whole trade against the depredations of these wolves.

When Prices Go Down

THE present condition in the automotive industry, which may be described as one of falling prices for cars, requires intelligent administration by the dealer. Prices are not being reduced radically, it is true, but nevertheless enough to affect the money volume on a given number of sales. It is this reduction of volume on a given number of sales that requires the attention of the dealer lest his profits be thereby curtailed. It is logical to assume that lower prices will result in more sales, and the progressive dealer will make the most of the argument, but it is not safe to assume that profits will be taken care of automatically. These are times for the dealer to carefully watch and control his business in order that he may enjoy a well-earned profit.

And these are times when more than ever before the automotive merchant should cultivate those other avenues of profit that are open to him—accessories, supplies, tires, maintenance and radio. It is surprising how quickly volume accumulates in the sale of articles of comparatively small unit value. The good dealer readily adapts his business to prevailing conditions and makes certain the continuance of his profits.

Now Is the Time

IF you are ever going to make a success of your business now is the time to do it. Not next year, two years from now or five years hence. But this month, this week, today. The rules of success are always the same and if you apply them today with any degree of success, no matter how moderate, and continue to apply them, your success will grow next year and from year to year. One cannot be a failure today and a success tomorrow from the same formula of business conduct. If you are a failure today you must find the flaw in your business code and correct it before you can expect to achieve the goal of success.

Your business is as productive of success as any other. Do not lay your failure to the line of business you are engaged in, unless you are definitely convinced that you are not suited for this business. Then it is your own fault, not that of the industry. Other men have achieved success in the automotive business. Others will continue to make fortunes out of it. If you expect to succeed, now is the time to begin.

United States Highways

A COMMITTEE representing the Good Roads Bureau of the United States and the highway commissions of the various states has decided upon 70 routes that are to be designated as United States Highways and to be uniformly marked and maintained throughout their length. This will be of very great advantage to the motor traveler, who, in order to get to his destination, has to pass through several states. It means that if he uses one of the United States highways he will follow the same number, the same markings, the same warning signs from beginning to end.

This is significant of the growing importance of private transportation by automobile over the public highways of the United States. It is recognition of the national character of this travel as opposed to the purely local travel that was once the sole function of the motor vehicle.

We hope this movement will have a more far-reaching effect to the end that traffic regulations in the various states and municipalities may be co-ordinated and made more nearly uniform. There is no doubt of the great need of such uniformity. The motor traveler today is constantly menaced by local regulations that it is impossible for him to know about. And there is no reason why a single set of regulations uniform throughout the country could not be successfully applied. Unless the states voluntarily get together on this as they have done in the designation of through highways, the time will come when the magnitude of interstate travel by motor car will demand that Congress take a hand in its regulation on a national basis.

U. S. May Take Action in Rubber Crisis

Hoover Expected to Fall In Line With Kellogg Note

Department of Commerce About to Ask Renewal of Conversations With Britain Over Releases

WASHINGTON, Aug. 8.—Herbert Hoover, secretary of Commerce, is expected to take an active part in the rubber situation this week. After studying the latest developments, it is anticipated that the secretary will cause the renewal of conversations with the British authorities with reference to the amount of crude rubber releases permitted under the Stevenson restriction act.

Despite American protests transmitted through the State Department to Ambassador Houghton in London, the British authorities restricted the amount of the release due for the quarter beginning August 1 to 10 per cent, or half the amount desired by American manufacturers.

It is understood that British producers gave assurance two years ago that the Stevenson plan would be flexible to safeguard the United States from any shortage. Mr. Hoover is expected to recall this point to British attention and to emphasize the conviction of American manufacturers that they are better able than the British to judge their needs for crude.

The Department of Commerce is conducting surveys of possible new fields for rubber production by American interests. The report covering the Philippines is due next week.

Goodrich Buys Rubber Ace Patents and Selling Rights

AKRON, O., Aug. 8.—The B. F. Goodrich Rubber Co. has purchased the patents, manufacturing and sales rights of Rubber Ace puncture proof pneumatic inner tube, and will manufacture and market this as a Goodrich product in the future. As soon as sufficient production can be secured in the Goodrich plants at Akron, Rubber Ace will be distributed through all Goodrich branches throughout the country.

Rubber Ace is not a new product, having been made, sold and used for more than five years. It is a patented sponge rubber inner tire, made of pure rubber and air. Instead of being in one container, the air is blown into the tire in millions of little cells. The inner tire is made in two sections—the main unit conforming to the shape of the tire, and a wedge. The wedge provides the proper fit in the casing under proper compression. The Rubber Ace then acts much the same as the usual inner tube under correct air pressure.

Would Have Gas Tax Replace License Fee

LANSING, Aug. 8.—As a solution for the state's financial problem, Secretary of State Charles J. DeLand has suggested the increase of from two to three cents in the tax on gasoline and the elimination of the yearly automobile tax.

In place of the latter, Secretary DeLand suggests a nominal license fee of from $3 to $5 for the life of the car. A substantial license plate which would endure for the life of the car would be furnished while $1 would be charged for each transfer of the license when the car changed owners.

The advantage of this would be the doing away with the annual rush to obtain licenses and would allow the department of state to do away with the 80 odd branches it now operates, making a saving of thousands of dollars annually for department overhead. A considerable sum would be raised the first year but after that only the new passenger cars would be required to pay the fee.

JORDAN REDUCES PRICES

CLEVELAND, Aug. 8.—Announcement is made by the Jordan Motor Car Company, Inc., of a $300 reduction in price of its eight cylinder models. New prices effective Aug. 11 are as follows:

Five passenger touring car	$2,275
Playboy	2,275
Victoria	2,475
Brougham	2,575
Friendly Three	2,575
Sedan—five passenger	2,675
Sedan—seven passenger	2,925

The reduced prices are due to increased production and the most successful six months period of selling in the history of the Jordan Company.

Paige-Detroit Earnings Show $351,094 Gain

DETROIT, Aug. 8.—Paige-Detroit Motor Car Company's net profit for the six months ending June 30, before taxes, amounted to $2,208,094.26, a gain of $351,094.26 over the same period for 1924.

This includes profits of the branches and compares with profits of $1,857,000 for the same six month period last year.

The company's total cash assets as of June 30 were $16,574,087.05, of which $5,142,978.73 is cash. A total of 24,002 Paige and Jewett cars were sold during the first six months, company officials said.

Boillot Drives Peugeot to Win French Touring Prize

Inaugural Race at New Montlhery Road Circuit Entered by All Classes

PARIS, July 21—(By mail).—Driving a sleeve valve Peugeot with a Weymann sedan body, Andre Boillot made the fastest time in the French Touring Grand Prix, which was the first race to be held on the new 7.7 mile road circuit at Montlhery, near Paris. The cars in this class had to cover a distance of 652 miles with a gasoline allowance at the rate of 10.7 miles to the American gallon, all the fuel being aboard at the start, and had to have ballast equivalent to six passengers.

As it started in the race, the car weighed 6,173 pounds. Boillot drove the entire distance without leaving the steering wheel, his time being 12 hours 12 min. 39 1/5 sec., or an average of 53.4 miles an hour. An Austrian Steyr, also with a Weymann fabric leather sedan body, finished second, and Louis Rigal on a sleeve valve Peugeot with the same type of body, was third.

The Austrian Steyrs, which appeared to be faster than the Peugeots, were held back throughout the race with deflated tires. Michelin clincher bead balloons with the bead held down by an internal extensible duralumin band were used.

In the five-passenger car class, three Cottin-Desgouttes were the only competitors. All three finished, the average speed of the winner being 53.1 miles an hour, on a gasoline allowance at the rate of 13.1 miles to the gallon. One of the Cottin Desgouttes lost its lubricating oil and the last 30 miles were covered with water as the only lubricant. These cars had dry sump lubrication.

In the 2-seater class, in which the distance of 590 miles had to be covered with a gasoline allowance of 19.6 miles per American gallon, a new type of straight-eight Bugatti with roller bearings, captured the first four places and averaged 52.6 miles an hour. The drivers were Constantini, Pierre de Vizcaya, Foresti and Jules Goux. The only other car to finish in this class was one of the racing 91½-inch Darracq's with touring equipment driven by Ledu, which, however, ran out of gasoline a mile from the finish. The driver pushed it over the line. Three Mathis cars were eliminated in this class by reason of defective water connections, and a couple of E. H. P.'s ran out of gas.

From a spectacular standpoint the opening of the new Montlhery track and road circuit, the construction of which has cost $2,500,000 was a dead failure.

Coast Tire and Rubber Co. Is Again in Good Condition

Board of Directors Named After Reorganization Last Year is Re-elected by Stockholders

OAKLAND, Cal., Aug. 8.—The Coast Tire and Rubber Company, whose reorganization after the filing of several suits against officials and directors was effected June 30, 1924, shows excellent financial condition in a report just rendered. This statement was made at the annual meeting of the stockholders at the factory in Oakland with complete representation present from Los Angeles, San Francisco, Oakland, Fresno, Lodi, Sacramento, Santa Rosa, Santa Cruz and Picific Grove.

After a full review of the financial reconstruction of the company the stockholders unanimously approved the year's work and re-elected the board of directors, consisting of J. C. Hughes, president; L. S. Budo, vice-president; E. H. Russell, secretary, and F. E. Miller, O. B. Caldwell and J. A. Silvera. Unanimous vote of confidence and thanks was extended to these men who rescued the corporation from what appeared to be disaster, and have since put it on its feet.

Willys-Knight and Overland Price Reductions Announced

TOLEDO, Aug. 10.—Reduction in the price of Willys-Knight Model 65, the 6-cylinder model and Overland Model 91, effective today, were announced by John N. Willys, president of the Willys-Overland Company.

New prices follow:

Willys-Knight Model 65, touring, $1,195, reduced $100; coupe, $1,395, reduced $100; coupe sedan, $1,395, same reduction; sedan, $1,450, reduced $125; brougham, $1,595, reduced $100.

Willys-Knight Six, touring car, $1,750, reduced $95; roadster, $1,750, reduced $95; coupe, $2,195, reduced $150; coupe-sedan, $2,095, reduced $50; sedan, $2,295, reduced $200; brougham, $2,095, reduced $200.

Overland Model 91 De Luxe sedan, $695, reduced $20; standard sedan, $645, reduced $10; coupe, $625, reduced $10.

Prices of the standard sedan and the De Luxe sedan of the Overland 6-cylinder class were recently lowered.

NEW HUPP DEALERS

DETROIT, Aug. 8.—New dealers added during the last two months by the Hupp Motor Car Corporation include:

Lester M. Brackett, Colebrooke, N. H.; United Motor Sales Co., Greensboro, N. C.; Jern Auto Sales, Chicago, Ill.; Tony Mantelli, Trinidad, Colo.; Braga Auto Co., Iowa Falls, Iowa; Cecil H Lewis, Marengo, Iowa; A. E. Britton, Peru, Ind.; M. & D. Motor Co., Iola, Kan.; W. P. Thorne, Linneus, Mo.; Tourist Garage, London, Ky.; Chambers Motor Co., Owensboro, Ky.; D. C. Knapp, Scobey, Mont.; F. Y. Conner, Tuskeegee, Ala.; McGuire-Baldwin Motor Co., Holdenville, Okla.; Germantown Motor Sales Co., Philadelphia, Pa.; Chas. W. Walker, Ellensburg, Wash.; Carl James, Clearwater, Fla.; G. H. Bates, Plant City, Fla.; Parker & Dunn, Augusta, Ga.; J. D. Welsh, Jr., Horseshoe Bend, Idaho; E. M. Hargis, Nampa, Idaho; J. B. Standley, Huntsville, Texas; Miss Minnie Porter Harris, Key West, Fla.; H. Klausman, Wadena, Minn.; Chas. Abbott Motor Co., Pensacola, Fla.; Saline Motor Sales Co., Harrisburg, Ill.; Robert Templeman, Aurelia, Iowa; G. V. Hudson & H. N. Durrance, Sebring, Fla.

A Good Prospect But a Poor Ad

McPHERSON, Kan., Aug. 8.—This town claims the distinction of having a record breaking motor car owner. Helmer Ek, music dealer, in the past nine years has owned sixty-three cars, representing thirty-six different makes.

Only three times has he owned more than one car at a time. He has never owned the same car longer than five months, and six of the cars he had in his possesion less than twenty-four hours before they were either sodl or traded.

He says that he is looking for the ideal car and when he finds it he will stop his trading, buying and selling.

NEW SALES TAX PROPOSAL BEFORE GEORGIA LEGISLATURE

ATLANTA, Ga., Aug. 8.— A sales tax plan that would cost the business men of this state hundreds of thousands of dollars a year and that would affect every branch of the automotive industry, has been introduced before the Georgia State Legislature, now holding its first biennial session in Atlanta.

If the measure is passed every firm, corporation and agent doing business in Georgia will be required to register, and pay a ½ per cent sales tax, or consumption tax, based on actual gross sales. The only redeeming feature of the new measure, from the standpoint of dealers, is the fact that it would take the place of all ad valorem taxes now imposed on behalf of the state. But the sales tax would cost considerably more than do the latter taxes. Furthermore, penalties are provided for failure to keep accurate records of sales so that returns can be made to the state.

Dealers, through their various associations, including the Atlanta Automobile Association, are vigorously opposing the measure.

A bill also has been introduced to fix the amount of the tax on gasoline in the state of Georgia at 5 cents per gallon, more than double the present tax.

A. A. A. PICKS GRAVELLE

INDIANAPOLIS, Aug. 8. — Medos Gravelle of the Gravelle Pictorial News Service has been appointed official photographer for the contest board of the American Automobile Association, it is announced here.

Louisville Dealers Report Satisfactory July Business

New Car Sales Slightly Below June But Much Better Than Same Month Last Year

LOUISVILLE, Aug. 8.—A satisfactory volume of business for July is reported by the majority of distributors and dealers. New car sales are slightly below figures but more cars have been sold than in the same month of last year. A few dealers are experiencing difficulty in making deliveries and while this restricts sales to some extent the prevailing opinion indicates that these deferred sales will be made up later in the year. Open car sales, especially roadsters, are gaining.

Careful buying of used cars continues to aid dealers in moving the used cars more rapidly and will likely enable dealers to show a larger net profit. Used cars are selling better than last year although a few dealers are having difficulty in moving them. Good results have been obtained by dealers advertising that all used cars sold by them are backed solidly by the firm, one concern going so far as to guarantee twelve months or 10,000 miles of satisfactory service. Dealers are giving the used car more attention than ever before and results are generally gratifying.

Rural reports show that farmers are buying more than in 1924 and the gradual improvement of agricultural conditions indicates a period of better business throughout the state.

Re-possessions are low. Collections are slightly better. Tire and accessory dealers and parts jobbers expect the present brisk sales to continue. Truck sales are good.

ATLANTA TIRE SALES RAISE

ATLANTA. Aug. 8. — Tire jobbers in Atlanta advise that advancing tire prices, and the fact that prices appear practically certain to advance still higher, is causing another influx of buying by the retail tire dealers throughout this section, and considerable advance buying also by motor car owners, particularly companies operating truck and car fleets. The dealer trades, in fact, are buying on a more extensive basis than in several weeks past, and are accumulating fairly large stocks in anticipation of the advancing market.

NEW GARDNER MODELS

ST. LOUIS, Aug. 8.—Celebrating the fiftieth anniversary of the begining of the Gardner organization, the Gardner Motor Company, Inc., announces the introduction of a Sedan on both 6 and 8 cylinder lines, which is called their "50th Anniversary Sedan." The 6-cylinder model lists at $1595 and the 8-cylinder model at $1995.

Benoist's Delage Wins French Grand Prix

PARIS, July 28, (by mail)—Robert Benoist, piloting a 12-cylinder supercharged Delage, won the annual French Grand Prix 621-mile race here Sunday, at an average speed of 69.7 miles per hour. Louis Wagner was second on a similar car, 7 min. 46 sec. behind the winner; Count Masetti was third on a six-cylinder supercharged Sunbeam, and five straight-eight non-supercharged Bugattis took the following positions, the orders of the drivers being Constantini, Jules Goux, Fernand de Vizcaya, Pierre de Vizcaya, and Foresti. The winner received $7,500 cash; the second took $1,500, and the third man $1,000.

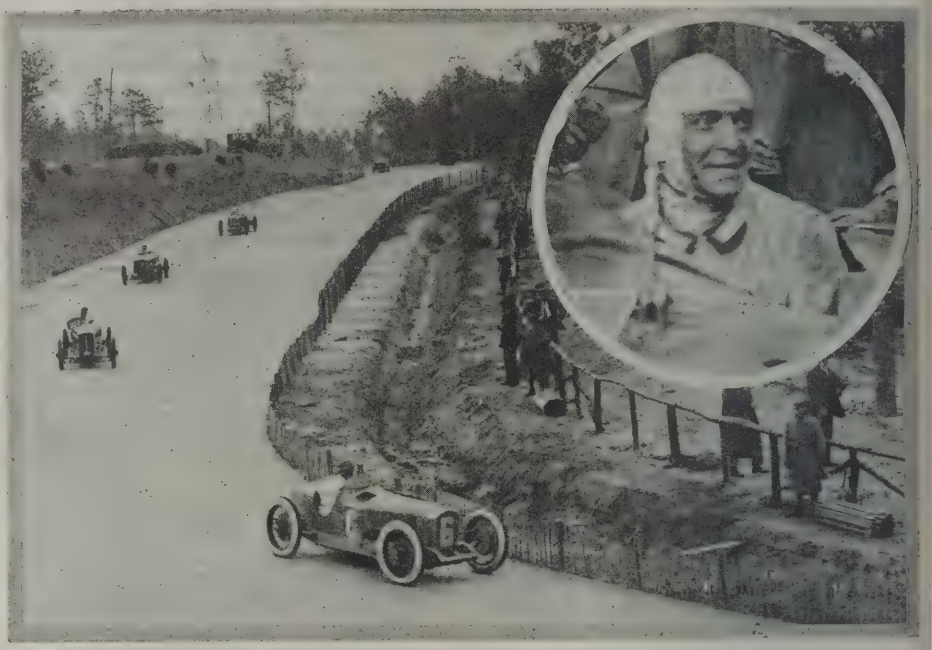
The race was held on the new Montlhery track and specially constructed road circuit measuring 7.7 miles round, in which a capital of $2,500,000 is involved, but owing to defective organization the attendance was poor and the gate receipts did not exceed $39,000.

Antonio Ascari on a straight-eight supercharged Alfa Romeo set the pace and let the field for 169 miles, his average for this distance, including one stop for gas and a change of tires, being 76.2 miles an hour. During the twenty-third lap, while having a lead of 2 min. 42 sec. on his companion Campari and 4 min. 37 sec. over a Delage which was third, Ascari overturned and died two hours later from his injuries.

The accident happened on a long, easy left-hand bend, which the car was taking at nearly 120 miles an hour. Light garden fencing had been placed on the inside of the bend; beyond this there were 8 feet of soft earth, then a ditch and a steep banking with railings on the top of the banking to hold the spectators back. Ascari took the corner so close that he flicked the fencing twice with his left rear hub cap, then in trying to straighten out began to scoop up the fencing between his left front wheel and his frame member. The car turned over twice, finally settling on its wheels with steering and tires intact.

It is now realized that light fencing around the course served no useful purpose, and was a danger to the drivers. With a wall hub-cap high this accident doubtless would not have happened. After the death of Ascari the two other Alfa Romeo cars were withdrawn when half distance had been covered, and Campari had the lead by 2 min. 13 sec.

Antonio Ascari, who was 36 years of age, was a successful automobile dealer in northern Italy. Starting life as a mechanic, he acquired a considerable fortune in business and took up racing after the war. Last year he won the Italian Grand Prix at Monza, at an average of 98.7 miles an hour, and the same year was forced out of the European Grand Prix at Lyons, when he was leading and had only one lap to go. In June he won the European Grand Prix at Spa, Belgium.



Lower left shows light garden fencing like that on the turn where Ascari met his death. He was traveling at 120 miles an hour when his hub cap flicked this fencing, causing the Alfa-Romeo with which he won the Grand Prix d'Europe at Spa Belgium, to turn over twice. Ascari died on the way to the hospital. Upper right shows Robert Benoist, driver of the Delage which won the race

Considering that 500 miles were insufficient to test men and machines, the Automobile Club of France this year increased the distance to 621 miles. This only fatigued the public without being any greater test for the cars, for all machines in at 500 miles went through to the end. The Alfa Romeos proved that they were the fastest, Ascari's maximum speed over the straightway being 134 miles an hour; Campari, on the second Alfa Romeo, showed 132.2 miles an hour, and the fastest other car was Benoist's Delage at 131.4 miles an hour. Ascari set up the first lap record at an average of 80.1 miles an hour, but this was beaten later by Divo on a Delage with an average of 80.3 miles an hour.

There was little mechanical trouble in the race. Segrave's Sunbeam went out with a broken inlet valve, and Conelli's Sunbeam was withdrawn with a broken servo brake. Divo's Delage went out with one of its two superchargers broken. These were the only three to drop out with mechanical defects. The Bugattis were the only cars to run without a supercharger, they were at least 12 miles an hour slower than the Alfa Romeos and the Delages, but they developed no trouble and ran with great regularity. Rain towards the end of the race made the task easier for the slower cars.

The winning Delage was the most distinctive of the competing cars in having 12-cylinders in a V, the engine being treated as a double six, with the two blocks of cylinders staggered in relation to one another to allow of the connecting rods being mounted side by side on the crankpin. A seven bearing circular web crankshaft was used. Rollers were employed for the crankshaft and the connecting rods, and the twenty-two pinions in the timing gear housing were mounted on ball bearings.

As the result of this race Delage and Alfa Romeo are placed on an equality for the world championship with 6 points each, Duesenberg being second with 7 points. If Duesenberg wins the Italian Grand Prix at Monza on September 6, the firm would secure the championship, carrying with it a cash prize of $5,000. This trophy is based on the make of the car and not on the driver. The Italian Grand Prix at Monza is the final qualifying event for the championship, but in case of a dead heat a final will be run off over a distance of 120 miles within the following 48 hours.

RADIO CONVENTION PLANNED

INDIANAPOLIS, Aug. 8.—The Gibson Company, wholesaler of automotive supplies, replacement parts and radio will stage a radio sales convention for retailers in this territory who sell radio or are interested in radio as a possible additional line. The meeting to be held August 18 will have several speakers who will talk on radio selling. Much of this information has never before been offered to dealers in such a dealers' convention.

Ford's Bid for 200 U. S. Board Ships Is Accepted

Chairman O'Connor Declares Vessels Sold for $1,706,000—Next Highest Bid $1,370,000

WASHINGTON, Aug. 8.—Acceptance of the cash bid of Henry Ford of $1,706,000 for 200 steel vessels of the United States Shipping Board was formally announced here this week by Chairman O'Connor. The vessels are to be dismantled and scrapped, including all engines, boilers and auxiliaries. The next highest bid received for these vessels was $1,370,000, which gave the right to the bidder to resell the engines, boilers and auxiliaries.

Calling attention to the trips he made to Detroit for the purpose of interesting Mr. Ford in buying some of the board's ships for general cargo operation, Chairman O'Connor in a statement, says:

"Mr. Ford's announcement that he proposes to buy ships and make a bid for ocean trade is most welcome news. The importance of this announcement can be measured only by the scale and success of his operation."

Mr. O'Connor says that the recent public attention to the scrapping of ships "was due largely to a bid for 200 ships recently made by Ford, and today accepted by the board."

"The keen public interest recently displayed in American shipping," opens the O'Connor statement which told of Ford's successful bid, "seems to show that the propaganda of foreign ship owners has been defeated by American common sense, and that this country will maintain its determination that an absolutely essential part of its business equipment as well as for national defense is a fleet of merchant ships.

"To best maintain this fleet is needed the money making incentive of private ownership, and we are attempting as rapidly as possible to get our ships out of the hands of American tax-payers, and into the hands of American private owners."

Martin-Parry "Safetibus" For Ford Chassis Ready

YORK, Pa., Aug. 8.—Beautiful lines and maximum comfort and safety characterize the new "Safetibus" now in production by Martin-Parry Corporation, commercial body builders. The "Safetibus" is designed for the Ford ton chassis, equipped with the Martin-Parry extension, which provides the required 146-inch wheelbase, semi-elliptic springs, and the Hotchkiss drive.

By mounting the body very low on the chassis, a low center of gravity has been maintained, assuring complete safety and giving a low coach effect. Yet there is a full 57-inch head room inside from floor to roof.

The "Safetibus" has been designed either for school purposes or for use as a general bus. The capacity is 25 children or 18 adults, not including the driver.

The cowl and windshield are standard Ford sedan type, while a sun visor affords extra protection to the driver. Large windows furnish perfect vision and ventilation to the occupants, with cowl and built-in rear ventilators also provided. The windows are double strength plate glass, and can be lowered into the sides of the body completely out of sight. Retail price is $800 F. O. B. York.

BUSES SERVE ANOTHER TOWN

NEW ORLEANS, Aug. 8.—The city of Meridian, Mississippi, has voted to substitute motor buses for street cars, 1,157 to 316. Meridian is the second Mississippi city to take similar action within a month, the city of Hattiesburg coming to the same decision recently. The street cars have already been superceded by the buses in Hattiesburg. It is expected that other cities, served by the Mississippi Power Company, a corporation servicing Hattiesburg Meridian and other South Mississippi cities with electric current, will change from trolleys to buses soon. The power company is in perfect agreement with the substitution, controlling the bus lines as they are put on.

Motoring Public Accepts New Models Approvingly

Many Who Planned to Defer Purchase Until Next Year, Now Giving Their Orders

DETROIT, Aug. 8.—The motoring public's acceptance of the new passenger models that have been offered during the past week has served to bear out the prediction made earlier in the season that the remainder of the present year will be the best in the history of the industry.

The new racy lines and the unusually attractive values have caught popular favor and orders are being taken from those who did not plan on buying a car until another year. This one field which has been considered impossible has at last fallen before the automobile salesman.

Deliveries are not being delayed any unusual length of time. The factories are gradually catching up in their production to the point where it is nearly equal to the sales demand. Within a month production and sales will be equal and from there on the production will be according to the sales demand.

Closed cars are still the big favorite with roadsters receiving a surprisingly large attention. Touring car orders are about on the same proportion as in the past.

25 Years Ago In the Automobile Industry
As Recorded In MOTOR AGE

(From MOTOR AGE of August 16, 1900)

New York Automobile Show

NEW YORK, Aug. 13.—Every foot of space for the automobile show at Madison Square Garden has been taken, including all the space in the restaurant which has been added. In this room there will be an exhibition set aside for an exhibition of motor vehicle racing machines.

Vanderbilt Gets a Locomobile

"Willie" K. Vanderbilt has just had added to his motor vehicle stable one of the new model Locomobiles. It was a present from his wife. He had hitherto been using one of the old model Locomobiles.

Swiss Automobile Regulations

The use of motor vehicles in Switzerland is to be regulated by new ordinances, which have lately gone into force. No motor vehicle can be put in use before being first thoroughly tested by a technical commission and declared fit for use by such commission. Furthermore, the motorman must be regularly licensed. Thirdly, every vehicle is to be equipped with two lamps, one of which must be provided with white, the other with green glass. Lastly, every motor vehicle must be provided with a plate, distinctly bearing the name and address of the owner. It is remarkable that the ordinances in question contain no clause regulating the speed to be maintained in driving.

Trade in Cleveland

CLEVELAND, Aug. 13.—A number of the material manufacturers of this city that have been prominent in the manufacture of cycle material are now actively engaged in furnishing material for the automobile industry, and almost without exception it seems to be the opinion that the new line is rapidly developing into an industry that will eclipse and in a measure take the place of the old.

Charleston Exposition

Automobile manufacturers will have no lack or opportunity to display their productions at expositions in American cities within the next year or two. Buffalo and St. Louis expositions are in prospect and have been widely heralded. Attention is also called to the exposition to be held at Charleston, S. C., from December 1, 1901, to May 1, 1902, which will be given under the name of the Interstate and West Indian Exposition. The promoters of this show say that it offers an exceptional opportunity for automobile manufacturers to place their various vehicles before the people of the South. It is hoped to have every department of the automobile industry represented.

Motor Wheel Corp. Earns $1,935,396 in First Half

Second Quarter Shows Increase in Business Making Net Income About $2 a Share

LANSING, Aug. 8.—Net earnings amounting to $1,935,396.04 for the first six months of 1925 are reported by the Motor Wheel Corporation in a statement of earnings just released. This amount added to the surplus account makes the surplus of the corporation at the close of business June 30 $5,614,328.40 or about $10 per share on the basis of 500,000 shares of outstanding, non-par stock.

The reports show an increase in earnings for the past three months as compared to the first quarter. Earnings for the first quarter were under $1.50. On a basis of 550,000 shares, the net income for the entire half-year figures amount to about $3.52 per share or about $2 for the second quarter.

Income from the sale of wheels, stampings, etc., totaled $1,991,333.30 for the six months just ended. Interest earned and income from investments adds $124,184.32 to this figure which is also increased by the sale of $513,252 worth of treasury stock. Deductions for various expenses, losses and provisions for taxes amount to $693,373.58, leaving the net income of $1,935,396.04.

From this figure deductions are made of dividends already paid, including $366,837.40 on common and $65,702 on preferred, leaving $1,514,663.43 to be added to the surplus of $4,099,564.98 as of January 1 for the reading of June 30.

Increase of 30 Per Cent in California Sales Reported

SAN FRANCISCO, Aug. 8.—Due to varied causes the business of merchandising automobiles and equipment in central and northern California showed a considerable increase for July over that of June. The gain for June over May was an average of 20 per cent, while that of July over June amounted to better than 30 per cent.

Reductions in prices on several models, lower first payments and longer terms on the balance, a drop in interest rates charged by some of the larger banks, and the annual influx of money for the fruit and vegetable crops were the principal causes of the increase in the sales of new cars. The same reasons, with a greater reduction in total price, worked for the benefit of the used car business, and both "as-is" and rebuilt used cars are now moving at a better rate in central and northern California than they have been for two years.

Fruit and vegetable crops, the fisheries, and the lumber production brought more money into central and northern California this year than for any of the past three years, and the development of paved highways all over the state put a great deal of this into automobiles.

FORD SALES CONTEST

DETROIT, Aug. 8.—Approximately 31,000 Ford salesmen in the United States in addition to 600 roadmen from the 35 domestic branches are in the midst of a 60-day sales campaign. When the finish is reached on August 20, several thousand dollars in prizes will be awarded to salesmen in various parts of the United States. In Detroit, the dealers have arranged special contests for the salesmen. A prize of $1,000 will go to the winner with the title of city champion. Similar honors will also go to the winner of the national title.

Industrial Construction Sets Record in South

ATLANTA, Aug. 8.—Definite figures pertaining to industrial construction in the south during June are now available, the total projects in the automotive field alone for the first six months of the year reaching 1,075, establishing the largest six months' record in the history of this industry in the south. This includes new companies formed in the automobile dealer, accessory, tire and independent garage field, and new construction of any important nature by automotive concerns in these same fields.

Particularly have distributor firms been active in the construction of sales buildings and service stations, these projects entailing an investment of several million dollars. Atlanta, Miami and Jacksonville lead the individual cities in this respect.

In the motor bus end of the industry, including new bus companies formed and bus terminal construction, the total for the first six months exceeded 50 projects, and an additional bus mileage of about 30 per cent compared with the mileage at the end of 1924.

NEW MARMON MODEL

INDIANAPOLIS, Aug. 8.—The Nordyke & Marmon Company, has announced the addition of a 4-passenger 2-door Victoria Coupe, to the new Marmon series. This model lists at $3,295. The body is finished in two-tone duco, and broadcloth upholstery is used. The equipment includes six balloon tires, shock absorbers, front and rear bumpers, cowl lights, motometer, sun visor, automatic windshield wiper, cowl ventilator, rear view mirror, rear traffic signal, dash gasoline gauge, clock, and ignition, spare tire, door and gearset locks.

PAIGE MOVES OFFICES

DETROIT, Aug. 8.—Completion of the executive building of the Paige-Detroit Motor Car Company at the West Warren avenue plant and its recent occupation marks the first change to be made in the administration office's location of the company in 13 years. The new executive building which lies along the front of the different factory units, houses all offices and experimental department of the company. Behind it is a new engineering building where all experimental work is completed.

Toledo Expects August Sales to Show 25 Per Cent Increase

July Much Better Than Last Year and Stocks of New and Used Cars Are Low

TOLEDO, Aug. 8.—Automotive dealers here feel that the general tone of their business is exceptionally fine for this period of the year. Dealers are not overstocked with new or used cars and the new models and prices announced in recent weeks have been a stimulus to considerable buying in all lines.

July has yielded much better business than last year and many dealers believe that August will show at least a 25 per cent gain over the same month last year.

Used car sales are beginning to show a slackening but are still keeping stocks at normal.

Accessory dealers declare their goods are moving well and look for very good turnover in the next month or two.

The public is buying tires only when necessary. They have refused to be stampeded by the rapid rise in prices and consistent talk of higher prices. Dealers are carrying large stocks purchased in anticipation of the rising market but are getting just a normal run of business.

Manufacturers have noted a quickening of demand in the last few weeks and employment has increased.

Money conditions are favorable to time purchases and there is plenty of credit available for dealers and manufacturers.

Farm conditions are showing improvement over last year and indications are that farm buying power will be greatly strengthened in this territory this fall and winter.

Texas Leads U. S. in Federal Aid Road Mileage for Year

AUSTIN, Tex., Aug. 8.—Of the total of 14,032 miles of designated Federal aid highway in the United States completed during the fiscal year ended June 30, 1925, Texas led all other states with a total of 784 miles, according to official announcement from Washington.

South Dakota was second with a total of 458 miles and Illinois third with 431 miles. The notable record which Texas made last fiscal year in this respect promises to be far exceeded this year. It is stated by Frank Lanham, chairman of the State Highway Commission, that there are under construction at this time 1,280 miles of first class designated highway, all of which should be completed during the current fiscal year.

The cost of constructing this 1,200 miles of highway will be approximately $20,000,000 including federal, state and county funds, Lanham said. In addition to this sum there will be expended during the year about $6,000,000 for maintenance of the roads already finished. Texas has a total of 12,948 miles of first class highway, according to Mr. Lanham.

Fisher to Begin Quantity Production of Bus Bodies

Most of Orders Expected From New Yellow Truck & Coach Manufacturing Co.

DETROIT, Aug. 8.—Quantity production of bus bodies in Detroit will shortly be undertaken by the Fisher Body Corporation following its purchase of the Buick plant located at Western and Michigan avenues in this city. The plant now has a ground area of 40 acres and more than 500,000 square feet of floor space, and will be enlarged as condition require.

Should orders materialize for which William A. Fisher, president of the Fisher Body Corporations, has started negotiation, Detroit will become the center of the bus body building industry in this country. Most of the orders are expected to come from the Yellow Truck and Coach Manufacturing Company. Several bus bodies have already been built for this company.

Negotiations leading to the purchase of the Buick plant has been under way for some time but final action was delayed until Fisher engineers and officials had assured themselves of certain problems entering into the manufacture of bus bodies which are different from those encountered in the building of passenger car bodies.

In a statement issued regarding the purchase, Mr. Fisher said, "Upon finding the conditions entering into the manufacture of bus bodies, the Fisher Body Corporation immediately began an intensive study by experts of the engineering, operating, economic, manufacturing, standardization problems and as a result is now entering the field on a production scale that was unbelievable a few months ago.

"This is possible only because of the close working arrangements existing between the Fisher Body and the Yellow Coach due to the acquisition of a majority of the latter common stock by General Motors."

Prohibitive Tariff Stops Sale of Fords in Germany

MONTREAL, Aug. 8.—There is no sale for Ford cars or others of that type in Germany at the present time, as what almost amounts to an embargo is set up by the government in order to enable manufacturers of small cars in that country to put out a cheap car, which will be able to hold its own against cheap foreign cars, according to A. Nagle, continental European manager of the Ford Company, who has arrived here.

There is a very large sale in other countries on the continent for the Ford car, which is assembled in Manchester, Antwerp, Bordeaux, or Copenhagen. Business in Switzerland he reported particularly good and also in Holland, as so many cars are "bootlegged" across the border by some method.

The European output, said Mr. Nagle, amounts to almost 700 cars a day, which is an increase of 100 per cent in the last year. Antwerp is an excellent position for assembling parts for a car, as it is only two hours from Holland and five from Germany, so when the embargo is raised it will be possible to send cars to the best and richest portion of Germany.

Club Service Given Through Dealers

DETROIT, Aug. 8.—Through an arrangement entered into by the Ford Motor Company and the Detroit Automobile Club, the 34 Ford dealer branches in the Greater Detroit area become direct representative of the club and their sales and service establishments become direct road service, road information and membership stations of the club.

Under the new arrangements all future emergency road service calls on Ford passenger cars and trucks will be dispatched to Ford dealer stations and standard Ford service will be rendered on the road. Present members of the club who are Ford owners and those joining through any of the Ford stations can in the future call the club office and be towed, if necessary, or receive service from the nearest Ford station free of charge.

In the various Ford dealer showrooms, there will be maps, guides and road information of the club which will be distributed free to Ford member owners. The same service now rendered to club owners will also be available to those joining through the Ford stations.

St. Louis Dealers' Parade Opens Ford Display Week

ST. LOUIS, Aug. 8.—Ford dealers here held a parade almost a half a mile long recently to open the Ford commercial display week which was a part of a nation-wide plan.

All Ford dealers in the citly, in addition to the factory branch, were represented in the parade and all the exhibits called attention to some particular feature of the dealer's establishment.

The Johnson Automobile Company's vehicle carried a banner "The Oldest Ford Dealer," Bilgere's car bore the inscription "Steer to Bilgere," chambers Long Co. advertised their downtown location while the Price Company exhibit was a Ford Roadster equipped with the recently devised pickup body with the announcement "A Truck by Day, a Roadster by Night."

Similar parades were held by all Ford dealers throughout the district during the week.

1925 Models and Used Car Stocks Are Low in St. Louis

Lull is Felt in Sales of New Automobiles Because of Appearance of 1926 Types

ST. LOUIS, Aug. 8.—There has been a lull in new car sales here during the past month due in a large measure to the yearly policy of prospective customers to wait for the presentation of new models by some of the large companies before buying. However those companies which do not put out a new line each year have not slowed up to any extent.

Dealers have been concentrating their efforts on the sale of used cars and those 1925 models which remained on hand to clear their floors for the 1926 models. In these efforts they have been signally succssful. Most companies have few 1925 models on hand now and their used car stocks are low, ready to take care of the expected increase in the number of used cars on hand which will come when the new car sales jump ahead with the arrival of 1926 models.

Factories here are going along on a normal production basis.

Accessory men are all well pleased with the volume of sales which is well ahead of last year and with every prospect of good business for the balance of this year at least.

Tire men have not yet felt the effects of the increase in tire prices. However they are skeptical about the future. They feel that their business is good at this time because of the fact that consumers are buying for present needs to keep from paying higher prices which they have been warned are coming. Dealers therefore feel that there may be a depression shortly.

Collections remain good and apparently there is plenty of money.

Velie Sales Increase Believed Due to Farmers' Prosperity

MOLINE, Ill., Aug. 8.—Evidence of increased prosperity on the farmers' part is seen in the business handled by the Velie Motors Corporation, according to a statement made here by Edwin McEwen, manager of the Velie plant.

"Our sales within a radius of 150 miles of the factory have shown a steady increase and new dealers are being established almost daily in towns where automobile representation has been lacking for years," Mr. McEwen states.

"For several months past Velie business has shown an increase each month over the corresponding month of last year. Present indications are that in July we will exceed July of 1924 by at least 100 per cent. Thirty-three of our total deliveries the first fifteen days of July were drive-aways."

Ford Obtains Property Near Boston for Plant Expansion

New Factory Will Employ About 2,500 Workers to Assemble Minimum of 500 Cars a Day

SOMERVILLE, Mass., Aug. 8.—The Ford Motor Company is now is possession of the property that it has been negotiating for the Boston & Maine Railroad since the latter company sought to increase its freight business through offering a large slice of vacant land for sale. The deed has been recorded at the Middlesex Registry of Deeds in East Cambridge and it shows that the area conveyed to the Ford Motor Company is 31.4 acres.

While the title was under examination by the attorneys Mayor John M. Webster of Somerville has been active in forwarding the plans by having streets laid out and widened, relocating the drainage pipes, etc., so that there would be no delay when the Ford Motor Company was ready to begin its building operations.

The plant will front on Middlesex avenue and on the north will be bounded by the Mystic river which will give the Ford steamers access to it for bringing cargo here and shipping abroad. That was one thing that the Ford people were anxious to get. The present plans are to assemble here a minimum of 500 cars a day and furnish employment for approximately 2,500 workmen.

This will give the Boston & Maine Railroad, which has arranged for a siding right to the plant, a large extra tonnage incoming and outgoing. It has been estimated that the plant when fully completed will cost about $4,000,000 and have an ultimate capacity of 1,000 cars a day. The use of the present assembly plant at Cambridge when the new one has been finished has not been determined.

The new plan is only about four miles from the heart of Boston. In fact Somerville adjoins that part of Boston known as Charlestown where Bunker Hill is located, and the Mystic river rolls past the hill on the way to Somerville. From Charlestown to the new Ford plant is only about a mile.

NEW MARTIN-PARRY BRANCH

YORK, Pa., Aug. 8.—Martin-Parry Corporation, commercial body builders, announces that negotiations have been completed by which it has taken over the Johnson Body Company of Phoenix, Arizona, and from this time will operate it as a Martin-Parry Branch.

COAST REGISTRATIONS UP

OAKLAND, Cal., Aug. 8.—A total of 19,833 passenger cars and trucks were sold in California in June, 1925. This is an increase of 344 sales over those of May, 1925, and is a fair indication of the steadily improving sales of automotive vehicles throughout the state.

UTAH STOPS POLICIES

SALT LAKE CITY, Aug. 8.—State Insurance Commissioner McQuarrie has forbidden the selling of automobile insurance with a car. A manufacturer outside the state wanted to sell a policy with a car, claiming that it could be done cheaper than through an insurance company in the regular way. The commissioner said that the company chosen by the automobile company to carry the risk had not been admitted to do business in Utah, and that this alone would prohibit the operation of the plan in this state. He said, also, that all insurance organizations, except life, must have a local agent who can countersign the policies. Another objection was that the automobile company plan did not provide for the issue of a policy, whereas the state insurance law required that the insurance department examine the contracts of all underwriting concerns before they do business in the state and approve of them.

Seiberling Rubber Plans Program of Expansion

AKRON, O., Aug. 8.—Contract has been awarded by the Seiberling Rubber Co. for construction of a new building, which will enable a production increase of nearly 50 per cent in tires and tubes.

The building, 150x240 feet, will cost more than $200,000. It will be used for curing, stripping and finishing. About 500 additional workers are to be employed, upon completion of the building.

This will be the first large expansion program undertaken by the Seiberling Co. since F. A. Seiberling, its president, purchased the old Portage Rubber Co. four years ago. It was made necessary, according to officials, because of the rapid growth of the company in the last few years. For some time production has been behind orders, due to insufficient factory floor space and machinery.

Sales of the company for July were approximately $1,500,000, as compared with $1,000,000 for June. Total sales for the year are expected to be in excess of $12,000,000, which will be the largest in the company's history.

Hayes Wheel Co. Declares Extra Quarterly Dividends

JACKSON, Mich., Aug. 8.—Two extra quarterly dividends of 25 cents a share were declared at a meeting of the board of directors of the Hayes Wheel Company, which will continue for the rest of the year. The regular dividend of 75 cents a share was declared. The stock is now on a $4 basis. It was announced that the cash balance of the company of $2,000,000 and that the ratio of assets to liabilities of 8 to 1 are the largest in the history of the company. Outstanding bonds of the company have been reduced $700,000 since the first of the year to $500,000, their present figure.

Fall Business Prospects Are Brighter in Iowa

New Models Disturb Sales Somewhat But July Volume Expected to Equal Last Year

DES MOINES, Iowa, Aug. 8.—The automobile business of Iowa continues at a steady pace, with bright prospects for fall business. The introduction of new models has had a distrubing effect on buyers, causing a slight slackening in sales, but the July volume is expected to equal that of last year. The business from rural districts continues to be better than that turned in from the cities and distributors expect this condition to be unchanged during the next few months. Crop prospects are excellent, a factor which has greatly influenced country buyers.

Used car stocks are lower than usual. There are comparatively few good used cars in the hands of Iowa dealers. The movement of used stuff has been good. Few dealers and distributors have been overstocked with 1925 models; such distributors as have already displayed 1926 models report that few 1925 models remain in stock.

The financial aspect of the trade is good. Re-possessions on time payment paper have been few. One finance company operating in the state reports that only four re-possessions have been necessary in the last ten months.

Tire stock at the branches and distributors are exceptionally low. Dealers, on the other hand, have stocked liberally in anticipation of further advences. It is probably that some dealers are overstocked. The tire trade has enjoyed a very good business, brought about by the advancing prices.

The first of July ushered in poor accessory business but the last fifteen days have noted a remarkable improvement in accessory buying. Radio business continues to be very dull, although jobbers and dealers alike look forward to very good business this fall and winter.

VANE HEADS CAMPAIGN

NEW YORK, Aug. 8.—Alfred Reeves, general manager of the National Automobile Chamber of Commerce, and C. A. Vane, general manager of the National Automobile Dealers Association, met recently in Chicago to discuss the joint meetings for dealer education to be conducted by the two organizations beginning in the fall. The details of the progress were left to Mr. Vane.

NOYES NAMED RECEIVER

BOSTON, Aug. 8.—Judge Lowell, in the United States District Court, has appointed President Frank V. Noyes, of the Arlington National Bank, receiver for the Northway Motors Company and the banker qualified in $10,000 bond.

Joseph J. Cole, Founder of Cole Motor Car Co. Dead

Pioneer Carriage Builder Planned Trip Around World With Mrs. Cole—Ill Three Days

INDIANAPOLIS, Aug. 8.—Joseph J. Cole, president of the Cole Motor Car Company, and one of the pioneer automobile manufacturers of Indianapolis, died here last night following a three-day heart attack.

Though he has been in ill health for two years, his condition did not become critical until three days ago. With Mrs. Cole he had planned a two-year trip around the world to start in July, but the trip was delayed because of the death of his mother.

For more than 35 years prior to his entrance into the automotive industry, Mr. Cole had been associated with the carriage business. He was a native of Indiana, born in Connersville, March, 1869. He came to Indianapolis when a young man to enter the old Parry Manufacturing Company, makers of carriages and road carts.

He later was connected with the Moon Carriage Company, of St. Louis, as sales manager and later as secretary of the company. In 1904 he founded in Indianapolis the Cole Carriage Company and in 1908 he built the first motor car of this make. The next year the company was changed to the Cole Motor Car Company with Mr. Cole as president, which place he held up to the time of the death.

Mr. Cole is survived by his wife, his son, Joseph J. Cole, Jr., and a sister, Mrs. E. D. Filby.

North Pole Trapper Buys Ford Car

FORD CITY, Ont., Aug. 8.—Again the automobile is going to invade territory in which it has never been seen before. This time it will be well inside the Artic Circle and where the Eskimos are found in plentiful numbers.

J. Harris, a trapper, who works within the shadow of the North Pole, purchased a Ford car while, with his Eskimo wife and three children, he was on a recent visit to Herb Lake, Manitoba. He will take the car back with him to be used in his trading.

Before arriving at his destination, Mr. Harris will have removed the engine from the car, attached it to a collapsible boat and will have sailed and been propelled by gasoline engine over 200 miles of open water. Arriving on the other side, he will replace the engine, then replace the front wheels with skids and continue the journey.

Financing Charge Reduction Is Made by General Motors

NEW YORK, Aug. 8.—Reductions in the financing charge to installment purchasers of General Motors cars, including Chevrolet, Oldsmobile, Oakland, Buick and Cadillac, became effective August 1 and were announced through the General Motors Acceptance Corp.

The amount of these reductions was described as substantial, and Alfred P. Sloan, Jr., president of General Motors Corp., said that they are tantamount to reductions of the delivered prices of the entire General Motors line. This was apparent, he added, because the important thing to the purchaser is the final delivered price, and the financing charge is part of that price in the majority of sales.

The financing charge reduction adds to the advantage won by time purchasers of Chevrolet, Buick and Cadillac cars in the recent announcements of price reductions on those makes.

The financing rates of General Motors Acceptance Corp., added to the cash delivered price, now constitutes the standard time sales price to the purchasers of General Motors cars.

Chevrolet Changes Radiator Design

(*Continued from page* 18)

has been considerably strengthened by employing a channel section of 6 in. deep instead fo 5 in. deep as previously.

Particular attention has been paid to the service and maintenance operations in the designing of the semi-floating rear axle. It is so constructed, as well as the frame, that it is not necessary to unload the chassis when it is desired to overhaul the rear axle, it being possible to withdraw the complete differential carrier in unit with the third member assembly. An extra large cover plate facilitates operation and allows for easy adjustment and inspection. The housing is of the one-piece pressed steel banjo type having large heavy duty New Departure annular bearings all round. Extra heavy spiral cut bevel driving gears provide a ratio of 5.43 to 1 which together with the ample tire size allows a high road speed to be maintained. As on the previous model, the service brake is of the external contracting type and acts with the internal expanding emergency brake on 12 in. drums. Both brakes are fitted with self-centering and equalizing devices.

Mounted on hickory twelve-spoked artillery wheels with steel felloes and demountable rims, the rear tires are of the 30 by 5 in. size while the standard equipment on the front is 30 by 3½ in. For an additional charge of $35, 30 by 5 in. tires with corresponding wheels are offered to replace those on the front axle, the latter being of the same type as used on the car chassis.

On account of the changes, the weight of the chassis with gas, water and oil is now 2030 lbs. as compared with 1950 lbs. on the previous series. All truck chasis are regularly fitted with the following equipment at no extra charge, generator, starter and electric lights connected to a storage battery; special combination dash and instrument panel equipped with ammeter, oil gage, speedmeter and choke control; motor hood, front and rear fenders; running boards with shields running the entire length; license holders, extra rims, tire carrier and complete tool kit. Alemite chassis lubrication system is employed as before.

THE TWO MANAGERS



Alfred Hacking, left, and Alfred Reeves, general manager of the National Automobile Chamber of Commerce. Mr. Hacking is secretary of the Motor Manufacturers and Traders of London, the N. A. C. C. of Great Britain. He was recently the guest of honor at a banquet given by the N. A. C. C. in New York

Along Automobile Row

MINNEAPOLIS.—George L. Wilson, Duluth, Minn., formerly of the Pioneer Auto Company, selling Buick cars, has been named to distribute Studebaker cars with headquarters at 326 East Superior street.

SALT LAKE CITY.—The R. T. Mitchell Company of Ogden has been appointed agent for the Star. The company will have the exclusive agency for the cars in northern Utah outside of Cache County. Walter Ross, formerly of the Read-Ross-Payne Company of Ogden will be manager of the Star sales department.

LYNN, Mass.—Alfred H. Sowers, who formed the Lynn Motor Company a year ago to handle the Chrysler-Maxwell line, has sold out his interest to his partner and is considering entering the real estate field in Florida in the near future.

OAKLAND, Cal.—George W. Glazier has been appointed manager of the uptown store of Cochran & Celli, oldest Chevrolet dealers in Alameda County.

CLEVELAND. — Walter Zimmerman, whose early training in the automotive field was in Hamburg, Manchester, Brussels and Valencia, has joined the factory sales staff of the Peerless Motor Car Company, for the purpose of making a survey of present and prospective domestic and export business. He has been engaged in the automobile industry in this country since 1904.

NEW ORLEANS.—John S. Dobbs, for 14 years a Ford dealer at Quitman, Miss., has obtained the Chevrolet contract for Clark county. The new company has been incorporated under the name of John S. Dobbs, Inc., with headquarters in Quitman.

WILMINGTON, Del.—A new company, known as the Automobile Sales Company, has been formed here and taken over from from the Fess-Hughes Company, the agency for the state of Delaware for the sale of Pierce-Arrow cars, trucks and buses. This agency has heretofore been a loyal branch of the Foss-Hughes Company, with headquarters at Tenth and French streets, which will be continued as the headquarters of the Automobile Sales Company.

YOUNGSTOWN, O.—The Bartram White Truck Company has been chartered with an authorized capital of $50,000 to buy, sell and deal in trucks and parts.

PORTLAND, Ore.—Chase Garfield Motor Company has recently been formed here to handle the distribution of Chrysler cars throughout Oregon, northern California and southern Washington counties. The new distributor has appointed 77 subdealers throughout the territory and given orders for an intensive sales campaign at the reduced prices put in effect.

MEMPHIS—R. B. Deal, service manager, H. S. Kirkland, shop foreman, and A. C. Huebner, inspector, of the Memphis branch of the Buick Motor Company recent visited the factory.

SIOUX CITY, Ia.—The Greenlease Motor Company, Kansas City, Mo., has purchased the J. R. Hansen Cadillac agency here. A. R. Williams, present manager of the Hansen company will manage the branch.

MARIETTA, O.—R. A. Morrison, who, for many years was with the American Lead Pencil Company, Hoboken, N. J., has been placed in charge of all research work at the laboratories of the North Western Chemical Company here.

SPRINGFIELD, Ill.—J. E. Dearmin, for two and a half years with the Sangamon Cadillac Co., here, has resigned as president and general manager of that agency to become associated with the Moseley Motor Company of Springfield, as Lincoln car sales and service department chief.

PORTLAND, Ore.—Lee O'Hanlan and S. S. Berry have formed the firm of Berry & O'Hanlan, to handle Overland cars.

OAKLAND, Cal.—The Willys-Overland Pacific Company has purchased a tract of 88,000 square feet at East Fourteenth street and Fifty-seventh avenue, and will erect thereon immediately a new assembly and distribution plant, according to announcement by James Hawk, vice-president of the corporation. The structure will house the general offices of the company, which are to be moved to Oakland from their present location in San Francisco, as well as a distributing plant and a warehouse.

COLUMBIA, Mo.—W. B. Palmer and L. H. Wegener have purchased the business of the Brown Overland Company from Fred Brown and will henceforth be the Columbia dealers in Overland cars.

MEMPHIS.—Along with the arrival of the new series of Oakland cars in Memphis, Jotham Baker, of Jotham C. Baker, Inc., Memphis dealer, announces the removal of the company's quarters to 265-269 Madison avenue. This location was formerly known as the Lyric Garage. A modern and well lighted service department is included.

ATLANTA.—The Atlanta branch of the Durant Motor Co., according to J. Elmo Green, district sales manager, has recently appointed Robert C. Smith as manager of the retail department. Mr. Smith has been identified with the Atlanta branch of the company for the past three years.

CHICAGO.—The Jones Gear Company, manufacturers of automotive gears, will move its plant from Chicago to Benton Harbor in the near future, it is announced by the company. At Benton Harbor the company will occupy a large two-story factory building formerly used by the Baker-Vawter Company.

GREENFIELD, Mass.—H. Purrington has acquired the Auto Service Station at 451 Federal street. Accessories are sold in connection with the repair business.

CHARLOTTE, N. C.—The Kriner Motor Car Company, of Greensboro, N. C., has obtained the agency in that city for the Flint motor car line.

Sioux City, Ia.—The Ryal Miller Chevrolet Co. has purchased the Chevrolet agency at Norfolk, Neb. B. F. Knuth of Sioux City will manage the branch.

MINNEAPOLIS.—The Arrowhead Motors, Inc., will sell Chrysler cars in Duluth territory. A new home has been opened at 526 East First street with two floors and basement.

CHICAGO.—The Sterling Auto Devices Company has moved from its present location at 207 South Green Street, to a new and larger home at 2016 West Lake Street.

ST. LOUIS.—Wilson Motor Car Co., Paige and Jewett distributor in the St. Louis district, announces the appointment of the Atlas Auto Repair Co., 4831-35 Easton avenue as an authorized Paige and Jewett dealer.

MONTREAL.—P. R. Norton, who has been manager of the local branch of the Studebaker Corporation of Canada, Ltd., has been transferred to the company's New York office. He has been succeeded in Montreal by Malcolm Le Mieux, who has been engaged in the sale of the Studebaker car since 1918.

PITTSFIELD, Mass.—Peter Selikowitz has purchased Sully's Tire Shop at 100 Woodlawn avenue.

CHARLOTTE, N. C.—R. H. Beasley, for four years holder of an important position in the sales organization of the Ford Motor Company's branch at Charlotte, has resigned to become director of the sales and service departments of the Sanders Motor Company, authorized Ford dealers, of Raleigh, N. C.

CHICAGO.—James L. Campbell, former sales manager for the Wills Sainte Claire Company of Illinois, has taken charge of the Wills Sainte Claire interests in northern Ohio with headquarters at Cleveland.

DES MOINES.—T. B. Bartholomew, Keokuk, Iowa, has resigned as director of the Iowa Automotive Merchants' Association. H. E. Hade of the H. E. Hade Motor Co., Ft. Madison, Ia., was appointed to the post held by Mr. Bartholomew.

ST. LOUIS.—A new dealer company styled the Hildebrand-Tobin Motor Company has been organized to handle the Flint car and has opened sales and service quarters at 4437-39 Manchester avenue.

DULUTH.—The Pioneer Auto Co. succeeds G. L. Wilson as territory dealer in Buick cars. Henry L. Howe is to be manager. He has been cashier of the company five years. H. S. Werger is proprietor.

NEW ORLEANS.—Leo G. Ford, formerly with the Chevrolet factory as field representative, has joined the New Orleans Chevrolet Sales Company as assistant to Sales Manager Backer.

MINNEAPOLIS.—J. C. VanAlen of the national service department of the Willard Battery Co., has been appointed manager of the Minneapolis branch. He succeeds L. E. Horton, who goes into the radio sales division.

BERKELEY, Cal.—A fifty-year lease on a tract of city-owned property on the Berkeley waterfront, has been granted to the Golden Gate Ferry Company by the Berkeley city council. This land is to be used as a terminal for the proposed triangular automobile ferry service between Berkeley, on the east side of San Francisco Bay, Sausalito on the northwest, and San Francisco on the southeast.

SPRINGFIELD, Mass.—Motor Tire Sales Co. has opened a store at 348 Worthington street. E. C. Davis, formerly New England district manager for the Powertown Tire Corp., manages the new concern.

PORTLAND, Ore.—John K. Leander Company of this city has appointed 33 dealers to handle Studebaker sales throughout the states of Oregon, Washington and Idaho.

COLUMBUS, O.—The Stanton Motors, Inc., 841 North High stret, Columbus, Ohio, have been appointed distributors for the Chrysler 4 and Chrysler 6 in Columbus and central Ohio. The firm, headed by A. T. Stanton, recently opened its new show rooom and service station.

DETROIT.—E. A. Bowman, president of E. A. Bowman, Inc., distributors of automobile accessories, has appointed the Stenger Bumper Service of Detroit as his authorized service stations to cover central and north Detroit. The appointment is the forerunner of a system by which Mr. Bowman eventually hopes to cover all Detroit.

SYRACUSE, N. Y.—Le Roy Casper, Inc., has been made distributor for Lincoln cars in Onondaga, Oswego, Cortland and Madison counties and in the city of Sherrill, Oneida county. This restores to the Casper concern the Lincoln distribution which it held before Ford took over the company.

KOKOMO, Ind.—The Kokomo Machine Company, which has been engaged in automobile repair and machine work here for several years, has been purchased by Emery Brookings, of South Bend, Ind. The new owner has announced that he will enlarge the scope of the business by adding a line of supply parts.

CHICAGO.—Bruce K. Steele, associated with the Franklin factory for a number of years, has been appointed manager of the Chicago branch of the Locomobile Company.

With the Associations

D'Ettel Heads Tradesmen

OAKLAND, Cal., Aug. 8.—Robert W. Martland, organizer of the California Automobile Trade Association, and secretary-manager of that organization since its formation, has resigned. Arthur D'Ettel, secretary-manager of the San Francisco Automobile Trade Association for several years, has been appointed to the position. Headquarters of the association have been removed to 472 McAllister street, San Francisco.

Martland organized the California Automobile Trade Association in 1916, and it reached its greatest membership, 3,000, and its greatest influence in 1922. In the following year dissension broke out among the managers of the locals, and in 1923 and 1924 a number of the locals in the counties of southern California withdrew from the state association. For the last nine years, the C. A. T. A. has saved its members thousands of dollars in legislative activities alone, and the better class of garage and repair men feel that this work should be continued to prevent the passage of a great deal of unwise and inimical legislation in this field.

George R. Murphy, of San Francisco, president of the C. A. T. A., has issued a letter announcing the resignation of Mr. Martland, and the appointment of Mr. D'Ettel, in which he said:

"A definite program, requiring fully two years to work out, is planned by the executive board. It is comprehensive, broad in its scope, and its principal aim is the automatic help to your business through the contributions and assistance of a number of experts, in addition to the solution of any problem which may arise. Our slogan is 'Protection for the Members of the Association; Clean Methods of Merchandising and Business Progress.'"

Booklet Demand Heavy

CHICAGO, Aug. 8.—The booklet called "Stock Records Used By Some A. E. A. Jobbers" recently prepared by the merchandising department of the Automotive Equipment Association has proved to be very popular. The demand for the booklet has been so great that the initial supply was exhausted within a few weeks, and a second printing was necessary. The second edition is now being distributed and according to Arthur R. Mogge, merchandising director of the A. E. A., it looks as if the supply will again be exhausted.

Since Dr. M. T. Copeland, director of the bureau of business research of Harvard University delivered his address at the A. E. A. convention at Colorado Springs on the subject "The Cost of Doing Business" many jobbers have written the A. E. A. for information relative to stock control.

A. A. A. Plans Safety Drive

WASHINGTON, Aug. 8.—A campaign to encourage safer motoring through the promotion of better driving by means of contests, competitions and tests may be among the near-future activities of the American Automobile Association. Officials of the organization, in making the announcement, declared lack of proper understanding of cars and their operation is a fundamental reason for the inability of the nation to make greater progress with its safety problem.

"The fight against accidents," says President Thomas P. Henry, "is nothing more nor less than a fight against ignorance. American automobiles today would be as far behind the times as are many American drivers had the manufacturers not been willing to combat ignorance through putting their cars on the race track."

Mr. Henry states that several American cities now hold annual driving exhibitions and that these have met with instant approval for the reason that they have been invariably followed by improvements in local safety conditions.

Cylinder Grinders Meet

BIRMINGHAM, Aug. 8.—Representatives from eight states attended the meeting of the Southern Automotive Cylinder Grinders Association which met in Birmingham late in July. The meeting was an enthusiastic one and the following officers were elected:

A. Jones of Chattanooga, president; D. J. DeGroppe of Atlanta, vice-president, and Starley White of Arkansas, secretary. Members of the board of directors will be chosen by the officers at an executive committee meeting, and at the same time it was voted to settle the date and place of the next convention.

One of the most important features of the meeting was the change in the by-laws which permits parts jobbers and machinery dealers to become associate members of the organization.

The Southern Automotive Cylinder Grinders Association is an organization made up of automotive repair men from Alabama, Mississippi, Georgia, Florida, Arkansas, Texas, Tennessee and Louisiana. Approximately 150 delegates attended the meeting.

Contributions Forbidden

CHICAGO, Aug. 8.—The Chicago Automobile Trade Association has taken action whereby its members are forbidden to contribute money, buy advertising space in year books, folders, dance programs, labor publications and other bulletins without the indorsement of the association. Members have been asked to telephone the association's office whenever solicited for any purpose.

Another Sales School Planned

TOLEDO, Aug. 8.—Another school for salesmen will probably be put on during October by the Toledo Automotive Trades Association following the lines of the one which was held a few weeks ago.

Out of a total of 43 applicants who took the examinations at the conclusion of the school, ten were secured as actual salesmen by members of the association.

This is considered a very fair return on the investment in a new plan to add fresh blood to the ranks of automobile salespeople in Toledo.

Sunday Closing Tried

CHARLOTTE, N. C., Aug. 8.—With few exceptions, Charlotte's gasoline and oil filling stations have adopted the policy of remaining closed on Sunday, according to an announcement by Keeley A. Grice, president of the Charlotte Automotive Service Association, which promoted this movement. Mr. Grice, who is president of the North Carolina Gas and Tire Dealers' Association, indicated he expected this movement to spread rapidly throughout this state. He forecast that, within six months, relatively few filling stations in the larger towns would remain open on Sundays. The principal purpose of the movement, Mr. Grice said, is to provide better working conditions for the stations' employes.

The eight large combination gasoline stations and storage places here will continue to remain open on Sundays. These will provide for the emergency needs of residents and meet the demands of tourists and transients.

In connection with the Sunday closing movement, the 45 stations adopting the policy inaugurated a campaign of newspaper publicity and through banners at the stations, urging the public to "buy your gasoline, oil and tires before Saturday night."

The "experiment" here will be tried for three months, and, at the expiration of that period the station operators expect to know fully the attitude of the public. Unless there is an unanticipated public opposition, the policy will be continued indefinitely, Mr. Grice said.

Bus Survey Planned

BOSTON, Aug. 8.—The Boston Chamber of Commerce, through its committee on public utilities and civic bureau, is to conduct a comprehensive survey of the motor bus situation in Massachusetts, particularly as to its effect upon business and also in regard to its competition with steam and electric railway lines. The Chamber wishes to learn if the bus is a genuine economic aid, and if it will lead to a more co-ordinated and cheaper system of transportation in metropolitan Boston. Every phase will be covered including railway transportation.

New Models Cause Slight Slackening in Kansas City

Demand from Outlying Districts, However, Is Good and Prospects Plentiful

KANSAS CITY, Aug. 8.—Passenger cars have been selling slightly slower during the month of July in this city, with only a very small decrease in volume of sales, but distributors report demand from the outlying districts to be as great if not slightly greater than in June. Prospective buyers are said to be plentiful in this section, especially for the new models.

Stocks of used cars are lower than previously and are said to be moving very well. This is attributed to the policy of making trades so that a used car may be offered at nearer its actual money value, and to the fact that several of the local dealers have recently made special efforts at closing out their entire stocks of used cars.

Credit is very easy. One of the dealers in the $2,000 class, who refuses nearly 50 per cent of his prospective buyers because of their doubtful ability to pay for the cars, says that the great majority of them are later sold by other companies in this city and their paper accepted willingly by the bankers.

Parts and accessories are on a good substantial basis of normalcy, said to be about equal to the volume in June.

A slight decline in the demand for motor trucks, though not very noticeable, has been reported by several dealers.

The outlook for August is regarded by virtually all local dealers to be unusually bright, since they attribute the present slowness to the public expectancy over the new models which will be offered soon, and they think that August will see the market upon a more substantial and normal basis.

NEW DURANT DEALERS

NEW YORK, Aug. 8.—The following automobile merchants have recently taken over the sale of Star and Durant products:

Bankers' Investment Company, Brighton, Colo.; Denver Motors Company, Denver; Standard Garage, Nashville, Ill.; Paul Isringhausen, Fielding, Ill.; Henry C. Lewis, Carrollton, Ill.; Canady Brothers, Wapella, Ill.; Long Auto Company, Creston, Ia.; Bohning Garage, Hanover, Kas.; Auto Inn, Clay Center, Kas.; Crescent Motor Company, Bowling Green, Ky.; H. B. Schmidt, Wabasha, Minn.; Frank Voss, Garage, Loose Creek, Mo.; Chadron Motors Company, Chadron, Neb.; H. L. Swanson, Hastings, Neb.; Sprague & Sutton, Sussex, N. J.; Newman & Moore, Hempstead, Long Island, N. Y.; F. W. Terry, Atlanta, N. Y.; Dow & Sonnhalter, Massillon, O.

Log Cabin Garage, Oklahoma City; R. B. Stevens, Marlow, Okla.; Watson Motor Sales, Erie, Pa.; Miller & Chapman, Marble Falls, Tex.; Roberts Motor Company, Hale Center, Tex.; H. L. Bonner Motor Company, Vernon, Tex.; The Canyon Garage, Logan, Utah; Ray Fitzgerald, Draper, Utah; Gleason Service Company, Mondovi, Wis.; Larralde Motor Company, Tampico, Tamaulipas, Mexico.

Coming Motor Events

Automobile Shows

Dallas, Tex. ..... Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis. ..... Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal. ..... Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich. ..... Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla. ..... Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal. ..... Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La. ..... Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va. ..... Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt. ..... Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn. ..... Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston ..... Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago ..... Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City ..... Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

San Francisco ..... Aug. 22-28
Third annual Pacific Radio Exposition in Municipal Auditorium.

Boston ..... Aug. 12-17
Annual radio show in Mechanics' Building. Shelton Fairbanks, manager.

New York ..... Sept. 18-19
Meeting of National Battery Manufacturers' Association at Commodore Hotel.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina ..... Oct. 3-13
Pan-American Road Congress.

London, England ..... Oct. 8-17
Olympia Passenger Car Show.

London, England ..... Oct. 29-Nov. 7
Annual Truck Show.

Races

Altoona, Pa. ..... Sept. 7

Charlotte, N. C. ..... Nov. 11

Fresno, Cal. ..... Oct. 3

Laurel, Md. ..... Oct. 10
A. A. A. Race, Baltimore-Washington Speedway.

Los Angeles, Cal. ..... Nov. 26

Monza, Italy ..... Sept. 6
Italian Grand Prix Race.

Syracuse, N. Y. ..... Sept. 19

Salem, N. H. ..... Oct. 12

Rockingham ..... Oct. 17

Baltimore ..... Oct. 24

Conventions

Buenos Aires, Argentine ..... Oct. 3-13
Pan-American Road Congress.

Cleveland ..... Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland ..... Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia. ..... Nov. 12-13
Automotive Merchants' Association Convention.

Montreal, Que. ..... Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia ..... September
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa. ..... Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis ..... Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Eaglesmere Park, Pa. ..... Sept. 14-17
General meeting of the Automotive Electric Association.

Wrightsville Beach, N. C. ..... Sept. 7-8
Annual meeting of the North Carolina Automotive Trades Association.

Montreal ..... Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

Ford Motor Co. Does Record July Business in All Divisions

Domestic Sales of Cars and Trucks Beat Year Ago by 6,182—Lincoln Deliveries Also Up

DETROIT, Aug. 8.—During the month just ended the Ford Motor Company did a record business in every division, it was today announced at the Highland Park general offices. Domestic sales of Ford cars and trucks totaled 167,626 in July, exceeding by 6,182 those of a year ago, sales of Fordson tractors were more than 3,300 greater than last year and 207 more Lincoln cars were delivered to customers during the month than in the previous July.

On the basis of branch reports received early in July the company anticipated an increased volume of business and while it predicted that summer buying would rise to a higher level than usual, the demand for all Ford products during the month exceeded expectations.

The outlook is for increasing business in August.

One of the chief indications of this appears in agricultural sections of the country, where farmers are coming into the market in rapidly growing numbers. Evidence of this is found in the remarkable sales of Fordson tractors during July.

NEW CHEVROLET DEALERS

NEW ORLEANS, Aug. 8.—Felix Doran, Jr., sales manager of the Chevrolet Motor Company, 424 Hibernia Bank Bldg., New Orleans, distributing zonal headquarters for the Chevrolet line in Louisiana and Mississippi, announces a big expansion activity for Chevrolet cars in Mississippi, the following dealerships having recently been awarded:

Martin-Newton Motor Co., Bay Springs, Miss.; Robinson-Quailes Motor Co., Scooba, Miss.; Gavin-Chevrolet Co., Laurel, Miss.; Anderson-Chevrolet Co., Hattiesburg, Miss.; Motor Service Co., Lake, Miss.; McMullen-Chevrolet Co., Hickory, Miss.; Joyner-Hannah-Chevrolet Co., Forest, Miss.; Busby-Smith-Chevrolet Co., Waynesboro, Miss.; Biloxi-Chevrolet Co., Biloxi, Miss.; Z. Z. Chapman, Monticello, Miss.; Hubbard & Buford, Utica, Miss.; John S. Dobbs, Inc., Quitman, Miss.

Chrysler Brings Action in Wisconsin Insurance Case

MADISON, Wis., Aug. 8.—Two separate actions against Insurance Commissioner W. Stanley Smith of Wisconsin have been launched in federal court by Chrysler motor firms to restrain him from interfering with a system of car insurance instituted by the company. The action is the outgrowah of the commissioner's pronouncement several weeks ago that the Chrysler insurance plan was not legal in Wisconsin and that sales of any Chrysler cars with the insurance feature as part of the sales contract would prompt him to "take action."

One of the two actions now institutaed is that of the Clark Motor Co. of Milwaukee, and the other is by the Chrysler Corporation. The Clark organization distributes Chryslers in Wisconsin. The firms have obtained a temporary injunction restraining Commissioner Smith from interfering with the insurance system pending a hearing in federal court at Superior, on the demand for a permanent injunction, on August 22.

Three federal judges will hear the application for making the injunction permanent, at that time. They are Claude Z. Luce, Evan A. Evans and F. A. Geiger.

SQUEEKS and RATTLES

MODERN DANGERS



"Good heavens, man! What is the matter with your face? Were you in a motor smash?"

"No, I was being shaved by a lady barber when a mouse ran across the floor!"

—Passing Show.

In a short time those of us who jump straight up in the air to dodge one of Henry's flivvers will be in danger of being bit by one of Henry's fliers.

—Omaha Bee.

In Bible times the devil got into hogs, and that may explain why some cars need all the road.

—Peru (Ind.) Tribune.

Lady Visitor—That parrot has a rare vocabulary. Was he trained in a repair shop?

Sweet Girl Graduate—No, we girls brought him from college.

SWING LOW, SWEET CHARIOT

A junk shop near a railroad crossing in New Jersey bears this admonition to motorists:

GO AHEAD, TAKE A CHANCE. WE'LL BUY YOUR CAR.

—Life.

THEN IT BOLTED

Exasperated Teacher — "This class room gets along about as smoothly as a second-hand Ford."

Student—"Yes, it has a Crank in front and a lot of Nuts behind."

—Collegiate Wit.

FIFTY-TWO per cent of the people in Des Moines own homes. The other forty-eight have chauffeurs.

—Grinnell Malteaser.

Teacher—If a farmer sold 1,476 bushels of wheat at $1.89 per bushel, what would he get?

Scholar—A new automobile.

The Girl (archly): "Did I ever show you where I was tattooed?"

The Boy (naively): "No."

The Girl: "Well, we can drive around that way."

—Brown Jug.

APOPLEXY



What's the matter—engine trouble?" "Nope! Heart trouble."

—DePauw Yellow Crab.

New England Section of Hertz Drivurself Opened

BOSTON, Aug. 8.—The New England section of the Hertz Drivurself System has been organized here with Robert J. Langden, of Hartford, Conn., as chairman. A corporation has been formed under the name of the Drivurself Corporation of New England, and the first sub-division to operate here will have its offices at 1358 Commonwealth Avenue, and the cars will be garaged in the Three Fields Garage.

The officers of this company are J. P. Kent, president and general manager; F. F. Bryant, vice-president, and John B. Clapp, secretary. These men with Elmer E. Clapp and Ernest R. Sharp, comprise the directors. They are all Boston men. The entire city of Boston will be dotted with Hertz stations within the next 10 days.

W. F. Fielder, manager of the Chicago Hertz System, came to Boston to help in the formation of the Eastern division, and it was arranged to have another meeting on September 12 at Worcester. Hartford, Pittsfield, Worcester and Providence have been organized and the chain will be extended to other large New England cities in a short time.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	5-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
		"8-88"	
———	4-p	Sport Roadster	1,975
.....	5-p	Touring	1,995
.....	5-p	Brougham	2,250
———	5-p	Sedan	2,350
.....	.....	Wanderer	2,400
BUICK		**"Standard"**	
.....	2-p	Roadster	$1,125
.....	5-p	Touring	1,150
.....	2-p	Coupe	1,195
.....	4-p	Coupe	1,275
.....	5-p	4d. Sedan	1,495
.....	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
.....	2-p	Roadster	1,250
.....	5-p	Touring	1,295
.....	5-p	Sedan	1,495
.....	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
.....	3-p	Sp. Roadster	1,495
.....	5-p	Sp. Touring	1,525
.....	4-p	Country Club	1,765
.....	4-p	Coupe	1,795
.....	5-p	Brougham Sedan	1,925
.....	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
.....	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
.....	7-p	Sedan	3,295
.....	5-p	Brougham	2,995
.....	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
.....	7-p	Touring	3,250
.....	.....	Phaeton	3,250
4400	5-p	Coupe	4,000
4490	5-p	Sedan	4,150
4590	7-p	Suburban	4,285
4655	7-p	Imperial	4,485
CASE		**J. I. C.**	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "8S"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3223	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3428	5-p	Sedan 4 d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	675
2110	5-p	Coach	695
2220	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2390	5-p	Touring	$895
2440	2-p	Club Coupe	995
2590	5-p	Coach	1,045
2680	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,965
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$6,650
4500	4-p	Sp. Touring	6,150
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
.....	5-p	Phaeton	1,895
3245	5-p	Std. Sedan	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
.....	5-p	Brougham	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	885
2695	5-p	Spec. Touring	985
2708	2-p	Coupe "B"	995
2823	2-p	Spec. Coupe "B"	1,095
2995	5-p	"B" Sedan	1,095
3077	5-p	Spec. "B" Sedan	1,195
3020	5-p	Sedan A	1,245
3107	5-p	Spec. "A" Sedan	1,330
2723	5-p	Coach	1,095
2823	5-p	Spec. Coach	1,195
DORRIS		**"6-80"**	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		**A-22**	
.....	2-p	Sp. Roadster	900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	850
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	$45
		With Balloon Tires	370
1644	5-p	Touring	$75
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	5-p	Cabriolet	4,400
GARDNER		**"Series 5"**	
2680	5-p	Coupe	$1,275
2895	5-p	Sedan	1,475
3070	5-p	Sp. Sedan	1,595
		"6"	
2975	5-p	Touring	1,395
2925	.....	Sport Roadster	1,595
3100	4-p	Cabriolet	1,845
3250	5-p	Sedan	1,595
3320	5-p	Sport Sedan	1,895
3300	.....	DeLuxe Sedan	1,895
		"8"	
3175	5-p	Touring	1,995
3100	.....	Sport Roadster	1,995
3300	4-p	Cabriolet	2,245
3550	5-p	Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HAYNES		**"60"**	
3295	5-p	Touring	$1,600
3650	5-p	Brougham	2,200
3765	5-p	Sedan	2,300

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ		**D-1**	
3360	5-p	Sedan	$1,695
HUDSON		**"Super Six"**	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,250
3425	4-p	Brougham 4 d.	1,595
3675	7-p	Sedan	1,795
HUPMOBILE "R"			
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		**"23-25"**	
.....	4-p	DeLuxe Road.	$1,500
.....	5-p	DeLuxe Touring	1,320
.....	5-p	Coach 2d.	1,245
.....	5-p	DeL. Coach 2d.	1,400
.....	5-p	DeLuxe Sedan	1,680
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,575
3340	5-p	Touring	2,575
3450	3-p	Friendly "8"	2,875
3625	5-p	Brougham	2,875
3520	4-p	Victoria	2,775
3525	5-p	Sedan	2,975
3470	7-p	Sedan	3,325
3800	7-p	Suburban Sedan	3,375
KISSEL		**"55"**	
3130	2-p	Speedster	$1,895
———	2-p	Sp'dster De Luxe	2,185
———	4-p	Speedster	1,995
———	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
———	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
———	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
———	7-p	Touring	1,785
———	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
———	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	1,995
———	5-p	Broug. Sed. DeL.	2,685
———	5-p	Brougham 2 d	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
———	5-p	Victoria De Luxe	2,685
		"75"	
———	2-p	Speedster	2,195
———	2-p	Speedster De L.	2,485
———	4-p	Speedster	2,295
———	4-p	Speedster De L.	2,585
———	2-p	Speedster De L.	2,585
———	2-p	Enc. Sp'd'r DeL.	2,985
———	4-p	Tourster	2,195
———	4-p	Tourster De L.	2,885
———	5-p	Phaeton	1,985
———	5-p	Phaeton De Luxe	2,185
———	7-p	Touring	2,085
———	7-p	Touring De Luxe	2,285
———	4-p	Coupe	2,485
———	4-p	Coupe De Luxe	2,885
———	5-p	Sedan	2,395
———	5-p	Broug. Sed. DeL.	2,985
———	5-p	Brougham 2 d.	2,195
———	7-p	Sedan De Luxe	3,485
———	7-p	Berl. Sed. De L.	3,585
———	7-p	Victoria	2,585
———	7-p	Victoria De Luxe	2,985
LEXINGTON			
		"Concord"	
———	5-p	Touring	$1,595
———	5-p	Touring (Enc.)	1,695
———	5-p	Spec. Touring	1,795
———	5-p	Sedan	2,185
———	5-p	Spec. Sedan	2,445
		"Minute Man"	
———	2-p	Roadster	2,145
———	5-p	Touring	2,095
———	7-p	Touring	2,195
———	5-p	Lark Touring	2,345
———	5-p	Cal. Touring	2,495
———	7-p	Cal. Touring	2,495
———	5-p	Royal Coach	2,495
———	5-p	Brougham	2,595
———	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	$4,000
———	.....	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

MOTOR AGE

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Subscriptions accepted only from the Automotive Trade
Entered as Second Class Matter, Sept. 19, 1899, at the Post Office at Chicago, Ill., under Act of March 6, 1879.

One STORM HONE will do all your honing



Did you ever stop to think what you are getting in a Storm Hone for $35.00?

It enables you to do any and all sizes, from 2¾" up to 8". This will take care of all the automotive and tractor cylinders now in use.

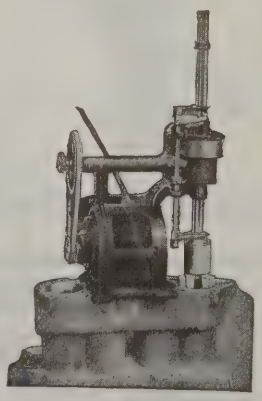
The Storm Hone is built strong, heavy and self-centering. It is equipped with large stones 1" wide and ¾" thick, which will easily out-last two or three sets of ½" stones. Extra stones $2.00 per set.

One single spring is used that exerts equal pressure against each stone for all diameters. The hone is instantly adjusted to any size cylinder, and will correct all cylinder wear that is practical to correct by honing.

If a cylinder is worn out-of-square by bent connecting rod or tilted piston, it cannot be corrected by the honing method. Even though it may be finished straight and round, the cylinder will still remain out-of-square with the crank shaft. For information on how to correct all kinds of cylinder wear, write for our booklet "FACTS." It's free.

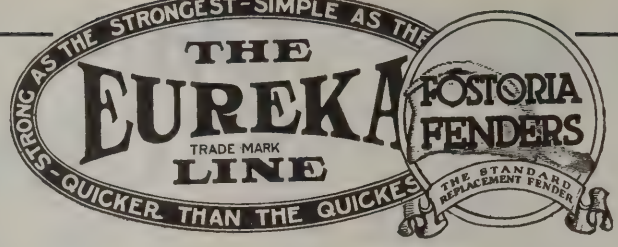
Storm Automatic Honing Machine

The Storm Automatic Honing Machine is the ideal equipment for operating the Storm Hone. It is provided with an automatic feed which feeds the Hone up and down in the cylinder at an even rate. Produces a "Mirror Like" and "Gun Barrel" finish. The self-centering action of the hone is strong enough to hold the machine without clamping the block.



STORM

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406-A Sixth Ave. So.
MINNEAPOLIS, MINN.



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IT is with great pleasure that we announce our purchase of the business of the Ashland Mfg. Co. of Ashland, Ohio, manufacturers of the well-known Eureka line of pumps and jacks.

The Eureka is a substantial, well-built, fairly-priced line and one that has enjoyed a steady sale for many years.

We will put behind the Eureka line the same quality ideals, the same manufacturing facilities, the same square deal merchandising policy that have meant bigger profits for all who are selling Fostoria Fenders.

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Succeeding the Ashland Mfg. Co.

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THE EUREKA LINE

EUREKA

FOSTORIA

JACKS *and* PUMPS

MOTOR AGE

Vol. XLVIII | Chicago, August 20, 1925 | No. 8

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

WAVE of price-cutting greatly stimulates automobile business. Production and sales are at highest levels of the year and are far ahead of same time a year ago.

Philippines seen by Secretary Hoover as possible future source of U. S. rubber. Page 34.

Treasury amends excise tax regulations regarding levies on automobile accessories and parts. Page 34.

Plans for American automobile show in Paris are now definitely abandoned. Page 33.

Additional space is provided for annual automobile salon in New York, allowing entry of 34 more cars this year. Page 35.

Contracts mailed for seventh annual exhibit of Automotive Equipment Association, to be held in Coliseum in Chicago, November 9 to 14. Page 43.

Ford completes purchase of all assets of Stout Metal Airplane Co. No quantity production is planned as yet, however. Page 35.

System of national roads touching all state capitals is planned by joint board of interstate highways. Page 42.

National convention of American Chemical Society is told that U. S. Army has new type of truck engine designed to burn ethyl gasoline, with greater power at less fuel consumption. Page 37.

Report of American Petroleum Institute denies belief in danger of exhaustion of supply of oil, declaring unexplored stores sufficient for many years. Page 38.

Studebaker prices reduced on all three lines as result of huge increase in sales volume. Page 38.

Peerless Motor Car Co. turns loss appearing at end of first quarter to substantial gain at end of first six months. Page 37.

Willys-Overland sets record for production during first six months of 1925 with 109,394 automobiles, or within 40,000 of the entire 1924 output. Page 39.

Federal reserve report declares entire automotive industry is showing greater activity than was evident a year ago. Page 36.

July sets another record for business done by Apperson Automobile Company, when sales volume shows 225 per cent increase over January. Page 36.

General Motors denies reports that it plans to produce engine to use "miracle fuel." Page 33.

Building of Mexican road system to begin at once under direction of American engineer. Page 32.

Rickenbacker Motor Car Co. ships 6,100 automobiles during the first half of 1925, compared with 5,412 for the same period of 1924. Page 39.

Peerless announces price reductions ranging from $10 to $300 on both its six and eight lines. Page 35.

Paige-Detroit sales and net income for first six months of 1925 set record in company's history. Page 43.

In Next Week's Issue—What About Radio?

THEY SELL TO FARMERS



W. H. Taylor

Scientific Analysis of Territory and Thorough Cataloging of Prospects Marks Methodical Start of Successful Campaign by California Dealers.

By ROY ALDEN

AVERAGE monthly sales for a full year of 19 new Willys-Knight and Overland cars, and 16 used cars, by a dealer located in a town of 6,000 people, and with a total population of less than 32,000 in the entire county.

Such is the achievement of the Overland Motor Sales Company of Oxnard, California, owned and operated by W. H. Taylor and C. S. Bobo, two of the leading small town automotive merchants in the West. Oxnard is a typical small town. It has no boom features. Nor does it have any unusual abundance of wealth-producing factors. Citrus fruit growing and general agriculture comprise the major productive activities of the community. These partners, when starting two years ago to build up a healthy permanent volume of business, had a territory to work that held approximately the same opportunities as presented to the average small town automotive merchant.

Scientific analysis of the territory, efficient cataloging of prospects, and systematic direction of sales activity, explains the uniform merchandising success of these Southern California dealers.

A year and a half ago the Oxnard dealers took a complete census of every automobile in the entire territory surrounding that little city. The census called for a description of the make and model of each car, and also included the occupation of the owner. If a farmer, the crops to which his acreage was planted were described. Lodge affiliations and hobbies were also noted when this information was obtainable.

No Selling During Survey

"In undertaking the survey," explains Mr. Taylor, "we assigned salesmen to cover certain territories. They were instructed only to gather the desired information and not to make any attempet to sell or to directly ascertain whether a prospect was in the market for a car. The census takers would frankly inform those called upon that they represented our firm and explained the object of their questions was the preparation of a map and accompanying data that would show the development in the use of the automobile in this county. Incidentally, we did prepare the map which is still in use in our sales room. This map shows the location of every car owned in our territory.

"We met with virtually no resistance in making our survey, which took nearly a month to complete. We arbitrarily set aside three hours a day when each salesman had to confine all his activities to this work. After our census takers had called on every farmer and every resident in our entire selling area and obtained the information sought, we then redistributed the territories and started our actual prospect finding campaign. By redistributing, I mean that the salesman who originally took the census in one district was not sent back into the same district. Rather, he was given another district where another salesman had worked on the census. It is quite apparent that it would be difficult in many cases for a salesman to get a proper audience when he originally presented himself solely as an automobile census taker, and then reappeared a few days or a week or two later with a direct selling mission. At least it was our experience that the switch in districts was the better plan.

"We did not consider the census as a direct canvass for prospects. Of course, it was indirectly, but it was designed to provide a basis for subsequent effort in this direction. In entering upon the second phase of our territorial analysis, our salesmen, working different districts as explained, made seconds calls on every resident.

A Car A Day



C. S. Bobo

"After this thorough canvass for prospects, we were able to systematically catalog our prospects, because we had full information on every car owner or prospective owner in our territory that had been personally obtained.

"On the second call of a salesman, we were able to tell whether the person visited was an immediate or future prospect for one of the cars we have for sale, or whether he should be crossed off our lists.

Weeding Out Process

"The prospects were weeded out from the non-prospects, individual cards being prepared for the former, and the latter listed alphabetically on a list for reference purposes. All information of value was written on the prospect cards. For instance, one farmer-prospect may have most of his acreage planted to walnuts and he will be selling his crop in the fall, when he will receive in cash the major returns for his year's labors. If he can be considered a prospect we then know from this information when he may be expected to be ready for the purchase of a new car. We also know when the time approaches for our salesman to cultivate him at regular intervals. If the prices are good on walnuts, our salesmen will emphasize in a casual way during his calls the excellent position of the walnut market. Building optimism, not directly or bluntly, but very casually, is an important qualification for successful selling with farmers.

"It required some investment and it took considerable time to make our census and prospect canvass, but it gave us a complete knowledge of our territory and armed us with the necessary information to properly direct our sales activity. We read a lot these days in the national automotive trade journals about the importance of proper sales direction—that the main contributing reason in many failures can be traced to the inefficiency of sales activity due to lack of direction. We believe that this matter of efficient sales direction is as important in the smaller community as it is in the large city. In our territory we cover a lot of ground, as far as 35 miles in some directions.

"If we did not have our prospects cataloged, but allowed our salesmen to operate largely 'on their own'—self-directed, so to speak—we could not expect to make the sales that we do. As it is, we scan the prospects a salesman has listed for the day. From the information gained from our census, we know all that should be known about the prospect, and we can discuss the calls with the salesmen. If there is anything the salesman should know about the market for certain products, such as beans, beets, lemons, apricots, walnuts, or other products that a prospect grows, he is given that information.

"Most of our business is with the farmers and we make it a point to keep thoroughly posted on all news and market information of interest to farmers, so our salesmen can talk on subjects that are close to them.

"When a salesman has ready access to full advance information on a prospect, it is only natural that he is going to make a much better presentation of his merchandise than he would if he were uninformed.

"As our territory is no different in important particulars from any other small town territory, I believe any small town dealer will find an investment in a thorough survey of his sales area will bring him substantial results. It should be borne in mind, however, that records such as we keep would soon lose their usefulness if they were not kept up to date. We check all sales from the registrations and

(Continued on page 19)



Home of the Overland Motor Sales Co., Oxnard, Cal.

As the Editor Sees the Automobile Business

Random Observations on Sales and Service

By SAM SHELTON

PROGRESS by the State of Missouri in the construction of highways is about the most encouraging development the automotive industry can point to this summer. Paved roads across the Show-Me state will boost transcontinental motor travel as nothing else can. The gateway to the Southwest and much of the West lies through Missouri. St. Louis and Kansas City are the keys. These two great metropolitan cities soon will be connected by two paved highways. And St. Louis already, thanks to Illinois, is at the terminal of several boulevards connecting with all points on the Atlantic Coast from Washington northward.

Striking southwest from Chicago I found it an easy matter this summer to penetrate the Missouri Ozarks as far as Springfield in two days of fairly diligent driving. St. Louis is easily made between an early breakfast and the evening dinner. About the same time is required for the somewhat shorter trip from St. Louis to Springfield if the road is dry, as I found it.

But not much longer will Missouri mud be the terror of transcontinental tourists. While I was in Missouri the State opened a new stretch of about 10 miles of modern concrete road in Webster County on the crest of the Ozarks. This is part of State Highway No. 14 leading from St. Louis to Springfield and Joplin and thence to the great Southwest and on to the Pacific Coast by way of El Paso.

On Highway No. 17 leading north from Cabool to Rolla I found a modern gravel road under construction. After grading and ditching was done earth shoulders were thrown up on either side. The space of about 30 feet between the shoulders was being filled to the depth of a foot or more with creek gravel. It is hard driving while loose but a wonderful road after it is packed. Between Rolla and Lebanon on Highway No. 14 is a wonderful stretch of completed gravel road.

But Missouri's road building enterprise is not confined to these highways leading southwest. In fact the cross-state highways connecting St. Louis and Kansas City are being pushed with great rapidity. Plans contemplate the completion of one of those, with concrete surface practically all the way, within a year, and the other will be finished soon thereafter.

This highway activity is bringing about an awakening in the automotive trade in Missouri and other Mississippi Valley states. I have noticed that where paved highways go an improved automotive trade soon follows. Paved roads tend to lift up the motor car sales and maintenance industry and put it on more progressive and profitable basis than prevails where muddy and neglected roads are the daily trial of those who strive to make the best of modern transportation methods.

Unfortunately the business men of some towns through which state highways run are not appreciative enough of what the state is doing for them to cooperate to the extent of improving the city streets to make them somewhere near as good as the state roads. The trade of tourists may not mean anything to such business men, but it is certain that most motor car travelers will not spend any more than they have to in towns that offer them the discourtesy of rough, muddy or dusty, unpaved streets over the route of the state roads. Between Chicago and St. Louis are two such unappreciative towns that I would not spend a nickel in if I could avoid it. But their streets are so rough that unless one drives cautiously he is likely to break a spring or blow out a tire and thus be compelled to patronize business men who get all they can but give nothing.

Such towns are the exception. Most towns favored by state highways have enough pride and enterprise to improve their own streets, especially those followed by the tourists, on a par with the highways. Progressive automobile dealers can well afford to take the leadership in such improvements. In most towns the automobile dealers and garagemen are among the first to recognize the advantages that come to them from being on the route of state highways. This advantage is due not merely to tourist travel, but also to the increased use of motor vehicles locally because of the splendid roads provided for business and recreational travel.

The improved public highway continues to be, as it has always been, the world's greatest salesman of motor vehicles.

COMMONSENSE!

By

JAMES EDWARD HUNGERFORD

He wasn't an ANGEL, and sprouted no wings,
Nor was he a "hard-slugging he-man;"
He lived in a world of "just COMMONPLACE things,"
And wrought no more wonders than WE can!
He USED what he had—just his plain COMMONSENSE,
And HONESTY, "GET-UP," and HUSTLE,
And that's HOW he hurdled the big SUCCESS fence,
And landed on TOP, in the tussle!

Just one of those fellows who laugh at defeat,
And nothing could "faze" him, or "floor" him;
Whatever he tackled, he wouldn't be beat—
Dame Fortune, she couldn't ignore him!
He stayed on the job when most men would have quit,
And seasoned himself to "rough-faring,"
And proved he was "GAME"—a "go-getter" with GRIT,
Who wouldn't be DOWNED by despairing!

He suffered HIS share in the world of "hard knocks,"
And sometimes succumbed in the scuffle;
Oftimes he was shipwrecked, and cast "on the rocks,"
And beaten, and "lost in the shuffle;"
But always he'd wrest himself out of the wreck—
To hardships he never would knuckle;
Though trouble submerged him clear up to the neck,
He'd grin, and COME BACK, with a chuckle!

Direction of American Car Design Reflected in New Models

Study of 1926 Offerings Shows Tendencies Toward Greater Operation Economies as Well as Improved Efficiency and Attractiveness

By P. M. HELDT

NOW that announcements of new models have been made by about a dozen companies prominent in the industry, it is possible to form an idea as to the lines along which automobile design is progressing. Some of the changes made naturally are of a minor character and incidental to other more important alterations, but nevertheless certain definite tendencies are discernible.

There are apparently four factors that have influenced the changes which have been made, or at least a great many of them.

The first is the prevailing downward trend of prices, particularly at certain ranges in the price scale, which has dictated economy and the elimination of unnecessarily expensive features.

The second is the demand for reduced servicing cost, particularly during the first few years of a car's life. This is evidently the factor responsible for the rather widespread adoption of air cleaners and oil cleaners, of improved oiling systems and other features tending to prevent premature wear of certain parts.

Keen merchandising conceptions can be seen in the practices of American passenger car manufacturers as revealed in a study of the new models brought out this year under the stamp of 1926.

While the cars are being made to sell in a highly competitive market and while lower prices tend to emphasize this condition American car producers are not letting down on mechanical efficiency or beauty in body design. On the contrary they continue to go ahead, giving the automobile buyer a bigger dollar's worth than ever before.

A third factor has been the desire to improve the appearance of the cars, it being realized that the appeal of the outline and of the color scheme has great weight in swaying the decision of a customer who may be wavering between several competing makes.

On many cars the radiator shell design has been revised with a view to strengthening this appeal, and many new color schemes and features of body style have been evolved.

On a good many cars also the horsepower output of the engines has been increased, either by refinements in design or by increasing the piston displacement. The object in view in thus increasing the available horsepower is evidently to increase the possible acceleration or what is commonly referred to as the "performance."

There is certainly no evidence that American designers are following the lead of their European confreres and cutting down the piston displacement to save on taxes and fuel. Buick, Chrysler and Rickenbacker have increased the piston displacement of their engines, Buick of both models, while a number of other makers have endeavored to increase the output by increasing the valve opening area, enlarging the carbureter size, smoothening and straightening the inlet passage and lightening the reciprocating parts.

Torsional vibration of crankshafts seems to be still a source of considerable trouble, if one may judge from the fact that in a number of instances the crankshaft diameter has been materially increased, in the Chrysler, for instance, from 1⅞ to 2¼ in., which gives an increase in torsional strength of 73 per cent, as compared with an area (and presumably in explosion and inertia forces of less than 9 per cent.) In one case a small front flywheel has been added to check torsional vibration while in the case of the Oakland an entirely new type of harmonic balancer has been applied, the exact principle of which has not yet been made public. The general increase in engine speeds naturally has a tendency to bring the critical speeds of the crankshafts within the operating range of the engines and calls for the use of devices of this kind.

This is the first time in a good many years that important changes have been made in the Cadillac engine and advantage has been taken of the occasion to incorporate in it with a number of features such as the turbulence head which have been worked out on other General Motors Products.

Since the majority of the General Motors makers have joined the ranks of air cleaner users which previously included Franklin, Chrysler, Rickenbacker and Willys-Knight, the position of that accessory has been signally strengthened, and it will probably not be many years until it will be regular equipment on practically all cars of medium and high grade, at least.

Along with the air cleaner the oil cleaner seems to be gaining in popularity. Of course, for a long time, engines have been provided with oil strainers which were supposed to remove all solid particles from the oil before it entered the pump, but since the straining surface is generally of rather limited area and the oil gets very viscous in cold weather, it was necessary to use rather coarse mesh gauze, which is not very effective in removing the finer particles of gritty material. A system in which the oil is forced through the straining medium by the pressure of the pump, instead of being drawn through, should be by its suction an important improvement.

In clutches the tendency seems to be still toward the single plate type, which can be made with a minimum of spinning weight and therefore facilitates gear shifting. This type of clutch also has advantages from the viewpoints of weight and manufacturing cost.

For a number of years transmissions have been contracting in size, until the gearbox on the average six or eight-in-line is an almost insignificent extension of the crankcase, but it seems that the practical limit in that direction has been reached and perhaps even surpassed, for among the cars of which descriptions have been printed recently there were at least two in which the face widths of the gears have been increased.

(Continued on Page 34)

Experiences of a Small Shop With Pyroxylin Finishes

Automobile Dealer in Small Iowa Town Finds Motor Car Painting Profitable Addition to Round Out His Line of Automotive Maintenance

By B. M. IKERT

PAINTING 50 cars a year as a side line in a town of 2,000 people is quite an achievement.

That is precisely what is happening in a small town in Iowa. It is happening largely for two reasons.

First, the automotive dealer about whom this story is written appreciates maintenance on the finish of a motor vehicle is quite as important as overhauling the power plant of such a vehicle—and just as profitable.

Secondly, lacquer finishes, with their ease of application, quick drying characteristics and lasting qualities have caused a right about face in the painting of automobiles and put it within the grasp of every dealer who wants to sell 100 per cent service and maintenance on motor vehicles.

The dealer who is on the road to sell 50 paint jobs this year along with his other repair business is Louis Shuh, Buick representative in Dewitt, Iowa.

Like most dealers in small towns he must sell service and maintenance on all makes of cars, otherwise his shop could not keep busy. To make this possible, his is a well-equipped shop and fitted out to almost any kind of repair job, even to cylinder regrinding.

Possibilities in Refinishing Work

But the interesting part of this dealer's business is he has not confined it to selling motor vehicles and repair work only. He saw the possibilities of selling his customers refinishing work on their cars.

He saw the possibilities of moving his used cars more readily when dressed up in a pleasing combination of color newly applied.

He felt it wrong to tell a customer he could overhaul the engine and rear axle of his car, but that the customer must go elsewhere to have the car repainted.

After all, the finish of a car is something anyone notices long before a piston slap gets too noisy and what appeals to the eye very often can be sold much more readily than an intricate repair job, which is all Greek to the customer.

It's easier to say "Mr. Smith, your car needs repainting," than it is to tell him about the condition of his engine. Mr. Smith does not know as a rule what it means to remove shims from bearings, to install oversize wrist pins, or lap in new rings. But he does know and can see that his car looks shabby and can visualize it in a new coat of paint. That is one reason why dealers like Mr. Shuh have little difficulty in selling paint jobs.

Naturally, it takes more than that to sell the work and keep it sold. Refinishing motor cars, whether done with lacquer or varnish calls for skill and if there is any place where poor workmanship will soon manifest itself it is on a paint job.

A mechanic might get away with a poor job of adjusting a rear axle and hide considerable of his work within the housings of a clutch or axle, but not so with the car painter. His work is always visible for inspection. His materials must be the best, his equipment adequate and he must have a thorough knowledge of the craft.

Hence the first thing Mr. Shuh did after deciding to add refinishing to his other branches of service and maintenance, was to hire a first class motor car painter.

At the present time very little work is done in the paint shop of Mr. Shuh's establishment, but this is the off season, so to speak. His shop was quite busy last spring and prospects are for a busy season this fall and winter. Mr. Shuh states people in his part of the country do not like to do without their cars for a week or so at this time of the year and consequently he does not look for much refinishing work until this fall. At that time his painter will rejoin the organization.

There is nothing pretentious about the paint shop and the work is done in a rather small room adjoining the main building. However, the room has good facilities for ventilation and the light is all that could be desired. Since he can get along with the services of one painter a small room is adequate for the work. There are two guns for spraying, one used for the undercoats and the other for the finishing coats. In addition there are such fixtures as an air pressure regulator and an air conditioner for removing all traces of oil and moisture from the air line. The air compressor used for the general shop also furnishes the air for the spray guns.

Above all, Mr. Shuh insists on quality work. To this end he takes no chances with the old finish on a car. All of this is removed and the new finish applied from the bare metal up. The shop has found the use of an alkali solution satisfactory for removing the old finish.

In doing this the necessary precautions are taken, of course, to see that all traces of the paint remover are removed from the metal. As has often been said, the preparation of the car for painting, especially with pyroxylin finishes, is the most important operation, as the finished job depends almost entirely upon this preliminary work. Although there are various ways to protect the



Louis Shuh and two of his mechanics.



Before this year is up the dealer who operates this establishment in a town of 2000 will have repainted 50 cars with pyroxylin finishes

windows and other parts of a closed car prior to the spraying operations, it seems the application of paper with gummed tape is the most popular. It is used in Mr. Shuh's paint shop.

He carries in stock an ample supply of paint materials and by means of a special chart is able to duplicate practically any color. Cadillac may have a certain gray and Hupmobile a brown, for example, and these Mr. Shuh's shop is able to duplicate exactly. The makers of the paint material supply the necessary instructions to properly mix the materials to secure specified colors. Thus far, Mr. Shuh has found his customers preferring gray-greens and dark colors.

There is probably nothing which detracts so much from an otherwise good paint job on a motor car as dented and rusted hub caps and other parts usually finished in nickel or some other bright metal. Consequently this shop tries so far as possible to sell the car owner a set of new hub caps and similar parts, which, when applied to the newly painted car enhance the effect and in reality make the car appear like a new one. It has been Mr. Shuh's experience that usually a car owner who has his car repainted is not hard to sell on the idea of new hub caps and such defaced parts which the eye readily catches by virtue of contrast with the new finish on the body and wheels.

Probably one of the most outstanding reasons why this dealer is successful in this small Iowa town is because he is a good mechanic aside from a good business man. Although he does not pass himself off as an automobile painter, he does know how the work ought to be done. He is business man enough to appreciate the fact every car his paint shop turns out is advertising for him and he cannot, therefore, use inferior materials or poor workmanship. Every job must sell the next one.

He thinks dealers are overlooking a good bet if they are not refinishing cars in their establishments, and especially used cars they have on the floor. It is not always necessary to take off all the old paint on a used car as some mighty fine jobs have been turned out by shops using the old undercoats.

It is entirely possible for the paint shops in the larger cities to sell their customers a high class job which runs into considerable money, but it is quite a different problem with the dealer in the small town. His customers are different. They are not always so exacting and if they are assured of a reasonably good looking and lasting paint job at moderate cost, that's what they are willing to pay for.

But almost every time a paint shop puts a pyroxylin finish over the old coats, it takes a chance. To be absolutely on the safe side all the old finish should come off. That's why you find men like Mr. Shuh selling their customers on a quality job, rather than on a job about which there is some doubt as to its lasting qualities.

The paint department of Mr. Shuh's establishment rounds out his business. Thus, in addition to being able to sell service and maintenance on car finishes, he also does a general line of machine work, welding, cylinder grinding and storage battery work. Normally he has four mechanics and one painter.



Gardner Six Anniversary sedan, a four-door model, listing at $1,595 f. o. b. St. Louis. It is the lowest priced Gardner closed model ever built. Mohair upholstery is used and all windows are of plate glass operated by rotary lifts. Satin finished hardware is used throughout. All instruments, including a gasoline gage and heat indicator, are grouped under a single glass panel on the dash and indirectly lighted

Storage Space for 2,000 Cars



Eighteenth street garage at St. Louis which houses 2,000 cars

And Service for Sale at a Profit

COVERING a square block, with 266,000 square feet of flour space, the new Eighteenth Street Garage was recently opened in St. Louis with storage space for 2,000 cars.

But this huge institution is not merely a motor car stable—it is a merchandising institution where extensive service for car owners is sold at a profit.

The building is bounded by Eighteenth, Seventeenth, Chestnut and Pine Streets, and is two blocks from the Union Station and within a few blocks of the downtown business district. It is four stories high on the Eighteenth Street side and two stories high on the Seventeenth Street side where the ground elevation is considerably higher than at Eighteenth Street. A number of stores, including some devoted to automotive merchandise, occupy the front part of the ground floor.

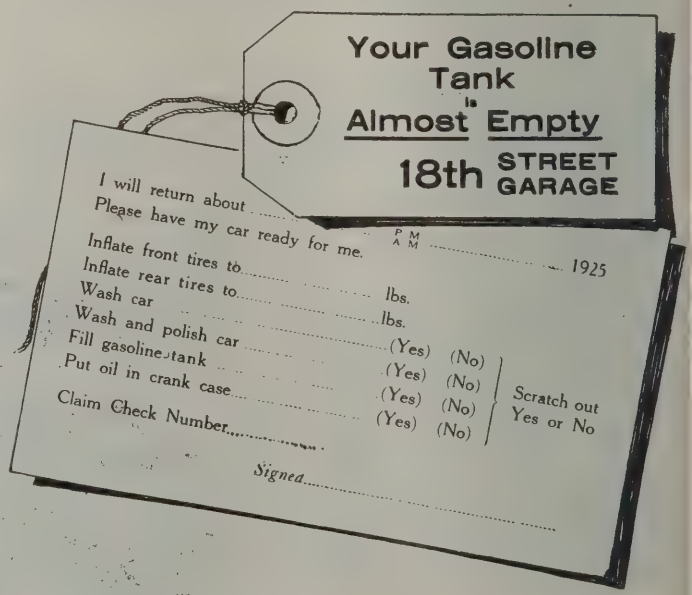
The garage service includes washing and polishing, inflation of tires, and gasoline and oil. Cars stored are always inspected and those found with gasoline tank less than one-fourth full are tagged to call the owner's attention to this condition and to the fact that he can replenish his supply at the filling station as he drives out.

When a car is stored by a traveling salesman or other person for a considerable time the owner is provided with an addressed and stamped postal card with blanks to be filled out to notify the garage when he will call for the car and what he wants done to it. This enables the garage to have the car ready for immediate delivery in condition to start on a long drive.

Storage rates in this garage are 50 cents for overnight and 25 cents for the day hours.

The accessibility to the business district is a strong inducement to those who drive to work to park their cars in this garage during the day. The small amount charged for storage also is a factor which has made for increased profits for the garage.

The proprietors are strong exponents of the doctrine that distinctive service makes for satisfied customers and incidentally increased balances at the bank.



Owner is supplied with this card to mail to notify garage when he will call for his car; the tag is attached to steering wheel of car whose fuel tank is less than one-fourth full

Bring on Your Used Cars!

Dealers in the Nation's Capital are "Bulls" on This Market

WASHINGTON'S used car market is enjoying excellent health, thank you!

No magic panaceas have been developed and registered in the nearby Patent Office for the exclusive use of automotive dealers in the District of Columbia.

Instead, they're simply applying sound business principles to the handling of one of the trade's bugbears.

One of the most prominent and successful dealers, Raphael Semmes, president of the Semmes Motor Company, says, "There's no difference between the used car business and the new car business that I can discover. We're making both pay us a net profit.

"As a matter of fact," he continued, "we can't get enough used cars today. Right now there isn't a used open car in our place."

The company's used car department is operated in connection with the service department, occupying a six-story garage building some two or three dozen blocks away from the new car salesrooms on Connecticut avenue.

And the president of the company makes his headquarters with the used car end of the business!

"We're buying used Dodge Brothers cars on the open market where we can get them in," he added. "On the street, or from anyone who brings one in to sell. If he doesn't want to trade it on a new car we are willing to buy it anyway.

"The answer is that we take them at our figure or not at all. Some owners, after getting our appraisal, which job by the way, is all done by one man, think they can sell the cars themselves to greater advantage. We're also willing to have them do that.

"But we tell them frankly in the first place that we intend to make a profit on the handling of every used car we take in, figuring on a basis of 20 per cent, less cost of reconditioning, deducted from the price at which we think the car will sell readily. The net amount is what the owner receives in cash or credit, as he prefers. Of course, we make a mistake once in a while and get one in bad shape."

Here another question popped up. "How do you keep up the volume of new car sales then, if any considerable proportion of the owners think your trade-in allowance is too low?"

Mr. Semmes smiled as he replied, "Our new car sales since the first of January have been 25 per cent in excess of the same period last year. Last month, only 16 per cent of those sales involved trade-ins. We thoroughly sell the prospect first on the new car. The next step is to convince the buyer that he must take the depreciation on his old car—not the dealer. Our salesmen thought that was a little stiff at first but now they're for it.

"And one more thing about our used cars. We're not selling any more 'as is' cars. If they're not worth reconditioning and putting our reputation behind, then we send them down to auction."

Another thing Mr. Semmes does because it later brings back his used car buyers as new car prospects. He writes a personal letter to every one of them after they are in possession of the car. In this letter the president of the company expresses the hope that the car will be entirely satisfactory and if it is not, invites the owner to come back and tell him so. "And once in a while they do," he said, "but it certainly is worth it."

Another veteran in the car selling business in Washington is the Lambert-Hudson Motor Company, handling Hudson and Essex.

Here the policy pervading the organization is "Buy them right and sell them quick" to paraphrase the slogan of the National Automobile Dealers Association.

All cars are sold strictly "as is" and the buyer so advised. The policy is justified, Mr. Lambert believes, because it puts in the hands of the used car buyer the vehicle he wants at the lowest possible price. Later, if he wishes to do so, he can add repairs and equipment as he may desire—many times doing the job himself.

Used cars never get a chance to accumulate in the extensive two-story garage and showroom maintained exclusively for used cars.

If a car remains without a buyer for two or three months, Mr. Lambert concludes there is something wrong with either the car or the price—and his remedy lies in the price.

Right now nearly every car coming in goes out again on the same day or the day following. Should any car prove a sticker up to the absolute four-month limit, a price is made which moves it. If a loss is inevitable, this company does not believe in prolonging it.

The same man appraises all cars offered. If the owner disagrees with the value set but wants a new Hudson or Essex, his old car is held at his price for 30 days. If it doesn't move then, the company's appraisal price is placed on the car as the sale price and it moves.

Two men sell used cars on full time. Both new and used cars are sold by the other salesmen. But they do not sell indiscriminately, for the simple reason that the salesmen do the financing—indorsing the buyer's notes. They're naturally cautious of credit risks! Down pay-

(*Continued on page 19*)

WASHINGTON, D. C., is one of the cities where dealers are getting down to bedrock business principles in handling the resale problem.

Here is an article which presents sidelights on how some of the progressive merchants in the national capital have been doing it.

No startling discoveries were revealed by the investigation of their practices, no magic wands were waved—no voodoo doctor has been on the job there. Their stories, substantially alike, simply tell of the application of practical business policies and demonstrates that practical business policies have paid.

It is worth noting that these dealers have kept their used cars moving from the first of the season. And some complain they can't get enough used cars.

In speaking of the used car business one Washington dealer says:

"The answer is that we take them at our figure or not at all. Some owners, after getting our appraisal . . . think they can sell the cars themselves to greater advantage. We're also willing to have them do that.

"But we tell them frankly in the first place that we intend to make a profit on the handling of every used car we take in, figuring on a basis of 20 per cent, less cost of reconditioning deducted from the price at which we think the car will sell readily. The net amount is what the owner receives in cash or credit, as he prefers."

LESS VOLUME *But MORE Profit* In the Tire Business

Los Angeles Merchant Deliberately Gave Up Half of His Business and Started Building Anew on a Money-Making Basis

TO sacrifice net profits in order to obtain greater volume is to invite ultimate disaster. F. J. Pullen of the Pullen Tire & Rubber Company of Los Angeles had this fact indelibly impressed upon him several months ago. Mr. Pullen has been engaged in the tire sales and tire repair business in Southern California for seven years. He built up a gross volume of nearly $70,000, but he found he was not drawing down the net profits he expected. He called in an auditor to go over his books and study his business. A few days later the auditor told him that, by improperly distributing his costs, he was actually losing money on 90 per cent of the sales that had been made to corporations. In other words, Mr. Pullen's corporation business, which represented fully half of his total volume, was transacted at a loss.

Investment of Hard Work

Many years' hard work had been invested in building up the trade among the large fleet operators in Los Angeles, but Mr. Pullen determined that he would voluntarily give it up. He was competing against exclusive distributors and factory branches, and he decided it was impossible to obtain an increased price for his merchandise. So he dictated letters to his many corporation customers, in which he explained that he had been handling their business at a loss and that he intended to discontinue it. He thanked them for their patronage and suggested that they seek other connections with some other tire house. When the last letter was in the mails, Mr. Pullen had relinquished about $35,000 worth of gross business—but he was also releasing the cause of an unhealthy situation in his establishment.

Today, he is doing about half the business he formerly handled, and yet he is making more net profit. He now caters only to the retail trade, and has gone in extensively for tire repair business. He has cut down his overhead and operating expenses, and has installed an efficient cost analysis system which shows him every month just where he stands.

"I am thoroughly convinced that volume is the most meaningless thing in the automotive business," said Mr. Pullen. "If every tire dealer would stick to a profit-producing basis of mark-up on his goods, and would not go madly on the quest for big volume, the tire business would certainly be in a much healthier condition than it is today. Where would other retail institutions get off if they practiced such slipshod methods in doing business as is common with many tire houses in every community? I can talk frankly on this subject because I used these slipshod methods. I was chasing the rainbow for big volume, just like the others. And I was kidding myself in the belief that I was building up a nice big business, just like many others. But that auditor I called in gave me a new perspective. I looked at my business on the books, rather than at the activity that was taking place in my establishment. And in so looking, I discovered a lot of things that I did not know existed.

"After deciding to give up the unprofitable corporation business, I moved my establishment and centered my efforts exclusively in developing the retail trade. And today we are making net profits from every tire sale and every tire repair job because we know our cost of doing business. We no longer are in the market for big volume, unless that big volume can be won with an established return in the way of net profits. We have learned the wisdom of turning away trade that is not attractive."

Mr. Pullen's new shop is equipped throughout with the very latest facilities for quick and efficient tire repair work. About 40 per cent of his total volume is now represented in retreading, vulcanizing and general tire repair. The other 60 per cent is in the sale of new tires.

Another change in business policy made by Mr. Pullen when he determined to place his establishment on a thoroughly efficient basis was to discontinue the practice of credit extension. During one year when he catered to the corporation business he lost $600 as a result of three bankruptcies among his customers. Now he has no credit losses because he makes no exceptions to his "no-credit" policy.

(*Continued on page* 19)



Two examples of post cards used by Mr. Pullen to bring in profitable tire business. He makes his repair department not only produce a profit but also cultivate customers for new tire sales.

They Sell to Farmers—A Car A Day

(Continued from page 11)

if there are any sales of farm property or any changes in the status of our prospects we so indicate it on our cards. In this way we know that our records are accurate all the time."

Four salesmen are employed by the Oxnard dealer, and all work on a straight salary with bonus given for exceeding quotas assigned, The salesmen own their own cars and are allowed a straight $20 a month for operating expenses.

"We have found the salary is the best basis of compensation for salesmen in the small town," says Mr. Taylor. "When we tried straight commission, we had a big turnover in our sales force. Since we switched to the salary with bonus, we keep our salesmen and we have good producers. With salary-paid salesmen greater co-operation is obtainable all the way around. We frequently advise a salesman to release a certain prospect and give him to another man for various reasons. For instance, one salesman may make three or four different calls on a certain farmer but has been unable to sell him. Yet the salesman feels confident that the man is still a prospect. He is satisfied the farmer actually has the desire and the money to buy a car. The salesman in reality may have convinced the prospect that his car fits his needs, but the prospect has said 'No' so many times that his pride simply won't let him say 'Yes.' Now, then, we recognize this bit of sales psychology, and we never discard a prospect until after we have sent another salesman for a final call. Many are the instances where the new salesman making the final call on a prospect will get the order, where the four or five calls of the other salesman failed—failed because the prospect's pride refused to let him yield from a negative to an affirmative attitude, although he was really sold by the first man."

Free Inspection Service

Every purchaser of a new car is urged to have two free inspections after delivery, one at 500 miles and the other at 1,000 miles. As evidence of the sincerity of the dealer to have the cars of their customers broken in right, Mr. Taylor says he sends out a service wagon whenever an owner reports he cannot drive into town himself. The service car tows in the owner's machine for the inspection and delivers it back to the customer.

Bring on Your Used Cars

(Continued from page 17)

ments of 30 per cent to 40 per cent are always required, with the balance payable in ten months.

Stepping to another price class, the same questions about used car disturbances were put to Rudolph Jose, president of the Washington Cadillac Company—also of long and excellent standing as a veteran dealer.

"Our chief difficulty is in getting people to realize that we're selling other than used Cadillacs and cars of similar price. Naturally we have nearly all kinds of cars offered in trade, but the average used car buyer doesn't appreciate that fact."

Pointing to a couple of Cadillac cars two or three years old but in excellent condition, he continued, "We recondition all of them now that warrant it and there is the result. We have many customers who come in and buy a car like that, use it for a year or two and then buy a new one.

"Another curious thing is that some of our new car prospects turn out to be used car purchasers."

Careful credit investigation plays almast as large a part in used car sales of the Washington Cadillac Company as does actual selling. Long time payments are granted only where there is sound credit and good reason for giving them, as sometimes happens when the car represents the owner's business.

That the "junk" car is the greatest "bug" in the used car business today is the belief of the head of the Justice Motor Company, handling Willys-Knight and Overland cars.

"We have less trouble buying in at the right price, the car for which we allow around $500 or $600, than we do with the car which is six or seven years old and worth but $50 or $75," Mr. Justice said.

Views quite similar to the foregoing were expressed by other dealers interviewed.

Less Volume But More Profit in the Tire Business

(Continued from page 18)

"We lost very few customers when we went on a strictly cash basis," says Mr. Pullen. "It is not difficult to get the money when a sale is made. If the customers know you allow credit privileges, they will in many instances take advantage of it, but when they are informed that sales are made only for cash, it is not offensive to them, because they realize the wisdom of this policy in the conduct of their own business."

Mr. Pullen offers free tire inspection, and also gives free wheel service. He does not give any further guarantee on new tires than that which the manufacturer advertises. On retreads he gives a guarantee of 5,000 miles, and he guarantees section work done at his shop to outlast the tire.

He has sufficient space in his new establishment to service seven cars at a time, with ample parking space for seven others without congestion.

Mr. Pullen keeps a close check on the frequency of visits of his regular customers in order to acquaint himself with those who apparently are giving their patronage elsewhere. To all customers who have not come in for any service after two months, he sends a card carrying an illustration of a Chinese, with the heading, "Long Time No See—How Come?"

Mr. Pullen personally receives nearly all the customers who drive in his establishment. Inasmuch as his business bears his name, he believes it of advantage to impress his personality upon the customer.

"I used to think that price was the dominating factor that swung business to a tire house, or keep it away, but I have completely discarded all ideas along that line," he says. "Of course, there are a large number of automobile owners who make purchases only on the basis of price, but there is a mighty large field of owners to be cultivated who respond to the quality and service appeal. And by efficiently catering to these owners, a tire house can make reasonable net profits."

Marmon Has New Four-Passenger Victoria Coupe

THE Victoria Coupe for four passengers has just been announced by Nordyke & Marmon Company, Indianapolis, Ind. Ample leg room has been provided without sacrificing a sociable seating arrangement or in any way giving an appearance of bulkiness to the car.

As in other models of the Series 74 line, the sun visor on the Victoria Coupe is a continuation of the top line. The windshield is in one piece, giving an ample view in all directions and insuring safety. The rear quarter is in black rough-grained leather with landau irons on each side. Distinctive type rear quarter windows have been provided with provision made for lowering the right rear quarter glass. The glass in the two doors lowers flush with the sills.

The driver's seat can be reached from either side of the car and to the right and a few inches to the rear of it is a comfortably upholstered seat for two passengers. Directly in the rear of the driver's seat is a storage compartment for small parcels. An auxiliary seat, is located to the right of the driver's seat and folds snugly under the cowl when not in use.

Ample storage space has been provided. In addition to the parcel compartment in the interior of the car, there is a large rear deck compartment suitable for carrying luggage, sports equipments etc. An attractive feature for golfers is a golf bag compartment of generous proportions in the left corner of the rear deck which extends beneath the seat and is so constructed that the golf bag and sticks can be carried safely without interfering with the use of the rear deck for other storage purposes.

The Victoria Coupe is upholstered in broadcloth of a pin stripe, brown pattern. Three color combinations of Duco are offered.



Marmon Victoria Coupe, a four-passenger model mounted on the Series 74 chassis

New Type Ford Transmission Bands Simplify Replacement

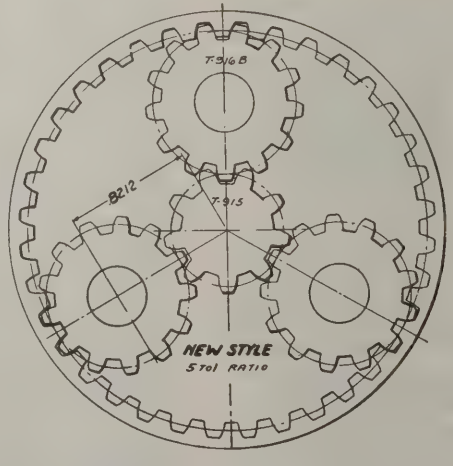
New type transmission bands simplifying replacements and steering gears of 5 to 1 ratio making for easier steering are now fitted on Ford cars and trucks.

It is no longer necessary to remove the transmission cover to change the new type of bands as a detachable ear on one side allows the bands to be withdrawn and replaced through the transmission cover door. The ear is held in place by means of studs in the ear slots, the shoulder of the ear snapping over the end of the brake band, holding it securely in place.

To remove the ear, it is only necessary to insert a tool which is made by bending over the end of a screwdriver one quarter of an inch, through the end of the ear into the square hole in the end of the brake band, lifting up on the tool and forcing the band down and the ear back. After the nuts, washers and springs have been removed from the pedal shafts, the reverse and brake pedals should be pulled out as far as possible, removing the ears as explained. The bands may then be withdrawn from the right side permitting them to follow close to the cover to prevent their distortion.



New transmission bands now used on Fords



The 5 to 1 gears replacing the 4 to 1 gears of the Ford steering gear



Where a car is equipped with the old type of bands, the transmission cover must be removed. The slow speed shaft must be cut off about 7/8 in. from the shoulder and a new type slow speed adjusting screw installed.

Steering gears of 5 to 1 ratio, which were originally installed only in cars equipped with balloon tires, are now being used on all cars regardless of tire equipment. A new steering wheel, 17 in in diameter is used with the new steering gears which together with the increased ratio adds materially to the steering control. The gears used in the new 5 to 1 steering gear are not interchangeable with the old 4 to 1 type and it is very important that mechanics be apprised of the difference of the gears of the two ratios to prevent accidents due to locking.

AUBURN ADDS MODELS

AUBURN, Ind., Aug. 15.—The Auburn Automobile Company has announced the addition of touring cars to both its 6-66 and 8-88 lines. The 6-cylinder touring car is priced at $1,395 and the 8-cylinder touring at $1,995. The equipment on both models includes sun visor, windshield wings, front and rear bumpers, spare tire and cover, and motometer. The finish is a two-tone lacquer and genuine leather upholstery is used.



Seifert convertible seat for automobiles, showing how the back of the front seat is lowered to bring it in alignment with the rear seat cushion. The support for the rear seat cushion also is tipped slightly forward to form a pillow-like structure

Seifert Convertible Automobile Seat

A RATHER novel seat construction for motor cars in which the seat back of the forward seat is so built that it can be readily placed in alignment with the seat proper thereby converting the interior of the vehicle into a sleeping compartment, has been designed and patented by Henry Seifert, 7035 Greenview avenue, Chicago.

The design of the seat is such that it can be applied to a single front seat or to the folding chair type of seat commonly furnished in closed cars. In the latter case it is therefore possible to make one half of the car interior into a sleeping compartment or the entire interior at will.

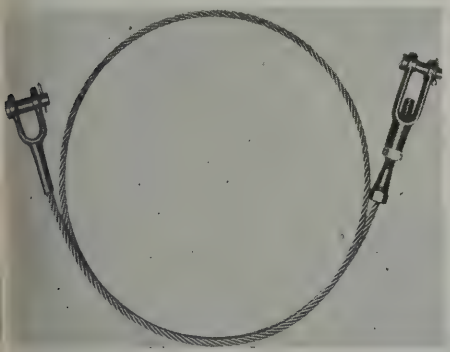
The general layout is shown in the cross sectional views in which A represents lugs supporting the front edge of the seat. Extending along each side of the seat is a bar B and pivotally connected to the inner end of each bar are the curved links C, the outer end of which is connected to D. Parallel bars E extend down the back of the seat and the end of the links D opposite its connection at F with the links C is connected to the bar E at each side of the seat back.

Below the seat and on each side is an angular plate G the vertical flange of which has a slot H cut into it for the pin J in which the latter rides. These two guides determine the position of the seat when it is folded back.

In the back of the seat is a knob K which actuates a spring catch L on each side of the seat. The catches normally engage in recesses cut into the pillar for the doors of the car or wherever they may be conveniently placed. Whenever it is desired to lower the seat backs it is only necessary to release the catches with the knob and drop the backs, during which process the pins J traveling in the slots move the links C and D toward each other.

The rear seat of the car is loosely mounted in order that it might be raised or lowered to provide a pillow-like structure. Adjustment of this is accomplished by a lever M placed in the seat riser. Moving the lever down raises the seat.

The Seifert convertible seat has been brought out particularly to meet what seems to be a more or less increasing demand on the part of the motoring public for a quickly convertible seating arrangement whereby the car may be used for sleeping purposes. The construction is said in no way to interfere with the conventional looks or seating arrangement of a car.



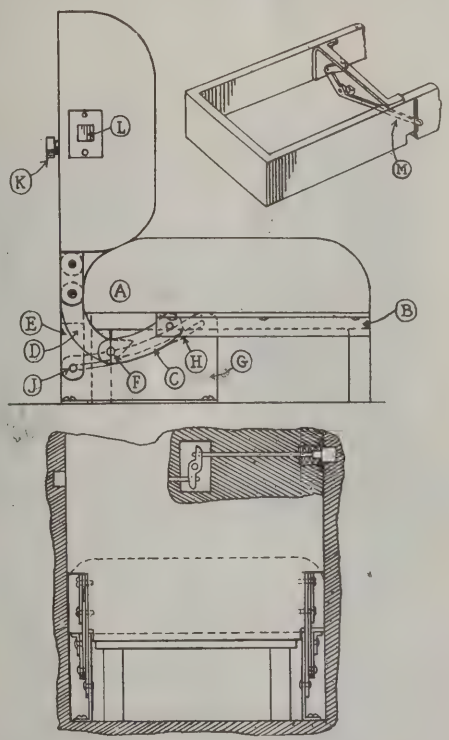
Tru-loc fittings attached to Tru-lay wire rope to be used for operating brakes on motor vehicles

New Cable and Fittings for Motor Car Brakes

New possibilities in cable for automobile brakes exist in the new Tru-lay wire rope and Tru-loc fittings developed by the American Cable Company, New York.

The new brake cable represents a basic change in wire rope making. Each wire and strand is preformed to the exact shape it must assume in the finished rope. Because of this new principle, the wire and strands resist unstranding. The new rope has greater stability and retains its length and diameter better under normal loads.

The new Tru-loc fittings are mechanically applied. They are in the form of a steel sleeve slipped over the unseized end of the rope, a mechanical process flowing the metal down upon the rope. The cable is supplied in correct lengths ready to install for each make of car with fittings especially designed for the brakes in question.



Sectional view of the Seifert convertible seat, showing the general layout of the brackets and sliding members. The reference letters are referred to in the text

PLANE USES NEW FUEL

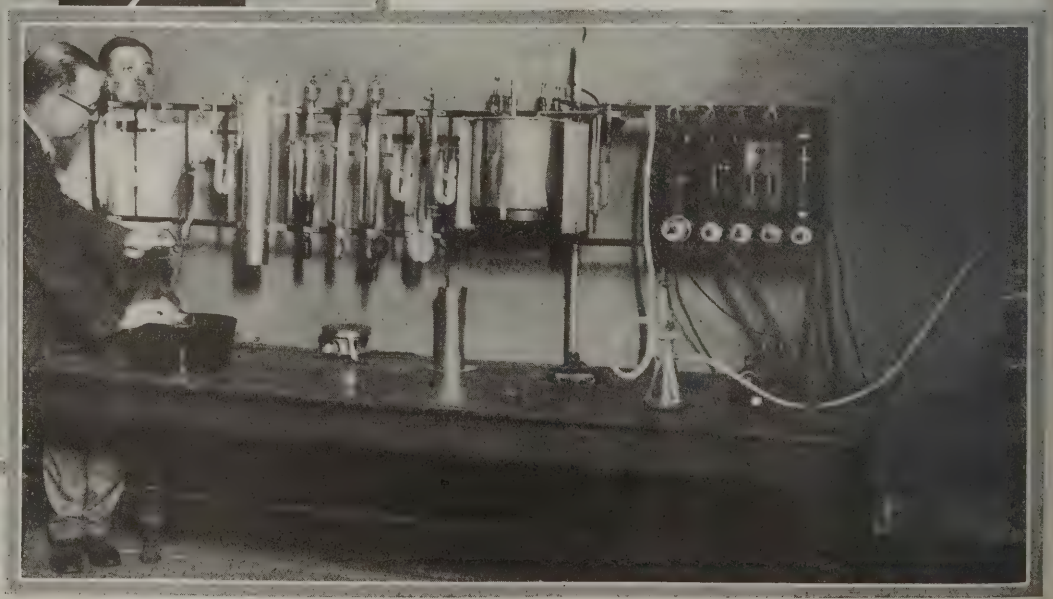
SPOKANE, Wash., Aug. 15.—Lieutenant Nick Mamer, 116th Observation Squadron, National Guard, and a government forest patrol flyer, recently flew a biplane from Spokane to Wallace, Idaho, a distance of 90 miles, in one hour, using an alcohol-base fuel made from cull apples and potatoes. A factory has started production of this fuel here.

MOTOR AGE'S PICTURE PAGES



COMPLETE NON-STOP TRIP. The photograph shows Lieut. Leigh Wade, one of the Army Round-the-World fliers, with his companion, Linton Wells, as they shook hands in the midst of a great crowd at Broadway and 57th street, New York, at the finish of their record non-stop automobile trip across the country from Los Angeles. A Packard eight was used.





AIR TESTED FOR CARBON MONOXIDE. Frederick Kenney, chief chemist, New York City, and Frank Gottisch, working on apparatus they will use to test air on Fifth avenue to determine amount of carbon monoxide discharged from motor exhausts.

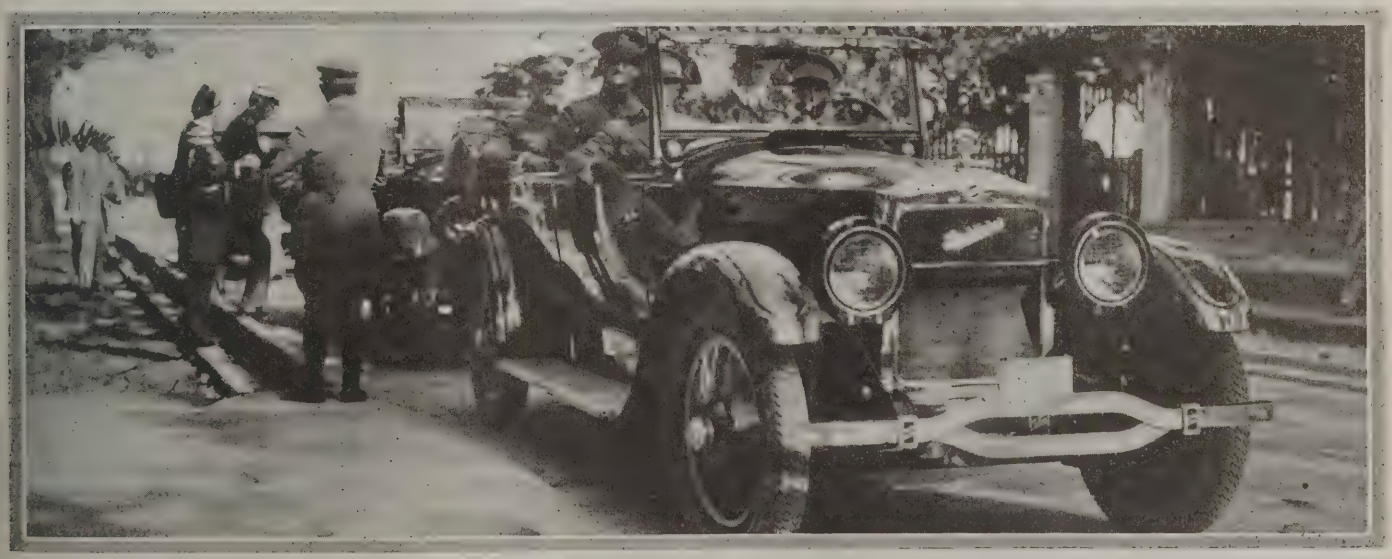
OF AUTOMOTIVE INTEREST



THEY KNOW BEANS. In a motor sales contest recently the side that lost was required to feed the winners with turkey, while they themselves were to eat an entire meal of beans. Members of the sales force of the William L. Hughson Co., San Francisco, won. The losers were the sales force of Bert Moeller, Inc., Sacremento. Nine different kinds of beans were served.



FORSAKES THE MOVIES. Beverley H. Baird, movie double, who has given up that profession after hurting her knee, now operates a gasoline station and is shown fixing one of the many cars that come to her place.



REPRESENTS U. S. At the celebration of the 100th anniversary of the battle of Ayacucho held at Lima, Peru, were special missions from many countries. Gen. Pershing represented the United States, and is shown with part of his staff in the Studebaker which was placed at his disposal.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

From Brakes to Wiring

Q—I would appreciate it if you could answer the following questions in regard to a 1917 model 22-73 Mercer sport touring. The brake, that is the service brake on the back of the transmission was relined and it now has a grinding, rattling noise when the brake is applied and the car is in gear, but when put in neutral and applied when coasting it is quiet.—A. F. Thedorff, 1727 Orange Avenue, Long Beach, Calif.

The noise in the brake is due either to looseness of the transmission main shaft or to backlash some place in the rear axle. Our guess is that the trouble is in the transmission which should be examined carefully and all abnormal up and down and end play removed by adjustment or replacement of bearings.

Q—Where is the adjustment of the hand brakes?

For ordinary adjustment a wing nut is provided which is accessible by removing the front floor boards. In other words the wing nut is mounted at the forward end of the hand brake pull rods. If equalization of the brakes is necessary loosen the lock nut on the ends of the two rods which extend from the rocker shaft to the brake levers. Then turn rods which are provided with right and left hand threads until both brakes have same tension. Then tighten lock nut.

Q—What method is used to prevent the oil from passing through the rear main bearing?

We are of the opinion that the original provision consisted of an oil slinger with a return groove in the bearing babbitt. We have been told from unofficial sources that regrooving of the bearing babbitt is necessary in order to secure a leak proof bearing, and for further details regarding the method of curing this trouble we would advise that you communicate with the manufacturers of the car, The Mercer Motor Company, Trenton, New Jersey, or with the local Mercer agent in your town.

Q—How is the motor timed in regard to valves and magneto?

Timing for Series 4

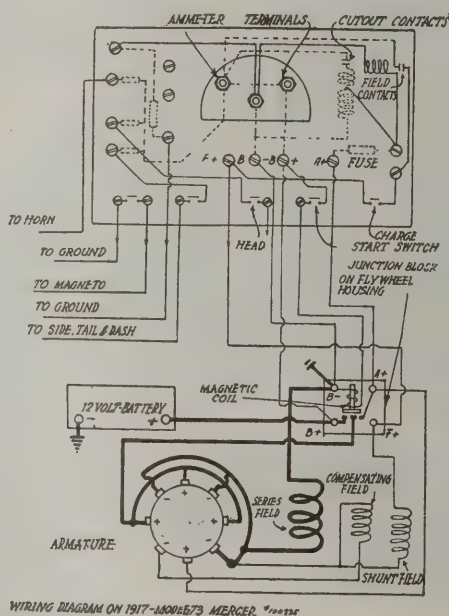
Although we do not have figures concerning the 22-73 the timing for the series 4 which is fundamentally the same is as follows: Inlet opens 5 degrees after upper dead center, and exhaust valve closes 15 degrees after upper dead center. The magneto should be set so that when the controls are in full retard position the points will just start to open when the piston is on top dead center. The recommended exhaust tappet clearance is .006 and for the inlet .004 to .005.

Q—What road speed is this car good for and how fast does the motor turn up? Also gear ratio?

We cannot give you a definite estimate of the speed of any individual car but basing the general run of this model with the average gear ratio and with conditions ideal it should show 70 miles per hour. The engine will turn up to as much as 3100 revolutions per minute approximately. There were four rear axle ratios furnished by the Mercer Company as follows: 2.76 to 1, 3.22 to 1, 3.62 to 1 and 3.78 to 1. We are of the opinion that the 2.76 and the 3.22 were the ratios used on the touring and sport touring.

Q—What size full balloon tires would you recommend for this car?

Either a 21 by 6.20 or a 21 by 6.75. In either case the standing diameter of the wheels will be so near to the original



Wiring of 1917 Mercer Model 22-73

that no noticeable difference will be found in the speedometer reading as regard miles per hour and miles traveled. As this car is powerful it probably would pay you to install the 6 ply type of balloon tire.

Q—Would the steering apparatus have to be changed? It does not steer any too easy now on the road but when the front end is raised up it seems to turn free enough.

The installation of balloon tires will no doubt increase the resistance for steering at low car speed and when parking. For straightaway driving on the road and touring speeds there will be no great difference. The ideal condition would be to increase the ratio between the steering wheel and the road wheel. For further information regarding this we would refer you to the manufacturers of the car or the local maintenance station.

Q—The generator quit working and the lights have given some trouble. In order to check up on this will you kindly supply wiring diagram?

The diagram requested is shown on this page.

Fitting of Piston Rings

Q.—What is the correct way to turn, grind and fit piston rings and is it necessary for them to be eccentric.—A. W. Taberner, 31 Jackson Street, St. Hilda, Melbourne, Victoria, Australia.

This is not a job that should be undertaken by a mechanic in a garage, for the making of piston rings is a business requiring extensive equipment. Both eccentric and concentric rings are on the market and many makes of each type are available. The piston ring should be a good sliding fit in the ring groove in the piston and it should have no appreciable up and down play nor should it bind when rotated. It should also be fit to the proper cylinder so that there is a certain gap at the end. In a Ford for example the lower ring will have a gap of approximately .003 inches, the center gap will be approximately .006 inches and the gap in the upper ring approximately .009 inches.

A Peculiar Knock

Q. I came in contact with a Willys Knight car which had a peculiar knock in the engine. I examined all main, big end and wrist pin bearings, also pistons and rings and all are in good shape. I think the knock must be in the valve arrangement. Kindly explain how to remedy this.

In Knight engines a condition is likely to be encountered which is not experienced in working on poppet valve engines. This is in connection with the head sealing ring which is a ring about one inch wide located in the extension of the cylinder head which fits inside the inner sleeve. When this ring wears loose in the groove the inner sleeve will cause it to move up and down and make a peculiar noise or knock.

A remedy which is applicable when sufficient care is used is to remove the cylinder head in question and carefully peen the portion of the cylinder head both above and below the ring. This will force the material of the head in so as to make the groove narrower and make the ring fit better. It is obvious that this work must be carefully done or the ring will bind in the groove; also if the fit is obtained by striking the head at only a few places the ring will be held due to a few high spots and will soon wear loose again.

Q.—Supply wiring diagram of a 1923 Jewett.

This diagram will be sent you by separate letter.

Planning Your New Building

By TOM WILDER

The READERS' CLEARING HOUSE

Land Should Be Very Valuable to Warrant Three-Story Building

Q. I am erecting a three-story building on a lot fifty feet wide facing main thoroughfare extending back one hundred feet. Want first floor devoted to showroom, offices, stock room with balance of space used for cars and storage. Entrance on left side within building. Elevator in left rear corner and would like to have second floor devoted entirely to shop, third floor for new car and dead storage. L. F. Hart, West Palm Beach, Fla.

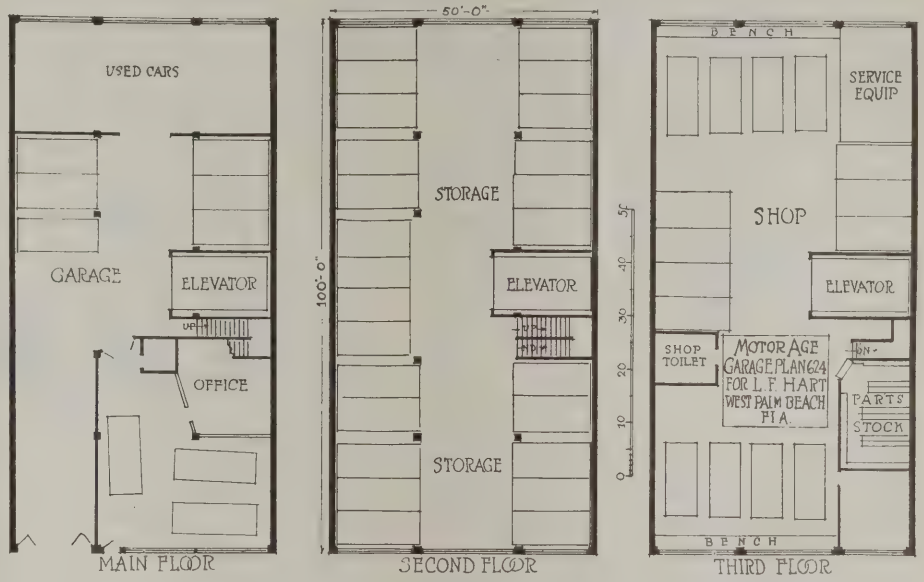
We are sorry that your lot is not a little wider than 50 ft. for while 50 ft. is a fairly good width for a one-story building, with the attendant complication involved in a three-story building, arrangement cannot be quite so good. If the lot were even on a corner, it would be more desirable or if it were 10 or 15 ft. wider you could install a ramp instead of an elevator and this would add greatly to the speed and ease of handling cars. The position we have given the elevator is much more economical of space than the one you suggest and we believe it is just as convenient. The second floor is by all means, the worst place in the building for the shop so we have located it on the third floor, where it can have plenty of light from skylights and since the roof will probably be supported by trusses, there will be no columns to interfere with car movement.

We have shown columns supporting the floor above on the first and second floors, but these could be done away with by the use of heavy girders. The expense of the building, however, would be considerably greater, although we believe the expense would be justified.

The worst feature of the plan in our estimation, is the limited garage space on the main floor. This could be increased by moving the used car showroom, to the front part of the second floor where it could be made of better proportion, and where it would have a better location in relation to the office and new car showroom being directly at the head of the stairs.

In laying out the shop floor we have considered the forward end as being the best place for minor repairs, while more extensive operations might be handled in the rear section, where the major part of the service equipment and machinery necessary for this work is installed. The small room in front of the parts department may be adapted to almost any use such as battery repair, electrical repair welding, in fact anything that seems to be necessary in the line of cars you handle. The man operating this room or his helper, might act as stockkeeper issuing parts to the shop or to customers.

If the used car showroom were moved to the second floor the parts department might be accommodated on the main floor back of the elevator with a dumbwaiter to supply the shop, but this would necessitate a special stock keeper and should be determined by the volume of your parts sales. If the sales are light we would prefer the third floor location.



Even With an Elevator a 50-foot Lot is Rather Cramped. If the Elevator is Turned Lengthwise it Fills Too Much Space

Removal of Clutch Springs

Q.—Again I wish to praise MOTOR AGE for the limitless amount of practical information I have received from the Clearing House. I also wish to express gratitude which I feel for same. I have taken the liberty to ask the following questions. Are the transmissions and clutches interchangeable on a 1919 and 1922 Cole?—Richard E. Saunders, Charlton, Mass.

According to information supplied by the local Cole maintenance organization, the 1919 and 1922 clutch and transmission are interchangeable.

Q.—How are the clutch springs removed? They seem to be difficult. Give any information necessary to accomplish No. 1 question.

Clutch springs are anchored by means of a cupped washer and a grooved key similar to the method of locking used on engine valve stems. As the springs are not very stiff it is possible to compress them by hand, push the cup washer forward and remove the locking washer, which will allow removal of the spring. The transmission and clutch assembly are removed in the same manner as you would remove any other assembly.

It is, of course, first necessary to disconnect the front end of the universal joint and the various brake rods and the transmission shifting lever. When this is done and the bell housing bolts removed and the clutch springs removed it is very easy to withdraw the entire assembly.

Q.—How much would be safe to remove from the cylinder head to increase compression, as you last advised me. This is on a 1922 Cole, serial number 61420.

We would advise removal of 3/64 of an inch from the head.

Q.—The 1919 car in question has the serial No. 55542, and the 1922 car has the serial number 61420. Are these cars of the year I have stated according to serial numbers.

According to our records Cole car bearing serial No. 61420 is a 1920 model. The car bearing serial number 55542 is a 1919 model.

DATA ON COMPRESSION RATIOS

Q.—What is the compression ratio of the 1924 Chevrolet?—Chas. W. Ralstin, 1049 Hosbrook St., Indianapolis, Indiana.

4.3 to 1.

Q.—How high could the compression ratio be raised safely in a stock car?

Approximately 5 to 1.

Q.—How much metal would have to be milled off the block to obtain a ratio of 5 to 1? 6 to 1?

Enough metal should be removed so that the volume of the space above the piston at top center be exactly 1/5 of the total volume when the piston is at bottom center. With regard to raising the ratio to 6 to 1 it is necessary to bring the ratio to 16 2/3 to 100 or 1/6.

Q.—What would be the approximate cost?

The cost of the work after the engine has been brought to the planer or milling machine should not be over $10.

Q.—Would increased compression give greater gas mileage?

Theoretically, yes. In practice we can not state.

Q.—Would the stock cooling system prove adequate in cooling the engine?

We cannot state definitely.

Clearing Up Electrical

The READERS CLEARING HOUSE

EDITED BY A. H. PACKER

North East Motor Generator Circuits

Q.—Show a sketch of the internal circuits and connections of the North East motor generator used on 1915-1916 Dodge Brothers cars. This motor generator has a cutout and regulator in it. We have one of these machines in our shop and it will not open the battery circuit when the engine stops, but keeps right on drawing current from the battery until the battery lead is disconnected. The cutout seems to act normally and the wires do not seem to be burnt in any way. It will not help to put paper between the regular points and between the contact points. As soon as the battery is connected the generator will start to draw current and operates as a motor with the chain off. The starting switch cables are disconnected.—Leaf Mountain Garage, Clitherall, Minn.

The first thing to do would be to carefully check the connections and make sure they are correct, for under some circumstances, improper connection may make the machine operate as a motor. When you are sure that these connections are correct, it would be well to disconnect the two medium heavy wires shown connected to the cutout. One of these is attached to terminal A and the other at terminal C.

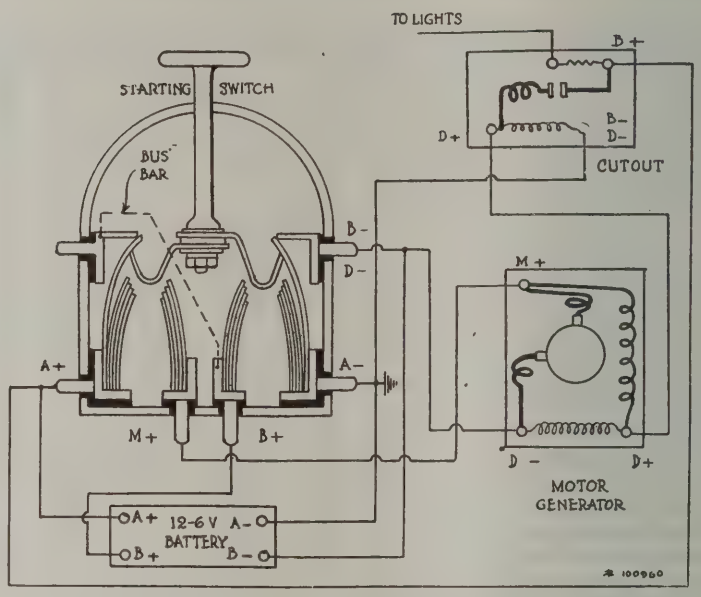
If you disconnect these and find this overcomes the trouble it shows that there is a short circuit in the cutout or in the regulator. With correct connections we have the No. 3 battery wire going to the left hand main brush, but we have the No. 1 battery wire going through the series field, but making no connection with the other brush until either the starting switch is closed or the cutout points are operated. It is therefore easy to see that if these connections are correct there must be something completing the circuit of the No. 1 battery wire to the right hand brush. One way of locating trouble of this sort is to disconnect the various parts of the circuit and then use 110 volt test points to see if any portions are connected which should not be.

For example, with the wires removed from the A and B regulator terminals you could put the 110 volt points on these terminals, and the lamp should not light up. The lower contact of the cutout should be insulated from the upper one and if this insulation is defective, it would cause the condition you describe. Additional information on this system was given on page 52 of November 6th, 1924, issue of MOTOR AGE, the same diagram being shown at that time.

AN OLD TIME SERIES PARALLEL CIRCUIT

Q.—Please send us a wiring diagram for Model 5 Dort, 1915. We have copies of MOTOR AGE since January 1st, 1924.—Auto Wrecking Company, Gatesville, Tex.

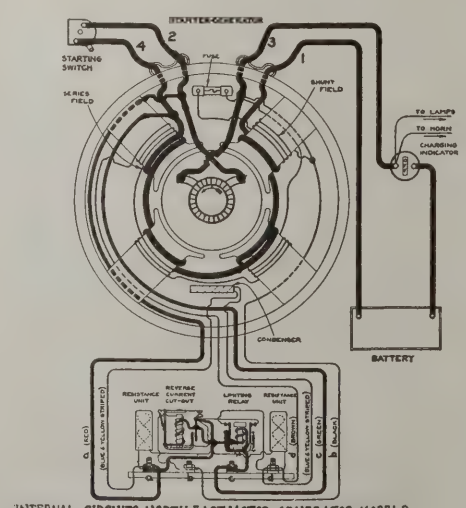
This is a diagram worth keeping so we are publishing it at the top of this page.



Splitdorf series parallel switch used on several old-time cars

To Make the Machine Generate Higher Voltage

Q.—We have a 60-volt 33 ampere Imperial Electric Co. compound wound generator. This machine is driven by a 5-h.p. motor at a speed of 2500 r.p.m. The rated speed of the generator is 2250. We desire to obtain 100 to 110 volts with this machine. We are using it for charging batteries and lighting purposes. Due to irregular current supply from the local power plant the voltage output often gets below the battery current, causing a reversal of polarity. The cutout in the charging line does not work fast enough to prevent this. We have overcome this by cutting out the series winding and running the generator as a straight shunt machine. The present shunt field coils are coupled in series. What effect would it have on the output to couple them in parallel? Can the voltage be raised by winding more wire on the present shunt field coils? Room for this would be available by removing the present series winding from the pole pieces.—Lyells & May Auto Co., Cascade, Idaho.



INTERNAL CIRCUITS NORTH EAST MOTOR GENERATOR MODEL D 1915-16 DODGE

We believe that you can increase the output of this machine by adding as many additional turns to the shunt field coils as the space permits. This means that space made available by removing the series winding will be filled up with additional shunt turns. You will then find that the resistance is considerably higher than at present and that it will be preferable to connecting the fields in parallel. If there are four field poles there will be two pairs of poles in series and these two pairs will be in parallel, so that the field current divides and half of it goes through one pair of coils and the other half through the other pair of coils. We assume that at present there is just one path and that all four field coils are connected in series. Without knowing the magnetic characteristics of the machine it is impossible to state exactly what will happen, but we believe this will give you approximately what you want.

Trouble With Bill Fixit

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Eccentric Commutator will Make Generator Cut Out

Q.—What causes a North East generator from a 1919 model Dodge Brothers car to reduce the charging rate to zero and cut out entirely when the car gains a speed of 30 miles per hour? The armature was out of round, and we had it trued up and new brushes put in.—Reckelberg Garage, Luxemburg, Wis.

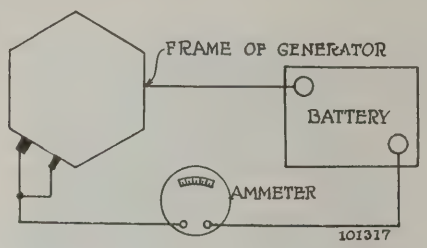
You may have turned the commutator without seeing that the surfaces on which the inner bearing races are supported were turning concentrically. This would mean that while the commutator would be turned round, it would run out of true. This would have the effect of throwing the brushes off of the commutator at high speed. Who ever did the machining on this commutator will know whether he first checked up the bearing races to see whether they turned concentrically or not. A recommended procedure is to turn these armatures by using the bearings themselves, as the centers of rotation, but this makes a complicated machining job.

If this is not the trouble, then there is doubtless trouble in the armature which only shows up at high speed when centrifugal force throws the wires outward and possibly produces a short circuit. Another possibility is that there is intermittent trouble such as a ground in the rocker ring or brushes which only shows up when the engine is rotating and vibrating. To test the armature you can run the machine on a test bench without any current in the shunt field winding. Then a delicate voltmeter can be connected to the two main brushes and the voltage should increase in exact proportion to the increase in speed. If at some speed the voltage suddenly drops off it will show either armature trouble or an eccentric condition which is throwing the brushes from the commutator.

If the trouble is due to eccentricity you can probably check by removing the commutator cover and pressing on the brushes with the fingers, to see if it again causes the machine to generate. This can be done with the car standing still and the engine running at a speed which is the equivalent of 30 miles per hour.

Another possibility is that when the armature was turned it was poorly undercut so that portions of the mica extend up to the surface of the commutator and cause the brushes to make poor contact. Poor spring tension would also cause the brushes to make erratic contact with the commutator.

In putting in new brushes it is essential to get those of the right grade, and it is also necessary to have them correctly installed. The yellow ones which contain the most copper are the main brushes while the black one is the third brush.



Connections for Maxwell generator used in charging radio batteries

The Connection Must Be Right

Q.—We have a Simms-Huff Motor generator that we purchased second hand and wish to use for charging 6-volt radio or automobile type batteries. It will not generate any current but runs very nicely as a motor when connected to a storage battery. Could you suggest the nature of the trouble?—Willard Griswold, Duplainville, Wis.

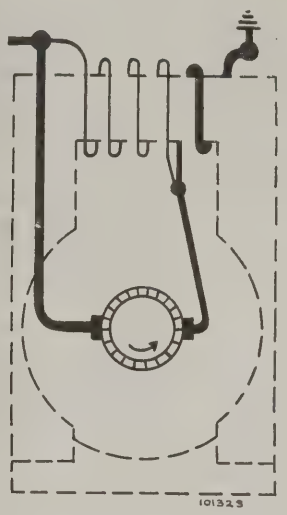
We are showing an illustration of a circuit that we think will be effectual in enabling you to charge a battery from the Simms-Huff motor generator. There are two terminals on this machine, as we understand it, one being connected to three brushes and the other being connected to the field. As you are operating without a regulator you will need to connect these two terminals together and then run a connection to one side of an ammeter. The rest of the circuit is evident from the sketch . The machine should run as a motor when connected in this way and you should then drive it in the same direction only faster.

When running as a motor the ammeter should show discharge, that is with the needle going to one side of the scale, and as you increase the speed by driving the generator the needle should come over to the other side of the ammeter scale, showing that you are getting charging current to the battery. You probably connected one battery post to one generator terminal and the other battery post to the other generator terminal. This operates the machine as a series motor, but it will not generate when connected this way.

Armature and Field Burnt Up—Otherwise Normal

Q.—I am having trouble with an Autolite model G. A. generator used on a model 89-6 Willys Overland. This generator seemed to quit while on the road without any excess heat, but on examination it appeared to be pretty well charred, so I decided to have the armature rewound, but it did not do any good, so I opened the field and found it charred and burnt pretty badly, so I rewound the field myself using wire the same size from another generator. This wire seemed to be all right and while I did not count the turns I put in about the same amount, but did not get any results. Now I would like to have your opinion on this generator and also would like to have an internal wiring diagram of the machine.

The shunt field may be shorted as I used enameled wire and some of the enamel chipped off. The generator seems to build up a small amount at times, but not enough to operate the cutout. It works as a motor and runs at a fair rate of speed.—Clarence Long, Kenton, O.



Circuits of Autolite G A. generator

We are showing a diagram of the internal connections of this machine. It has both a shunt and a reverse series winding, although it would operate as a straight shunt machine except that there would be no regulation and it would send out too much current at high speed. The shunt field should draw about 1.4 amperes on 6 volts and you can make this test to see if the field is badly shorted or not. A slight short in the field winding would do no harm as it merely draws a little extra current and cuts out a few turns, but gives approximately the same number of ampere turns. We would say that if the field current is less than 2 amperes, that the machine should generate.

You should drive it as a generator in the same direction that it runs as a motor. One possibility is that you are driving it the wrong way or that the shunt field is wound in the wrong direction. Winding the shunt field the wrong way may be corrected by reversing the leads at the ends of the coil. In addition to possible trouble in the field it is possible that the armature has been incorrectly wound and if you do not correct the condition readily would suggest your getting in touch with an authorized electrical service station. You should also test the shunt field to see if it is grounded.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Trend of Small Town Dealer Is for Fixed Prices on Repairs

ONE of the most gratifying things to be observed at the present time is the general trend even on the part of small town dealers and shops to the flat rate system of selling maintenance work.

Only the other day the owner of a shop, who by the way handles the Studebaker car, when asked if he sells all his repair work on other makes of cars at a flat rate price, replied "Wherever possible."

Being located in a small town he naturally must work on all makes of cars to make his shop pay and since he is able to quote Studebaker owners contract prices for all work he naturally seeks to extend this to customers driving other makes of cars.

They used to say flat rates could not be established in a shop doing a general line of repair work, but this idea is rapidly becoming discarded since too many shops have shown it can be done —and at a profit.

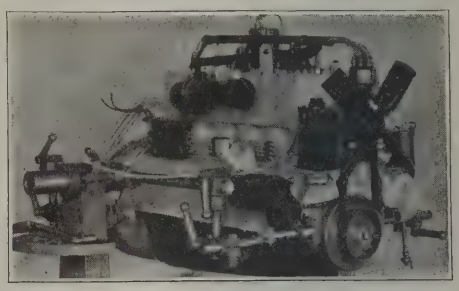
With all the available material to be had from factories and other sources there is little reason why any shop should hold off on the adoption of flat rate. We can divide present day cars into several groups such as the eight in line, V-type eights, the sixes, fours and then with a few makes likes Franklin, Ford and Reo which have certain constructions peculiar to them only, figure out methods and prices that will accurately be in keeping with the nature of any kind of operation done on all the various makes.

We have received letters showing dealers and repairmen using Motor Age's Flat Rate Manual are having excellent results with the schedules given therein, which surely would seem to indicate that flat rate is possible on all cars regardless of the make.

Too Much Bookkeeping?

A subscriber who requests we do not publish his name says he thinks there is too much "red tape" in connection with the flat rate system, and his customers for the most part are willing to accept a maximum estimate on the work he does.

About all we can say to this is that nothing worth while ever was done without effort. Flat rate does mean system and bookkeeping and it has been the total absence of this in the past which forced a good many men out of business. The manufacturers of motor cars have done most of the work when it comes to compiling facts and figures for the assistance of those engaged in the maintenance of motor vehicles and it seems there is little excuse for any shop nowadays to attempt to sell its work on any other than a flat rate basis.



THINGS THAT HELP FLAT RATE

When engines are to be entirely overhauled or certain units taken apart, it usually is best to remove the engine from the frame of the car and place it in an engine stand. Such a stand allows the mechanic to hold the engine at any position desired and infinitely is better than trying to do the work on the floor.

Practically all car makers have a flat system or are compiling them and all the dealer or maintenance man has to do is adapt them to his conditions. Ordinary multiplication and division is about all that is needed. MOTOR AGE's Flat Rate Manual tells how to do this.

The maximum estimate plan is at best a guess and the more we eliminate guesswork both as to the nature of the work involved and the price thereof, the better.

Flat Rate or Fixed Price System

Rochester, N. Y.

To the Editor of MOTOR AGE:

I note in various issues of MOTOR AGE that you refer to the flat rate system also as the fixed price system. It seems to me it woud be a good plan if the industry adopted one or the other name. —Fred V. Miller.

It is true the work of selling service and maintenance at a definite figure has been commonly referred to as the flat rate system and fixed price system. They mean the same thing although probably the expression fixed price is more indicative that a definite charge is made for the work. It would be interesting to hear what other readers have to say about this.

Likes Flat Rate Manual

Groesbeck, Texas.

To the Editor of MOTOR AGE:

Please find enclosed money order for 50c to cover charge for one flat rate manual. We think it a fine thing and are adopting that plan.

—P. M. Dillingham.

MOTOR AGE'S FLAT RATE FORUM

No. 25

FLAT RATES ON HUDSON-ESSEX

REAR AXLE AND DIFFERENTIAL OPERATIONS

Manufacturer's Official Designation		Time Hudson	Essex 4	Essex 6
D- 1	**General Rear Axle Overhaul. Includes inspection and replacement or adjustment of all necessary parts. Use this operation when it is necessary to replace housing assembly or to remove housing for riveting or welding seams**	8½	8½	8½
D- 2	**Renew Ring Gear, Pinion Gear, Bearings and Cups. Replace ring gear, pinion gear, bearings and bearing cups, if necessary. Lubricate pinion bearings and differential housing**	6	6	6
D- 3	**Adjust Rear Exle Gears Without Removing Gear Set Assembly. Aujust pinion and ring gear**	2	2	2
D- 4	**Renew Pinion Gear and Pinion Bearings. Does not include operations on ring gear, differential or differential bearings. Lubricate pinion bearings and differential housings**	5	5	3½
D- 5	**Remove End Play in Rear Axle Pinion. Remove end play in rear axle pinion by adjustment only**	½	½	½
D- 6	**Tighten Rear Wheels on Axle Shafts**	½	½	½
D- 7	**Renew Differential Carrier Gear Set Assembly. Remove old carrier from rear axle housing, assemble new carrier to housing and lubricate**	2½	2½	2½
D- 8	**Adjust End Play in Axle Shafts and Renew Felt Washers, Axle Shafts, Adjusting Nuts and Bearings, if necessary**	1	1	1
D- 9	**Renew Rear Wheel and Inspect Axle Shafts. Replace shaft if bent and adjust end play**	1¼	1¼	1¼
D-10	**Renew Axle Shaft**	1	1	1
D-11	**Tighten Rear Axle "U" Bolts**	½	½	½
D-12	**Frozen Wheels. Add "A" to the above operation numbers and add additional time**	½	½	½

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Eveready Windshield Cleaner

ADVANCED mechanical features are said to be found in the Eveready (Type "B" Improved) Automatic Windshield Cleaner which is being manufactured by the Apex Electric Manufacturing Company, 1410-20 W. 59th street, Chicago. A special feature claimed for this contrivance enables the driver to lock the wiping arm in any position desired. The cleaner operates from suction of the vehicle's engine, connection being made at the intake manifold or vacuum tank. The wiping arm locks up in a corner so it cannot jar down in vision when not in use. It can be operated by hand in an emergency. The instrument comes complete with necessary fittings. Each shipping carton contains 10. Price, black finish $3.50; nickle finish $4.50.



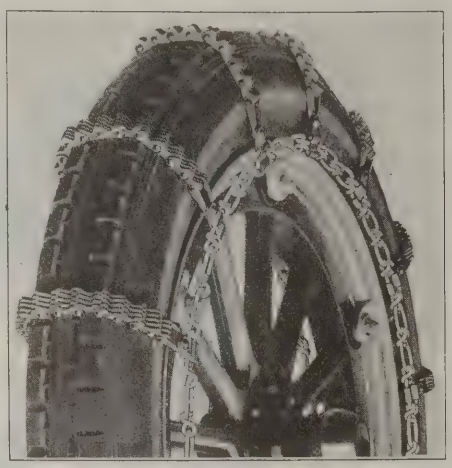
Eveready Windshield Cleaner

Watkins Device

INCREASED gasoline mileage and less crank case oil dilution are claimed for The Watkins Device which is made by the M. & M. Co., Cleveland, Ohio. It consists of a cap at A, installed over the oil filler opening in which is collected the unburned vapors which pass by the pistons into the crank case. These are drawn through a brass tube to the valve at B, which leads the vapors back into the intake manifold. A button, D, on the instrument board controls this valve through a flexible connection, "C."

The valve is opened by pulling the button and it can be regulated to feed as much or little of the vapor to the engine as is desired. By utilizing these vapors which would otherwise be lost, it is claimed that extra mileage is gained. Also that it prevents these vapors from mixing with the crank case oil and diluting it.

Installation is said to be simple and not to require more than half an hour. A $\frac{7}{16}$ in. hole must be drilled in the intake manifold and a hole through the dash to take the flexible control. Its installation does not interfere with filling the crank case with oil in the usual manner. At present it is made only for Fords. Price $5.



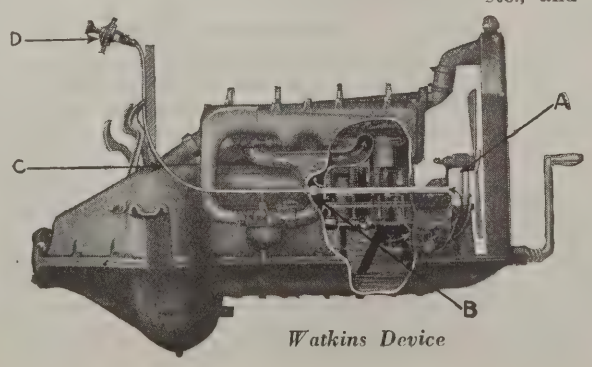
Tiger Claw Chain

Keeping Up Contact With Buyers

"Owner satisfaction" is getting to be an important term in automobile selling. Keeping up contact with owners is getting to be an important part of the motor vehicle merchant's operations.

In some instances automobile dealers assign special men to keep in touch with owners, not primarily as salesmen, but to inquire as to the owner's satisfaction with the car he has bought. This interest pleases the owner and in many instances leads to further business with him.

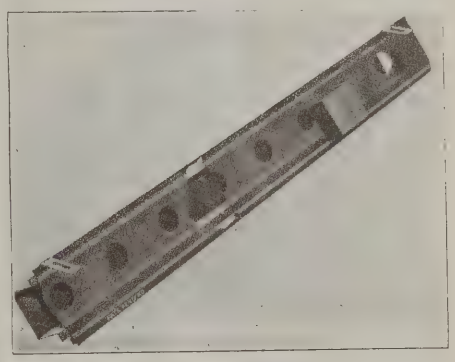
The buyer of an accessory will appreciate it if the accessory dealer or one of his employes would call him up to see if the device he has bought is giving satisfaction. A personal visit and chat, if possible, would not be amiss. This manifestation of interest will capture the confidence of the buyer in a way to bring him back to the store. In addition to that the new contact, itself, might result in an additional sale.



Watkins Device

Tiger Claw Chains

ONE of the latest additions to the market's tire chain offerings is the Tiger Claw Chain which is being produced by the Universal Skid-Less Chain Company, of Niles, Michigan. Slipping or sliding in any direction is said to be impossible when these chains are used because of the corrugated cross links which provide hundreds of points of gripping contact with the surface of the road. Another distinctive feature stressed by the manufacturers is the smooth under-surface of the chain which prevents it from bruising or gouging the tire. Tiger Claw Chains are made in all sizes for both standard and balloon tires. The manufacturers declare there is seldom any necessity for replacing the cross chains, the entire device being able to withstand much heavy wear. Prices for these chains now range from $7 per pair to $13 per pair. It is stated that the list will shortly undergo slight readjustment.



Spon Auto Ventilator

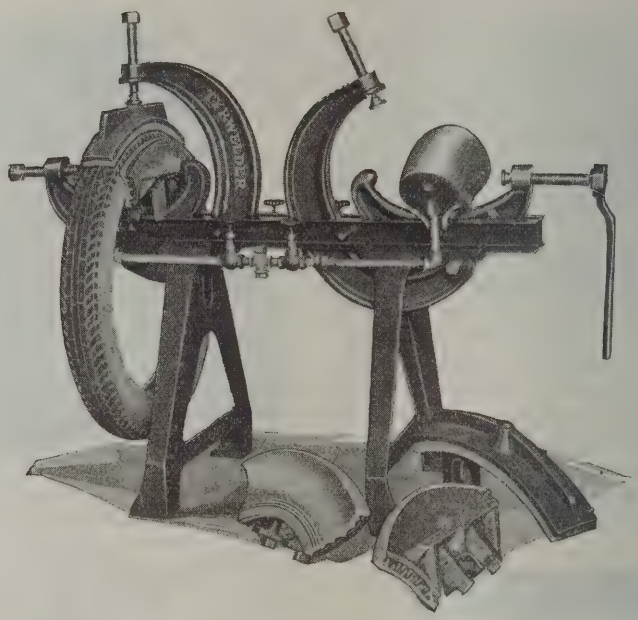
(Cut shown above.)

A VENTILATOR for closed cars is offered to the trade by the Lewis Manufacturing Co., Inc., 210 Orchard avenue, Sharon, Pa. It is known as the Spon Auto Ventilator. It is claimed that the Spon equipment will permit of free cirulation of air within the car without setting up drafts, that it will keep windows from frosting and steaming in cold or rainy weather, that it will not admit rain, snow or sleet and that it will serve as a receptacle for cigar ashes, matches etc., and thus contribute to cleanliness within the vehicle. This ventilator is made of high grade sheet metal attractively finished and enameled and it is said it can be put into position in three minutes without special tools. It is made for all makes and sizes of cars. Price for doors up to 27½ in. wide is $1.50; above that width, $1.75. West of the Mississippi add 25 to the above prices.

GETTING MORE OUT of the SHOP

Tyrewelder

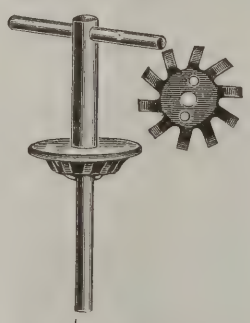
To facilitate balloon and heavy duty truck tires a machine called the Tyrewelder has been developed. It is equipped with three steel plates attached to which are rubber studded cushions. The section in the tire to be repaired is placed over a central steam arm or core. By means of heavy steel clamps and powerful screws, these three rubber cushioned plates press downward and inward on the tire thus holding the repaired section to be vulcanized snugly in contact with the central steam arm. This welds the repair to the tire so that it actually becomes a part of it. The cure is accomplished quickly for the heat is applied directly to the raw portion to be cured rather than having to pass through the tread and outer section first. The resilient rubber cushions take up every inequality of any shaped bead, sidewall or tread of any tire. It eliminates entirely the use of air bags, rubber impression pads, etc. The Tyrewelder is marketed by the Akron Tyrewelder Company, subsidiary of the Akron Equipment Company, Akron, Ohio.



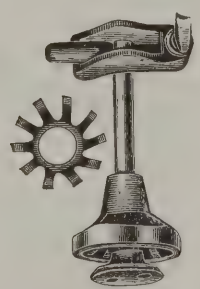
Tyrewelder

Spraker Valve Seat Reamer and Valve Refacer

The Spraker valve seat reamer and valve facer are so constructed that the cutting of the metal is made with a scraping effect, making chattering impossible, it is stated. The blades can be removed and reground with little effort and can be replaced at a slight cost. The curved blades give two cutting edges and the concave cutters naturally give a convex seat. They are made in two sizes, one being 1½ in. for Fords and any 1½ in. valve seat, and the other, 1 21/32 in. suitable for the Fordson engine valves or other valves of the same size. The price complete for the smaller size is $1.25 and for the larger size, $1.50. Extra blades cost 30 cents each. The tool is made by the Spraker Mfg. Co., Indianapolis, Ind.



Spraker valve reamer



Spraker valve refacer

The purpose of this page is to help the shopman keep up with opportunities for time saving and added profits through the medium of new working facilities. If you own a shop do not neglect to read this page weekly. You will find here many valuable suggestions.

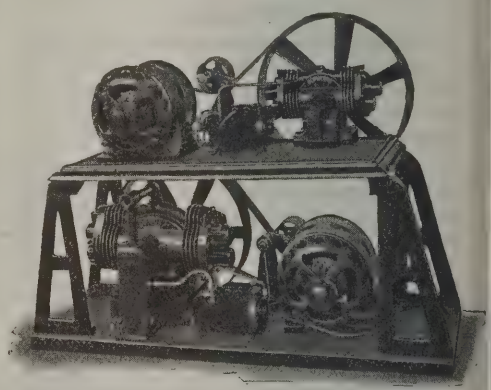
New Weed Sturdy Pliers

The new Weed Sturdy Pliers recently placed on the market by the American Chain Company are especially designed for general garage, service station and taxicab uses as well as for the private car owner who does his own tinkering. They are drop forged and very rugged. They may be used in repairing passenger car tire chains to open and close hooks when installing new cross chains. They are also equipped with a wire-cutting device and measure 16 in. in length and weigh, in carton, 3¼ lbs.

Dunning Compressor

The Dunning Compressor Company of Holmesburg, Philadelphia, who manufacture a unique two cylinder air compressor that has but three moving parts, is now building a special unit for the oil and gasoline trade.

The top section is for tires and general purposes, the pump working at 150 lbs. pressure.



Dunning Air Compressor built for oil and gasoline stations

The bottom section is for a gas system where large volume is required for air lift systems.

Both units are fully automatic, noiseless in operation, and are operated with two 1/2 h. p. motors.



Weed pliers

EDITORIAL

Now We Can Go Ahead

FOR years we have been startled from time to time by the dire predictions of Professor Somebodyorother that the crude oil supply of the country was rapidly being exhausted and that in a few years there wouldn't be any gasoline left to run our automobiles. Then there was talk of this or that substitute fuel that could be produced in the laboratory for a cent or two a gallon.

But we went on running our increasing number of motor vehicles with gasoline. And it appears that we will continue to do so for some years to come.

A Committee of Eleven appointed by the American Petroleum Institute has just made a complete study of the available petroleum resources of the United States and the probable demand for the next 50 years and has published a detailed report that holds little encouragement for the promoter who expects to get rich making a substitute motor fuel—at least for many years to come.

Here two significant paragraphs from this committee's report:

1. There is no immediate danger of the exhaustion of the petroleum reserves of the United States.

2. It is reasonable to assume that a sufficient supply of oil will be available for national defense and for essential uses in the United States beyond the time when science will limit the demand by developing more efficient use of, or substitutes for, oil, or will displace use as a source of power by harnessing a natural energy.

So let's get down to business and keep on making, selling and operating motor vehicles.

Roadsters

WHILE closed cars continue to enjoy the lion's ratio of demand over open cars there is one open unit which has been holding up remarkably well in sales. This is the roadster.

Reports from the trade indicate most pleasing sales of roadsters while factories are giving considerable productive attention to this particular body. In many quarters surprise at the roadster's activity is expressed.

The roadster does not compete with the coach and sedan so extensively as does the touring car. It serves many distinctive purposes which give it certain sales outlets practically to itself. Then it can be curtained more quickly than the touring car—again reducing the force of closed car competition.

Handsome and snappy designs in roadster bodies doubtless have stimulated these sales, but the big contributing factor has been this model's great utility. The roadster is a handy vehicle well answering particular needs of many motor car users.

The Obligation to Make Money

THE man who is engaged in any useful business is under a moral obligation to make money. This may seem inconsistent with the principle of competition and the ever-present demand of the public to be served at the lowest possible cost. Yet it is an indisputable fact.

A useful business is one that renders a service to the public. It fills a need or a desire of the consumer more conveniently, more promptly and more economically than this need or desire can be satisfied in any other way. A business cannot continue to render this service unless it is operated at a profit. If it is an unprofitable enterprise it soon falls by the way and its wreckage carries financial injury far beyond its own confines. The business that is economically operated and at the same time makes a reasonable profit is the one that deserves the patronage of the public, because it is the one that will continue to render a regular and useful service to the public.

There Must Be Progress

SEVERAL years ago MOTOR AGE announced in its news columns the appearance of an automobile at the National Shows with a fabric-covered body. Since then we have heard very little of any further developments along the line of pioneering indicated by that event. Now, however, one of the oldest motor car manufacturers has placed on the market a car which has a body finished with that type of fabric.

The fabric body as mounted today does not closely resemble the early experimental models. In the present-day adaptation of this material the hood is left with its conventional metal covering and metal fenders are retained. But the rest of the body is covered with fabric which is said to possess the advantages of being durable, easily cleaned, easily repaired, light, noiseless and attractive in appearance.

The public will be the judge of this type of passenger car finish. What the public decrees will be accepted by the manufacturers. But we have no way of knowing the verdict of the public until the article is offered to it. Then it speaks quickly. To test out public opinion is a function of the manufacturers, and the more we have of such testing the more progress will there be in the automotive industry.

Price Cuts Greatly Stimulate Business

Production and Sales Both At Highest Levels of Year

Bus and Truck Builders Especially Fortunate Because Demand Precludes Need of Reductions

NEW YORK, Aug. 19.—Bargain hunters are thronging the automobile salesrooms these days. The wave of price cutting has undoubtedly stimulated business, and with the lower price in most instances have come new models in attractive colors and body designs well calculated to catch the fancy of the prospective purchaser.

Both production and sales are running at the highest level of the industry for this time of year. There has been little, if any, over-production so far, and dealers' stocks are in excellent condition, with some of them complaining of inability to obtain sufficient numbers of the new cars. The used car situation is not quite so favorable, since lower prices on the new models have had the effect of making the used cars harder to dispose of without reductions.

Bus and truck manufacturers are in even better condition than the car makers, since the demand for their products has been so great there was no need for price cuts. Parts and accessories manufacturers are sharing in the general prosperity, a compilation by *Automotive Industries* showing that profits in this end of the business increased in the first six months of 1925 an average of 89 per cent over the corresponding period of last year.

Profits for car manufacturers are not likely to be as great during the last half of the year as they were in the first, as they are now feeling perhaps the fiercest competition they have ever known. The price cuts, however, are not as damaging financially as they might appear, as notable economies in production have been introduced in most instances. The feeling is that no further reductions will be made, except in two or three possible cases.

A great deal of attention is being directed to foreign sales, as opportunities for the export of American cars were never better. Cuba has launched a $300,000,000 road building project that should mnea large sales of American cars. Germany has abandoned its restrictions on automobiles, which limited manufacturers to four cars a month, and replaced them with a tariff which, while high, will permit American makers to compete.

Committee Is Appointed to Plan Standard Parts Show

DETROIT, Aug. 15.—Announcement of a committee to arrange for the annual convention and show of the National Standard Parts Association was made here today by C. B. Fraser, secretary of the Association. The date of the convention is November 5 to 7, inclusive, and it will be held in Chicago. It will be opened to manufacturers and jobbers and nonmembers by special invitation.

The personnel of the various committees for the show which was placed in the hands of the show committee follows: President, A. T. Haugh, chairman, King Quality Products Company, Inc., Buffalo, N. Y.; Manufacturers, Chas. W. Moffett, Warren Gear Products Company, Warren, Pa., D. W. Rodgers, Federal-Mogul Corporation, Detroit; Jobbers, C. J. Pierson, P-D Auto Parts, Inc., Meriden, Conn., W. E. Mills, Auto Parts Company, St. Louis, Mo.

The show committee had divided its work among various committees as follows: Publicity, T. R. Walton, chairman, James Motor Valve Company, Detroit, C. J. Parks, American Piston & Machine Company, Detroit; Entertainment, J. G. Winterfeldt, chairman, Well-Ever Chicago Sales Company, Chicago, Ill., C. B. Fraser, secretary of the association.

The invitation and attendance committee is composed of D. W. Rodger as chairman, and secretary C. B. Fraser, Garland Ames of the Timing Gear Corp., Chicago, sergeant-at-arms,

University Offers Traffic Course

WASHINGTON, Aug. 15. — A course in traffic, unique in university circles, is being conducted here by Dr. F. A. Moss, professor of psychology at George Washington University. The course is conducted as a seminar, and is open only to graduate students.

Dr. Moss is preparing a series of lectures, some of which have dealt with the analysis of the psychological factor of automobile driving, causes of accidents, the element of emotional stability of drivers, and the use of psychological tests to determine a person's capacity to drive.

Professor Moss, who conceived this course in traffic, is secretary of the Hoover committee on causes of accidents, and on one of the district advisory committees. He has recently devised a series of tests to be given to automobile drivers. The course is proving so valuable that Professor Moss is contemplating conducting it next year.

Mexican Highway Building Will be Started at Once

Carolina Engineer to Have Direct Charge Under Commission of Three Government Officials

LAREDO, Tex., Aug. 15.—Construction of Mexico's system of modern highways will be under the direction of a National Highway Commission of three members selected by President Plutarco Elias Calles, according to Charles M. Upham state highway engineer of North Carolina, who was recently appointed consulting highway engineer of Mexico. Mr Upham passed through here on his way home from a visit to Mexico City where he conferred with government officials.

"A tax of 6 cents per gallon on gasoline, and a graduating tax on tobacco will provide the finances," he said. "The commission now has about $500,000 per month available from this source. This is expected to increase to about $12,000,000 per year.

"In my first official report to the Mexican government submitted August 3, I recommended that we begin work at once on the road between the Mexico City and Pueblo, a distance of 72 miles, and also on the road between the capital and Pachuca, 54 miles. This work was contracted to Byrne Brothers of Chicago, at an estimated cost of $2,286,950, or, about $18,100 per mile.

"Local conditions made an immediate start on these two stretches feasible. Surveying and aerial photographic work on the other links will be carried forward at once, the first work to be on the Laredo-Mexico City line.

"The abundance of local material of almost every kind, and also the ample and cheap labor makes vast economies in construction possible. The main highway arteries will be fashioned after the standard American type, about 19 feet wide and of varying construction to meet the traffic demands.

"I recommended that about $300,000 worth of road building machinery be purchased at once. This will all be of the most modern, portable type, and should be available in the next month for work to start."

MOON SALES INCREASE

ST. LOUIS, Aug. 15.—Sales of Moon cars in July were 59 per cent higher than in July, 1924, according to Frederick H. Rengers, general sales manager of the Moon Motor Car Co. Shipments were well distributed over the seven body styles of the Moon cars. On nearly every day of the month there were at the factory a number of dealers asking for cars and in many cases these dealers brought from two to five assistants with them in order to drive away the cars they had on order rather than have them shipped

Paris American Car Show Now Definitely Abandoned

Project, if Carried Out, Would Cause Disqualification in National Show of All Who Participate

PARIS, Aug. 1. — (By Mail) — The French automobile industry having decided against a show this year, persistent rumors are circulating in Paris to the effect that dealers in American cars will organize their own exhibition in the French capital. Traced to its source, it appears that this project originated with the European branch of General Motors, but it has been definitely abandoned, for it would cause those taking part in it to be disqualified from the official French show.

Henri Cezanne, general manager of the Paris Salon, stated that no public exhibition of any kind will be tolerated; an exception, however, will be made for used car shows, providing they do not last more than four days. Dealers at Lille announce a show for the Fall, but manufacturers have been warned that if they take part in it they will not be allowed to exhibit in the Grand Palais in 1926.

M. Boehr, who holds the Chrysler concession for France, is completing an exhibition hall, declared to have cost 8,000,000 francs, and will inaugurate it in early October with a public show of all makes of cars. The hall, which is the biggest and most luxurious in the world devoted to the automobile industry, has a floor space measuring 200 feet by 165 feet with perfect roof lighting and no pillars, and above it are four closed tennis courts with rubber floors. After the October show this hall will be used as an automobile showroom. The building adjoins the St. Didier garage of which Baehr is the owner, and is being fitted up in a most luxurious manner. Offices surround the main hall; there is a gallery for storage; bathrooms, showers, an American bar and private salons are provided.

Various French makers are considering the possibiblity of inviting their dealers to Paris at the time the show is usually held. The main difficulty is that French dealers generally have the agency for several makes, and if any manufacturer took the initative of inviting his dealers to Paris the other makers would get all advantages without any cost. Joint action among manufacturers is impossible for this would be considered equivalent to a public show and would be disapproved by the Paris show management.

Production of Hannum Gear Expected Within 90 Days

MILWAUKEE, Wis., Aug. 15.—Actual production within 90 days, of the Hannum steering gear, is announced by George H. Hannum, president and general manager of the newly re-organized Hannum Manufacturing Company of Milwaukee.

The Hannum Manufacturing Company has taken over the property of the Lavine Gear Company. In addition to continuing to service all former products of the Lavine Gear Company, the Hannum Manufacturing Company is engaged in rearranging its factory and machinery for the production of the Hannum gear, a gear especially designed to take care of the additional demands of balloon tires upon the steering assembly.

The present plans are being so worked out that additional factory space on the adjacent land to the present plant can be swung into production without interfering with the present factory.

The officers of the new organization are: George H. Hannum, president and general manager; T. R. Johnson, Vice president and sales manager; Herman Uihlein, chairman of the board; Arthur Westfall, secretary and treasurer; Arthur Groth, assistant secretary and treasurer. The first four named above, together with Walter Malotte, form the board of directors.

Nash Gives Camp Lodge to Boys

MILWAUKEE, Aug. 15.—C. W. Nash, president of the Nash Motors Company, is donor of Nash Lodge, recently erected at Camp Manitowish in northern Wisconsin by the state Y. M. C. A. The lodge is a big one, 128 feet long and 32 feet wide, with floor space exceeding 7,000 square feet. Mr. Nash presented the building for use by the boys of the state with this thought:

"I believe that the greatest good you can do for America, in addition to what you are doing, is to use these boys' camps to bring together boys of all denominations. If I were to start out today to map out a work that I should wish to accomplish before I die, it would be to bring into close association, all religious organizations of this great world."

BRIGGS EARNS $2.04 SHARE

DETROIT, Aug. 15.—Briggs Manufacturing Co. reports for the first half year, after depreciation, taxes, etc., net income of $4,067,265, equivalent to $2.04 per share earned on 1,999,688 shares outstanding after recapitalization. Second quarter earnings were $1,678,449, compared with $2,388,816 in the first quarter. According to W. O. Briggs, president, earnings for the two quarters reflect the expense of radical changes in body manufacturing. Replacement of wood by steel parts necessitated additional plants and equipment. Larger earnings are expected in the last half and body units manufactured in the first six months were in excess of those manufactured last year.

General Motors Denies Plan to Produce "Miracle Engine"

Authorities Discredit Reports of Discovery of New Fuel, Said to Revolutionize Industry

NEW YORK, Aug. 15.—Sensational news dispatches concerning a "new" synthetic fuel termed synthol, and assertions that it is to be produced by General Motors and other du Pont interests in cooperation with the Standard Oil Co., are discredited by authoritative sources here. Officials of the Standard Oil Co. of New Jersey deny that they have any intention of marketing a new synthetic fuel, while President Alfred T. Sloan, Jr., of the General Motors Corp. characterizes the statements that his company is to make the fuel and a new high compression engine giving double the power for the same weight as being ridiculous on their face and without the slightest foundation.

Both General Motors and Standard Oil officials still are interested in ethyl gasoline and still are awaiting the report of the Surgeon General in respect to the effect upon the public health of the use of this fuel, but this is in no way related to the fuel termed synthol, the manufacture of which is said to be covered by German patents turned over to the Chemical Foundation by the alien property custodian and recently "discovered" by a government chemist engaged in preparing a Department of Commerce circular about Methyl alcohol.

A legal fight over the processes has been impending for some time between the Germans and American interests, but with the discovery of the secrets of the key patent here, legal authorities say there is no doubt to the American rights.

The thirteen patents were among 4,500 seized during the war by the alien property custodian and turned over to the Government-formed Chemical Foundation Inc., for licensing to American manufacturers. They cost the foundation a lump sum of $250,000 or at the rate of $50 each.

Prices Reduced by Dodge Brothers From $10 to $60

DETROIT, Aug. 17.—Due to increased production a reduction of from $10 to $60 in the price of all models, with the exception of the roadster and chassis, was announced today by Dodge Brothers, Inc. The new prices follow:

Standard Models

Touring	$ 875
Coupe	960
"B" Sedan	1,045
"A" Sedan	1,195
Coach	1,035
Panel Commercial	960
Stream Line Commercial	885

Special Models

Touring	$ 975
Coupe	1,060
"B" Sedan	1,145
"A" Sedan	1,380
Coach	1,135

Treasury Amends Excise Tax on Automobile Parts

New Ruling Removes Levy on Accessories When Used by Makers of Other Than Motor Cars.

WASHINGTON, Aug. 13.—The Treasury Department this week issued amended excise tax regulations covering automobile and motorcycle parts and accessories, which exempt from taxation these accessories when used with other commercial articles. The new regulations, which are retroactive to July 3, 1924, make a drastic change in the administration of excise taxes on automobile parts, as heretofore some accessories, such as spark plugs, were taxed as automobile parts whether used on automobiles or boats.

The amended regulations provide that the last paragraph of Article 16, Regulation 47, 1924 edition, are to read as follows:

"Parts or accessories for automobile chassis, automobile bodies and motorcycles primarily adapted for use on or in connection therewith when sold by the manufacturer thereof and used for any other purpose are not taxable provided the purchaser files with his order a statement that such parts or accessories are to be used on or in connection with another article of commerce not enumerated in sub-divisions (1), (2), or (3) of section 600 and further provide that the parts or accessories are used according to the certificate.

"For example, a self starter primarily adapted for use on an automobile, if sold to a manufacturer of motor boats, such manufacturer stating in his order that it is to be used in the manufacture of a motor boat and not upon an automobile, is not taxable provided it be used in accordance with the certificate."

New Types Reflect Design Trend

(*Continued from page* 13)

The application of gear grinding to transmission gears after hardening has lagged a long way behind the development of practical gear grinders, but gradually the practice seems to spread. To the several firms having adopted it in the past there has now been added the Chrysler Motor Corp., which grinds all of the gears in its transmission that are likely to be troublesome from the noise standpoint. In this connection it is interesting to note that Chrysler has changed from the stub tooth, in general use in transmission gears, to the full depth tooth, thus confirming the assertion which has been made by a number of investigators that the full depth tooth is decidedly more quiet, if other things are equal.

Few changes in connection with brakes are mentioned in the descriptions of new models. Those who have been using four wheel brakes continue to fit them, in most cases without alteration, while those who still maintain these brakes are not necessary on their particular models do not seem inclined to alter their position. The period of feverish activity in brake development seems to be past. In one case application of the brakes is rendered easier by giving the rear brakes a greater wrap.

Changes in body lines, in trimmings, color schemes and items of body equipment are numerous and in spite of a few instances where the chief consideration evidently has been a lowering of manufacturing cost, it is undoubtedly true that the 1926 car will be an all around improvement over that of any previous year.

Nevada Bans Free Tourist Camps

SAN FRANCISCO, Aug. 15.—Abandonment of free automobile camps by practically every town in the state is announced by the Highway Commission of Nevada. Nominal charges are being imposed in all the municipal camps which formerly were free, in an effort to do away with the abuses of the camps encountered under the free system. Nevada officials say that the free camps were not patronized by a desirable element of motorists; that they attracted petty criminals, who used the camps as centers from which to prey on the communities; and that a number of persons found in these camps eventually became public charges on the state and the communities. Reno led the way last year in abolishing its free municipal camps and the other cities of Nevada followed this year.

Stutz Production in July Is Ahead of June Record

INDIANAPOLIS, Aug. 15.—Stutz Motor Car Company of America, from records recently completed, announces that its July production and shipments were 380 per cent of last year's mark, and this big gain was made in spite of the fact that the first three days of the month were given over to completion of an inventory started in late June, and the holiday of July Fourth also caused another productionless day.

The July output and shipment figures also beat the record established in June and the present month activity forecasts that August production will at least approach last month's mark.

The records made by the plant and the sales organization throughout the land for the 1925 season have surpassed all expectations and tentative schedules laid out when Fredrick E. Moskovics took over active management of the Stutz company this spring.

Philippines Seen as Future Source of Rubber for U. S

Secretary Hoover Believes Abou 70,000 Tons of Raw Product Could Be Grown at Present

WASHINGTON, Aug. 15.—The Philip pine Islands, with a potential rubbe production of 70,000 tons annually, ma be the answer to the British Rubbe monopoly, which controls a big portio of the world's supply of this raw ma terial, the Department of Commerce an nounced here this week.

A survey directed by Secretary of Com merce Hoover indicates that condition in the Philippines are more favorabl to cultivation of rubber than those i Sumatra and Malaya, now the princi pal producing centers of the world American manufacturers consume nearly 350,000 tons of raw rubber las year, paying prices virtually dictated b the British monopoly. Officials declare that the potential Philippine outpu would put a "big dent" in the foreig supply control.

The report of the commission investi gating conditions in the islands declare that "foreign" capital is required fo the establishment of plantations. Thi capital is, of course, available in th United States where bankers are carry ing more than $10,000,000,000 invested i foreign enterprise.

"Regarding soil, topography and ac cessibility there are large areas in th Philippines that if utilized for rubbe production, would be superior to th lands now generally available for new plantations in Sumatra and Malaya," th report said.

"With a population of more than 10, 000,000 in the islands it is believed tha the more congested provinces togethe with local labor, might furnish a suffi cient force to produce 70,000 tons o rubber yearly."

Members of the commission feel tha steps might be taken by the governmen to encourage natives to plant rubber with their annual crops. Such a plan, it was explained, would be in harmony with the present land policy of the Philip pine government, helping to solve the problem of inducing the so-called caingin farmer to become a permanent land holder. If carried out officials say it would increase the productive wealth o the islands.

"The capital cost of bringing European owned rubber plantations into bearing in the Middle East averages $250 an acre," the report declared. "In the Philippines incomplete figures indicate a cost of from $100 to $200 an acre."

Officials said that production costs in plantations financed and managed by American interests might be considerably lower in view of the more efficient methods common to industry of this country. Labor conditions likewise are better in the Philippines than in other eastern centers, the report said.

Extra Space Is Provided for Automobile Salon This Year

Over 110 Cars With Custom Bodies Will Be Shown—Added Room Allows 34 Additional Entries

NEW YORK, Aug. 15.—To meet the demand for space to exhibitor motor cars de luxe at the Twenty-first Annual Automobile Salon, arrangements have been made to show 24 more cars than has heretofore been possible at the Commodore, New York, where this exhibition has been held for many years. The cutting of a new doorway from the main ball room has made available a suite of large private reception rooms and in addition there will be an overflow exhibit of or more cars downstairs in the hotel's main lobby.

The forthcoming Automobile Salon, the date of which is November 15 to 21, will include by a wide margin the largest exclusive exhibit of fine motor cars ever staged anywhere in the world. There will be more than 110 individual cars, each mounting a specially designed and built custom body.

Six nations, France, Italy, Belgium, England, Germany, and the United States, will be represented among the exhibits, which are: Amilcar, Brewster, Cunningham, Duesenberg, Isotta-Fraschini, Mercedes, Minerva, Renault, and Rolls Royce; exhibited by coachmakers, Cadillac, Franklin, Lincoln, Locomobile, Marmon, Packard, Pierce-Arrow, and Wills Sainte Claire. Special coachwork exhibits will be made by Brewster, Brunn, Derham, de Causse, Dietrich, Fisher, Fleetwood, Hollbrook, Judkins, Le Baron, Locke, Merrimac, Rollston and Willoughby.

Of hardly secondary interest will be the equally complete showing of the latest developments in body finishes, upholstery, equipment, and accessories. An outstanding feature will be the improvements in chassis engineering as found in the latest models of the worlds leading makers of high priced cars. Thus a record brbeaking attendance of motorists and of executives and engineers from the entire automobile industry seems assured.

New Car Registrations in Iowa Ahead of Last Year

DES MOINES, Ia., Aug. 8.—Registrations of new cars in Iowa for the first six months of 1925 totaled 41,927, or 4,628 greater than the 37,299 which were registered during the same period of 1924. May was the only month which showed a registration less than the corresponding month of last year.

Registrations by months follow:

For 1925—January, 3,348; February, 3,579; March, 5,285; April, 12,956; May, 10,368; June, 6,391. Total—41,927.

For 1924—January, 2,240; February, 2,611; March, 3,010; April, 11,888; May, 11,525; June, 6,025. Total—37,299.

Registrations in Polk county were slightly below last year. During the first six months of 1924, 2,768 new cars were registered, compared to the 2,766 registered this year during the same period. Truck registrations during the first six months were 212. During the same period last year, 252 new trucks were purchased in Polk county.

Used Essex Axle Court Feature

MILWAUKEE, Aug. 15.—A matter of $50 to $80 difference in the price of the rear axle of a used Essex car saved Durbin D. Rosedale, deputy sheriff of South Milwaukee from being bound over to municipal court on a charge of manslaughter. The charge was dismissed by Judge Page when it was shown that the rear end of a used Essex car is valued at from $70 to $100.

Rosedale shot and killed Edward Drutkowski when he caught the youth and another young man removing the rear axle of a wrecked Essex automobile. Relatives of the slain boy insisted upon the arrest of Rosedale.

The state's contention was that Drutkowski at worst was caught committing only a misdemeanor, petit larceny, and that no officer was justified in such a case. The defense argued that Drutkowski's offense was larceny, a felony which justified the shooting. Theft of anything more than $20 is larceny in Wisconsin.

Peerless Announces Price Reductions on Both Lines

CLEVELAND, Aug. 15.—The following price reductions on Peerless eights and sixes have been announced by Edward Ver Linden, president and general manager of the Peerless Motor Car Co.

Peerless Equiposed Eight

	Old Price	New Price
Four-passenger Phaeton	$2,945	$2,845
Seven-passenger Phaeton	2,990	2,895
Four-passenger Victoria	3,545	3,245
Five-passenger Coupe	3,595	3,295
Five-passenger Sedan	3,895	3,495
Seven-passenger Sedan	3,995	3,595
Limousine	4,195	3,795

Peerless Six

	Old Price	New Price
Five-Passenger Phaeton	$1,895	$1,895
Seven-passenger Phaeton	1,995	------
Sport Roadster	2,285	2,195
Five-passenger Coupe	2,495	2,295
Five-passenger Sedan	2,565	2,395
Seven-passenger Sedan	2,765	2,595
Limousine	2,925	2,695

LEWIS PLANNING MOTORS

LOS ANGELES, Aug. 15.—Dave Lewis, racing driver who placed a Junior Eight Special second in the 1925 Indianapolis speedway classic, arrived last week in Los Angeles and is associated with Harry Miller in working out plans for the new 91-cubic-inch racing motors that are shortly to be offered to speed fans the world over.

Ford Completes Purchase Of Stout Airplane Assets

No Quantity Production Planned As Yet But Planes Will Be Used to Connect Plants

DETROIT, Aug. 15.—By completing the purchase of the Stout Metal Airplane Company today at a figure estimated to involve $1,000,000, Henry Ford has added to the resources of his organization the latest and fastest mode of transportation. Operating as he does his own railroad and steamship lines, the airplane will fulfill certain requirements with which the other lines of travel are unable to cope.

Henry Ford is not expected to commence upon quantity production of the metal planes, but will continue to build the machines for the purpose of providing closer contact with the various assembly plants and the main offices. In this manner it is planned eventually to have a network of air routes which will link every assembly plant with Detroit and at the same time cover practically the entire country.

At the present time the airplanes operating daily between Detroit and the Chicago and Cleveland plants are employed in transporting official mail and certain small parts used in the assembly of the Ford cars such as headlights and other electrical equipment, tools, body parts, etc. Even with the precision of latest assembly methods, there are occasions when costly tie-ups arise through delays in receiving certain materials. By using air transportation the Ford Company will be able to ship to any of its assembly plants the necessary material, thereby relieving the situation and enabling production to be continued with little loss of time.

On July 31, the Ford Motor Company became a manufacturer of airplanes by purchasing all stock and assets of the Stout Metal Airplane Company. The building of the Stout monoplanes will henceforth be carried on by the Stout Metal Airplane division of the Ford Motor Company and operations will be continued at the Ford Airport, Dearborn, as formerly where four planes have already been built and others are under construction.

William B. Stout, who developed the present model after 15 years of experimentation, remains in charge of the plane manufacture, while the personnel of engineers, mechanics and pilots has also been retained. The association of the Stout Company with the Ford organization began less than 12 months ago when on completion of the airplane factory building at the Ford Airport, Henry Ford and Edsel Ford contributed to the development of the Stout plane, of which only one of the present type existed.

While Mr. Henry Ford has evinced a technical interest in airplanes, his enthusiasm has been confined to the engineering problems involved.

Federal Reserve Sees More Than Normal Sales Volume

Entire Industry Declared in Report to Be Showing Greater Activity Than Year Ago

WASHINGTON, Aug. 15.—The Federal Reserve Board in its August bulletin just made public here reports that "the automobile industry is enjoying continued activity at a fairly high rate."

"Production during June," continues the board's official resume of the automobile industry's standing, "although slightly less than in April and May, was greater than in the corresponding month of previous years, and the total output for the first six months of the year also established a new high record.

"About 350,000 passenger cars were produced in the United States during June, as compared with a maximum of 376,000 in April and with 214,000 in June, 1924. Truck production declined from 41,000 in May to 36,000 in June, but exceeded figures for any month of last year. Reports from the industry in July indicate further seasonal declines in production schedules; buyers are apapparently waiting for the new models which are expected on the market soon.

"Shipments of automobiles in June were less than in May, but much larger than a year before. Certain large manufacturers, reporting to the Federal Reserve Bank of Chicago, indicated that their sales to dealers and dealers' sales to users during June were approximately equal to each other, whereas in April and May and in June of last year dealers received more cars than they sold. Wholesale distribution, according to certain Middle Western dealers, was less in June than in May, but more than double that for June, 1924. Retail sales increased as compared with both of the months with which comparisons were given. Stocks of cars held by dealers decreased.

"Crude rubber has continued its sharp price advance, and during July spot quotations reached $1.20 a pound, as compared with about 20 cents a year earlier. Rather large reductions occurred later in the month. Imports continue to be large. Advances in tire prices, following previous increases on May 1 and June 1, were announced on July 1 and again on July 18. These prices are now about 35 or 40 per cent higher than in April. Production and shipments of pneumatic tires during June attained new high records, and stocks which were on March 31 at the maximum ever recorded were reduced on June 30 to an amount smaller than that of a year earlier."

OIL CO. GIVES DINNER

SPOKANE, Wash., Aug. 15.—A dinner and entertainment for 100 of its customers, the first of its kind given in Spokane, was tendered here recently by the Wesco Oil company to independent service station men and wholesalers. O. W. Schultz, president, was the host.

Buffalo Offered 5-cent Fare System of Buses

BUFFALO, Aug. 15.—Ernest M. Howe, president of the Gray Manufacturing Co. of Detroit, has proposed to establish a city-wide bus system in Buffalo on a 5-cent fare basis allowing transfers. The city council is considering the offer.

Howe proposes to place 100 Tilling-Stevens type buses on the streets at any time his proposition is approved. These buses, manufactured at his Detroit plant, are the same type used in London, Australia and South Africa.

He explained that he is able to operate the buses on the low basis of return owing to the fact that they are operated by combined gas and electric motive power and require little maintenance expenditure. He claims that the bus will operate more than 100,000 miles without having to be housed for repairs. He added that the average gear-driven bus is useless after 300,000 miles.

Street car fare in Buffalo is 8 cents, or two for 15 cents. The trolley company also operates three bus lines charging a 10-cent fare. Howe agreed to meet the New York state public service commission regulations. He also offered to post a bond of $150,000 to guarantee his good faith.

July Sets Another Record For Apperson Co. Business

Sales Volume Beats June Mark and Shows 225 Per Cent Advance Over January

KOKOMO, Ind., Aug. 15.—Celebrating the first anniversary of the factory reorganization of last July, the Apperson Automobile Company established a second record breaking sales mark in successive months with the close of July business.

Previously, the June, 1925 sales had exceeded all totals for any month of the year.

Sales for July, however, were greater than June, and 225 per cent above the mark of January—the month in which the new Apperson line was introduced. The mounting sales curve of this now strongly-entrenched manufacturing company is shown by the fact that while each succeeding month of the year showed healthy advances, June's increase was 219 per cent over the January figure and July went 225 per cent over.

In addition to the heavily increased sales in July, the month closed with an increase of 13 per cent in unfilled orders over the record June.

25 Years Ago In the Automobile Industry
As Recorded In MOTOR AGE

(From MOTOR AGE *of August 23, 1900)*

Gasoline on Ferries

NEW YORK, Aug. 20.—President Chamberlain of the Automobile Club of America is overrun with correspondence from all over the country on the question of the United States laws in reference to the carrying of gasoline on vessels plying on waters inside government jurisdiction. It has been held that a gasoline vehicle violates this prohibition. Mr. Chamberlain has been in correspondence with the Secretary of the Treasury with a view to securing some modification of the application of the law and the establishment of special regulations for vehicles employing gasoline for motive power or fuel. He says, however, that there is little chance of getting relief except through a special act of congress.

One-Hour Motorcycle Championship

PARIS, Aug. 9.—The Motorcycle-tricycle championship for one hour was run at Lille on the fifth inst. The starters were Beconnais, Fossier, Demster, Vasseur, Loste, Cabaillot, Bathiat, and Louis. * * * After a number of accidents, among which Beconnais was the only one to escape, the race was finished. The forty kilometers were ridden in 41:45 and the fifty in 52:36 3/5. At the end of the hour Beconnais has covered the 57½ kilometers, nearly three kilometers ahead of Loste, who, in turn, was nearly a kilometer ahead of Demester.

New Mackay Steam Carriages

BOSTON, Mass., Aug. 20.—Twenty-five of the new Mackay steam carriages have been turned out at the factory of the Stanley Mfg. Co., Lawrence, Mass. They have all been built to special order and several of them have been shipped to Europe.

They are all heavily built carriages, weighing about 1,650 lbs., against 700 lbs. average weight of the ordinary steam runabout. Their retail price is $1,800.

The Mackay carriages have several notable features. The gasoline tank is immersed in the water tank. The engine is simple or compound and has a superheating device.

The Chicago Automobile Club

The Chicago Automobile Club has been organized with 33 members and already enough more applications have been received to swell the active list to 40. Among its objects, as stated in the constitution, are the promotion of an organization or club composed in whole or part of persons owning self-propelled passenger vehicles for personal or private use; to afford a means of recording the experiences of members and others using motor vehicles or automobiles and to promote original investigation in the development of motor carriages.

Chemical Society Told Army Has New Type Truck Engine

Radical Changes Giving More Power With Less Fuel Consumption Said to be Features

LOS ANGELES, Aug. 15.—That the United States Army has developed a motor truck engine embodying radical changes from the usual type of internal combustion motor, which is reported to be able to deliver an increase of 28 per cent in power with a decrease of 20 per cent in fuel consumption, was the report given to the national convention of the American Chemical Society, in session in Los Angeles.

The convention was told that this motor was developed to meet the recently perfected ethyl gasoline, and will not use the standard fuel. With the specially treated gasoline it will outclass anything in its reach and will climb hills and pull exceedingly heavy loads with surprising ease, engineers say.

The new motor was developed at Camp Holabird, Md., by Arthur W. Harrington, chief engineer of the Motor Transport Division, Q. M. C. and other army engineers. The exact nature of the fuel to be used in this motor was not disclosed at the convention. It is known, however, that the gasoline intended for the motor is of the type treated with tetraethyl-lead. Only one fifteen-hundredth part of this chemical is added to the ordinary gasoline. One quart was used to treat 500 gallons of fuel, with such success that the army men interested in the test predicted eventual overthrow of present standards of motor construction, Chief Harrington declared.

The motor was built of parts used in government Class B. trucks. To outward appearance it is exactly like the old type of truck, but internally it has been redesigned to work under pressure terrifically greater than the usual motor is required to withstand.

A statement by Dr. T. A. Boyd of the General Motors Research Laboratory at Dayton, O., on the subject of chemical research on automobile fuels, was made public by the American Chemical Society at the convention in connection with the development of the new type of motor.

If the chemists are able to develop a fuel that will increase the useful store of energy in the gasoline being burned by the motor from 3 to 5 per cent to approximately 10 per cent, the saving to motorists would mean an average of $50 a year per registered vehicle, Dr. Boyd declared.

The search of the chemists for such a fuel was partly rewarded, Dr. Boyd stated, in the perfection of the ethyl gas. Ethyl gas, he explained, is gasoline to which has been added a small fraction of 1 per cent of a synthetic oil containing a metallic component, which serves the purpose of combustion governor.

Another discussion at the American Chemical Society's national convention which will be of interest to the automotive industry was led by Dr. Harrison Howe, of Washington, editor of Industrial and Engineering Chemistry, the official organ of the society.

"Methanol, a new form of fuel developed by the Germans, may take the place of gasoline in time," said Dr. Howe. "This field, which is derived from elements that are among the most abundant in nature, possesses all the properties of wood alcohol, which is distilled from different kinds of wood, and may be used for the same purposes. About the only respect in which it differs is that it does not have the characteristic odor of wood alcohol.

"The Germans are carefully keeping the formula for methanol to themselves and are producing large quantities of it, exporting a good deal to this country."

Dr. Howe predicted that American chemists will eventually learn the secret and that the new fuel may some day become popular as a power producer.

A. A. A. Sanctions 102 Races

WASHINGTON, Aug. 15.—A total of 102 automobile races were sanctioned by the Contest Board of the American Automobile Association during 1924, it is announced. These covered speedway and dirt track events as well as hill climbing, reliability and endurance tests. During 1924 the Board distributed $332,433 in prize money to the knights of the "Roaring Road" with 560 racing drivers and 335 racing cars registered.

Marseilles Picked for Site of Next Year's Grand Prix

PARIS, July 28.—(By mail.)—Miramas track, near Marseilles, will be the scene of next year's French Grand Prix race, the probable date being June 28. This event will be open to 91½ inch cars with super-chargers, having two-seater bodies of 31 inches width, but with the driver only aboard and a minimum weight of 1,543 pounds. These rules will apply to all the big European races.

The present European rule calling for two seats side by side is giving dissatisfaction among firms indulging in racing. Just before the French Grand Prix, Bugatti threatened to withdraw all his cars because of the official interpretation of the rule regarding two-seater bodies. All difficulties could be overcome by merely requiring a minimum width without any stipulation as to the number of seats.

It is reported that the Fiat and Delage companies are working on 91½ inch two-stroke super-charged racing engines, which will be entered in all important events next year. The Fiat racing department refuses to make any statement regarding its plans.

Peerless Turns First Quarter Loss to Gain in Second Period

Sales Increases Run Far Ahead of Those of Industry As Whole—August Seen As Big Month

CLEVELAND, Aug. 15.—The Peerless Motor Car, of this city, turned a loss of $280,514 in the first quarter of the present year into a profit of $327,234 in the second quarter, and at the same time paid off $1,000,000 in bank loans in the first six months of 1925. A small six cylinder car is to be added on October to the present line of sixes and eights. These are the important points in a report just issued by the company.

Since February a steady, month by month gain in Peerless sales has been accomplished. While retail trade, as a whole, has been running 13 per cent above last year during the last month Peerless sales have been practically doubled, according to Charles A. Tucker, sales manager. Not only has there been a big increase at the principal distributing points, but there also has been marked interest in the Peerless franchise, more than 90 new distributors and dealers having been added during the last five months.

June sales were 75 per cent higher than in the same month last year. In July they were 154 per cent greater than in July, 1924. Orders on hand for August indicate clearly that Peerless will continue to operate at a far greater increase over the preceding year than the industry as a whole, says Tucker.

These sales conditions are reflected in the six months statement. Net profits of the company for the half year after $86,774 depreciation were $46,719, but earnings in the second quarter which was the first three months period to really reflect the efforts of the present management, were at the annual rate of $6 per share on 228,589 shares of common stock. The company has no bonds or preferred stock.

In addition to paying off $1,000,000 to the banks, the balance sheet shows $996,715 in cash. On December 31, the company had $728,225 in cash, but owed $418,287, so there has been an actual gain of $1,686,777 in cash.

1,015,100 CARS TITLED

CHICAGO, Aug. 15.—Statistics compiled from the records of the automobile department of the secretary of state's office, show that from January 1 to July 15, there were 1,015,190 registration licenses issued to passenger automobiles in Illinois. In addition there were registrations issued to 4,332 dealers, 5,449 motorcycles, and 146,114 trucks, making a grand total registration of 1,171,085. The total revenue received by the department during this period was $12,110,777.03.

A. P. I. Report Denies Belief In Exhaustion of Oil Supply

Survey Submitted to Conservation Board Shows Unexploited Stores Sufficient for Years

NEW YORK, Aug. 15.—A reassuring report as to the supply of petroleum in the United States prepared by a committee of eleven of the directors of the American Petroleum Institute was transmitted to the federal oil conservation board at Washington yesterday by J. Edgar Pew, president of the institute.

The report states it is reasonable to assume that the oil resources of the United States, including oil from wells, shale, coal and lignites, assure the country of a sufficient supply of motor fuel and lubricants for the national defense and for essential uses beyond the time when science will limit the demand by developing more efficient use of, or substitute for oil, or will displace its use as a source of power by harnessing a natural energy.

The 300 page report prepared after a country-wide and prolonged survey by many operators and by experts and scientists within and without the industry embraces estimates of the future supply of and demand for petroleum and contains conclusions of far reaching importance to the country. The conclusions negative the idea that there is imminent danger of the exhaustion of the petroleum reserves of the United States. The report estimates petroleum recoverable by present methods of flowing and pumping from existing wells, and acreage thus proven, to be 5,300,000,000 barrels and that after pumping and flowing cease there will remain in the area now producing and proven 26,000,000,000 barrels of oil, a considerable portion of which can be recovered by improved and known processes.

The report indicates that the major oil reserves of the United States lie in some 1,100,000,000 acres of land underlain by sedimentary rocks and not fully explored, in which geology indicates oil is possible. With extended search, new supplies will be found therein. In addition the report states that improved methods of deep drilling, the limit of which has not been reached, will disclose in many areas deposits not hitherto available. It is pointed out that the nation has an additional reserve in the vast deposits of oil shale, coal and lignites from all of which liquid fuel and lubricants may be extracted if and when the cost of recovery is justified by the price of these products. It is stated that these deposits are so huge that they promise, under conservative estimates, an almost unlimited supply.

CHRYSLER SALES HEADS NAMED

DETROIT, Aug. 15.—Appointment of three directors of sales and two assistant directors has been announced by J. E. Fields, vice-president in charge of sales for the Chrysler Corporation. The resignations of John J. Plath and Arthur T. Stanton as directors of sales to become Chrysler distributors at Miami, Fla., and Columbus, Ohio, were announced. The new directors are Joseph W. Frazer whose principal cities are New York, Detroit, Minneapolis, St. Louis and Dallas; J. L. Justice whose principal cities are Chicago, Philadelphia, New Orleans, Portland, Ore., Cleveland. His assistant will be John McArdle, formerly head of the car order division, and Henry T. Myers, formerly with the Studebaker corporation, whose principal cities are Boston, Pittsburgh, Atlanta, Kansas City, Mo., and San Francisco. His assistant will be S. W. Monroe, formerly supervisor of sales for the Chrysler Corporation in the Boston district.

FRENCH TIRES RAISE

PARIS, July 29.—(By mail.)—French tire manufacturers today announced an increase of 35 per cent on tubes and 27 per cent on casings, to go into effect immediately. This measure had to be taken, it is declared, on account of the shortage of rubber and the consequent increase in cost. Michelin is of the opinion that the price of raw rubber will drop before the end of the year, and that, as a consequence, tires will be reduced.

NEW VELIE DEALERS

MOLINE, Ill., Aug. 15.—The following have been named dealers by the Velie Motors Corp.:

Petaluma Velie Company, Petaluma, Cal.; Lyter's Garage, Harrisburg, Pa.; Grover C. Taggart, E. St. Louis, Ill.; Henry's Garage, Wilmington, N. C.; Leslie B. Harriman, Gorham, N. H.; R. E. Twite, New Albin, Ia.; J. W. Hook, Grays Lake, Ill.; P. C. Sacchi, Arcata, Cal.; Smith Brothers, Lemon Springs, N. C.

Ford Truck and Tractor Sales Rise During July

DETROIT, Aug. 15.—Sale of Ford one-ton trucks and Fordsons for the first 20 days of July were 30 and 43 per cent greater than for the same period a year ago, reports received at the Ford factory from Ford dealers throughout the country show.

Sales of the one-ton truck amounted to 12,168 during the 20-day period, an increase of approximately 3,650 over the first 20 days of July, 1924. Fordson sales numbered 3,664, or approximately 1,575 more than for the same period last year.

The greater portion of the truck sales covered industrial installations but there also was a noticeable increase in deliveries in rural sections where harvesting of crops is under way or just beginning. The increase in the number of Fordson sales indicates that the farmers are coming into the buying market in larger numbers.

Increased Sales Cause Cut In Studebaker's List Price

Financial Report Shows Business Volume Jumped 48 Per Cent In Second Quarter

SOUTH BEND, Ind., Aug. 15.—Greatly increased sales resulting in economies of production, have caused reductions in prices on all Studebaker models, it is announced by officials of the Studebaker Corporation of America.

The financial report for the second quarter shows that sales increased 48 per cent over the corresponding period of 1924. It is believed that July sales will show a gain of 200 per cent over July last year.

The new prices announced by the company are:

Standard Six Models

	New Price	Old Price	Saving
Country Club Coupe	$1295	$1345	$ 50
Coach	1195	1295	100
Sedan	1495	1595	100

Special Six Models

Duplex-Roadster	$1395	$1450	$ 55
Sport Roadster	1595	1645	50
Duplex-Phaeton	1445	1495	50
Coach	1445	1595	150
Brougham	1695	1795	100
Victoria	1750	1895	145
Sedan	1805	2045	150

Big Six Models

Duplex-Phaeton	$1795	$1875	$ 80
Coupe	2045	2450	405
Brougham	2195	2575	380
Sedan	2245	2575	330
Berline	2325	2650	325

Moline Tractor Plant to Be Used by I. H. C. as Warehouse

MOLINE, ILL., Aug. 15.—Although industrial and banking circles here last week circulated apparently well authenticated stories that the International Harvester company was to purchase the tractor plant in Rock Island, owned by the Moline Plow company, now the Moline Implement Co., Alex Legge, president of the International, said that only negotiations were under way for the deal and that the plant is to be utilized as a warehouse.

Industrial circles, however, had been informed that the International was going to rehabilitate the plant which had been closed down two years and reopen the production operation. The plant has a storage space of 425,000 square feet and has been on the market since the Moline Plow under its reorganization adopted a policy of severance of all outside units and non-profitable lines. At one time it was a center of production activity but under the agricultural implement depression became a liability.

Mr. Legge announced that under his plan the factory will be an assembly warehouse to handle distribution in this territory. Parts are to be shipped in in carload lots, assembled and reshipped to north and west territory.

Willys-Overland Production In First Half Sets Record

President of Company Believes Business Is Due to Complete Line of Cars Produced

TOLEDO, Aug. 15.—With production of 109,394 cars in the first six months of the present year the Willys-Overland Co. of this city has broken all records for a similar period in the history of the company.

This is more than 10,550 cars increase over the first six months of 1924 and is within 40,000 of the entire 1924 production.

President John N. Willys attributed the big business of this year so far to the complete line of cars produced, the response from dealers, and the reception from the public of new models and new ideas in the line.

"Despite the ugly rumors of the early spring months that agriculture, our basic industry, forecast an unusually small yield in all crops of importance, the retail organization found that never had business been better," declared President Willys.

"Our car shipments the first six months of 1925 absorbed practically our entire output, and throughout this period we found that despite our sincere attempts to bring production schedules up to the insistent demand of the dealers for more cars, we could not build them fast enough.

"We were constantly behind on our deliveries, and our production still is below our orders in hand.

"I am firmly convinced, not only from our own sales and production records, but from the generally firm tone of business conditions that 1925 will see the 'bumper' year in the automobile industry."

NEW RECORDS IN MILWAUKEE

MILWAUKEE, Aug. 15.—Automobiles and accessories continue to be the most active in Milwaukee's industrial and business circles, according to analysis of business conditions for mid-summer completed by Robert Wittig, Milwaukee manager for R. G. Dun & Co. The investigation indicates that the automobile industry in both its manufacturing and retail end is setting new records in Milwaukee.

FORD CHANGES RADIATOR

DETROIT, Aug. 15.—The Ford Motor Company of Canada, Ltd., is now equipping all closed cars with nickel plated radiators and radiator aprons. The change was designed to give a better finish to the car and is in line with the company's policy of altering the car to meet with the demands of the public. While the new radiator has only been on the market a short time, the manner in which it has been received by automobile owners is taken by officials of the company to mean that its advent will be a popular one.

Car Hazard Less Than Rail

WASHINGTON, Aug. 15.—Statistics proving that the railway hazard on a mileage basis is nine times greater than the automobile hazard were made public here this week by the American Automobile Association.

That the hazard on a mileage basis as between trains and automobiles is correctly stated will be seen from the following figures: In 1923, the last year for which complete figures are available, railway accidents accounted for 6,922 deaths and 56,464 injuries, a total of 63,386 killed and injured. The total train mileage, freight and passenger, for 1923 was 1,191,397,000, showing that in round numbers there was one accident for every 18,000 miles.

In the same year the accidents in which motor vehicles figured accounted for 17,000 deaths and 500,000 injured, a total of 517,000. The total motor vehicle mileage for the year is estimated at 85,000,000,000 miles. This would mean one motor vehicle accident for every 160,000 miles. Thus on a mileage basis the railway hazard is nine times greater than the automobile hazard.

Illinois Registrations Jump 32 Per Cent During July

CHICAGO, Aug. 15.—Registration statistics covering new passenger cars in Illinois during July reveal that there was a gain of 32 per cent in the total as compared with the preceding month. This is not surprising in view of the fact that many people usually wait until July 1 before registering in order to take advantage of the semi-annual fee.

The most pronounced advance was in the medium price class with a jump of 37 per cent; Fords were 31 per cent ahead of June, while low-priced cars (excluding Fords) and the high-priced vehicles scored gains of 26 and 25 per cent respectively.

Following are the detailed figures for the first seven months of 1925:

Mon.	Fords	Low, ex. Fords	Med.	High*	Total
Jan.	4,060	2,275	5,748	808	12,891
Feb.	3,424	1,718	4,977	612	10,731
Mar.	5,714	2,729	6,416	784	15,643
April	9,010	3,755	8,801	861	22,427
May	8,751	3,644	8,014	899	21,308
June	6,473	3,400	6,383	828	17,084
July	8,499	4,305	8,787	1,035	22,626
Total	45,931	21,826	49,126	5,827	122,710

*Includes miscellaneous cars not named.

The foregoing statistics were compiled from figures furnished to MOTOR AGE by Robinson's Advertising Service, Springfield, Ill.

Rickenbacker Output Makes Big Increase in First Half

Shipments Now at Rate of 70 Daily—Total Expected to Double Last Year

DETROIT, Aug. 15.—Rickenbacker Motor Car Company during the first half of 1925, shipped 6,100 automobiles as compared to 5,412 for 1924.

Shipments are at the rate of 70 daily which, with present indications and prospects will make between 12,000 and 15,000 for the year. Last year the total was 7,187.

Production is also on the increase 1,450 being the July output. In February it was 700, this number being gradually increased until the present time. July output will be the largest this year.

Hudson-Essex is now operating on a schedule of 865 Essex and 425 Hudson cars daily. July production was close to 30,000. Factory enlargements now being made will enable the output to be 1,500 and later 2,000.

July shipments of cars reached 27,000 and with indications pointing to 30,000 for August. The company probably will report sales of 87,000 for the quarter ending August 31.

The increased output is due to the building of the new Hudson-Essex body plant of the company. The building will be one of the most modern of its kind and will be especially designed for the production of Hudson-Essex cars. The company will continue to take the present output of the Briggs Manufacturing Company which is now building its bodies.

WILLS SAINTE CLAIRE DEALERS

MARYSVILLE, Mich., Aug.15.—Dealers who have recently taken on the Wills Sainte Claire line are:

W. P. G. Motor Company, Atlantic City, N. J.; Ayer and Ayer, Inc., Worcester, Mass.; Wills Sainte Claire Company of Greensburg, Greensburg, Pa.

OVERLAND MEETING HELD

QUINCY, Ill., Aug. 15.—Distributers of the Overland car in the western Illinois and northern Missouri territory, assembled here recently. About 25 counties were represented. W. O. Kiracofe of St. Louis, branch manager; O. S. McKinney, wholesale manager; Frank Whyte, sales promotion manager; W. T. Warner, zone supervisor; and T. S. Duby of the wholesale department, were among the factory representatives present. Reports were received from the various districts represented concerning the business for the first half of the year, and the prospects for the fall and winter. With the prospects for a bumper crop of corn, and wheat and oats threshing yields far above expectations, an era of agricultural prosperity seems certain in this section, and the dealers who assembled here felt encouraged over the outlook for the remaining months of the year.

Along Automobile Row

SAN ANTONIO, Tex.—The Crawford Motor Company, Ford and Lincoln dealers, has occupied its new $200,000 home at 209-517 West Houston street. The building is two and one-half stories high and houses 38,000 square feet of space. In addition to usual spaces for accessories and parts, shops and sales departments, the company has installed a used car department on the roof of the building.

GREENWOOD, Miss.—G. M. McDavid of Memphis, and W. R. Moore of Cleveland, composing the Moore-McDavid Company, have secured the Buick agency for the Greenwood territory.

OTTAWA, Ill.—Dayton Keith of Chicago and L. S. Putnam and W. G. Putnam, both of Ottawa, have organized the Putnam Chevrolet Company of this city. Capital stock has been fixed at $10,000.

DeQUEEN, Mo.—The Stringfellow Motor Company of this place, local Ford dealer, has been purchased by W. L. Davies, who will continue the business under the name of the Davies Motor Company.

MILWAUKEE.—The Alemite Lubricator Co. of Wisconsin has moved to new and larger quarters at 582-584 Jefferson street, the former home of the Harry E. Weber, Inc., wholesale automotive supply dealers. One of the finest lubricating service stations in Wisconsin will feature the new home of the Alemite organization.

ATLANTA.—The semi-annual conference of dealers, distributors and salesmen in the southeastern territory for the United States Rubber Co. was held in Atlanta at the Biltmore Hotel the latter part of July, and merchandising plans of the company outlined for the fall and winter months.

CHICAGO.—R. B. (Dick) Thornton, who has been associated with the automobile industry for a number of years, first as a member of the transportation division during the World War, then in the distribution of automobiles with J. W. Leavitt of San Francisco, as assistant sales manager of Durant Motors, vice-president and general manager of the W. C. Auble Motor Co., territory man for C. E. Gambill, Hupp distributor of Chicago, then manager of the Studebaker branch at Cleveland, has become manager of the Chicago branch of the Peerless Motor Car Company.

PALMER, Mass.—Michael Cavanaugh, formerly of Sullivan's Garage, has opened a salesroom for the Hudson and Essex in the Madura Block.

DETROIT.—The Universal Parts Company of Lansing, Michigan, recently completed remodeling and enlarging its quarters to permit the taking care of its increased business. It recently installed a complete line of Republic gears and other accessories.

NEW ORLEANS.—G. G. Chambers, formerly Durant factory representative and now president of the Chambers Auto Sales Co., Inc., Star dealers in Hammond, La., has extended the activities of his company to include the agency for Star and Durant cars in Baton Rouge, La., by taking over the Nordyke Motor Co., Inc., of the capital city.

MINNEAPOLIS.—Manager W. V. Harrington of the Harrington Motor Car Co., Minneapolis, has appointed the A. E. Arney Co., International Falls, Minn., to handle the Hupmobile in that territory. The company had the agency several years ago under Duluth, Minn., management.

NEW ORLEANS.—The Hoffman Schiro Motor Car Co., 1615 Canal street, distributors for the Chandler announced recently the appointment, as associate dealer, of F. A. Ahrens, Inc., 720 Carondelet street, New Orleans.

HOLYOKE, Mass.—J. Allen McGarry has been appointed sales manager of the Barnes Motor Sales Co., Chrysler dealer. He formerly held a similar position with the Pickup Motor Co.

MONTREAL.—L. E. Robin, of Robin Freres, 3845 Park avenue, announces that he has acquired the local representation for the Diana 8, a new car manufactured by the Moon Motor Car Co., for the Diana Motors Company.

ST. LOUIS.—The Merchants Tire & Battery Co. has moved from 1111 North Twelfth street to 2710 Washington boulevard. The old location will be used as a garage for passenger cars and trucks.

SPOKANE, Wash.—George L. Bryan and I. M. Logsbon, until recently with the March-Strickle Company in Spokane, have begun business as the Walla Walla Nash Company at Walla Walla, Wash., and will handle a complete line of 1926 Nash and Ajax cars.

DETROIT.—Victor H. Findlay is the new manager of the Genesee-Durant Company, Flint, Michigan. He succeeds W. S. Cook. Previous to being associated with Durant Motor Corporation, Mr. Findlay was associated with the Studebaker Corporation.

MINNEAPOLIS.—R. L. Stevens of Detroit, manager of service for the United Motors, Inc., is superintending opening of new quarters for the Minneapolis branch at 28 Tenth street S. The company will move from 10 Tenth street S., a few doors to double its space. G. E. Hall is manager of the branch.

DES MOINES.—The Harris Auto Supply Co. has opened a branch at Omaha. A location at 2112 Harney street has been leased for salesroom and warehouse. R. B. Hammill will be in charge of the Omaha branch.

CLEVELAND, O.—Papers have been filed with the secretary of state, chartering the Northeast Ignition Co., with a $10,000 capital to do a general automotive ignition and repair business.

CHARLOTTE, N. C.—Charlotte Hudson Company has been organized at Charlotte to engage in the retail sale of Hudson and Essex motor cars. B. D. Heath Motor Company, of Charlotte, distributor for this territory, will maintain its retail department.

ATLANTA.—The Kant-Grab Manufacturing Co., of Nashville, Tenn., manufacturers of accessories, announces the recent appointment of R. D. Murray as a member of the company's traveling sales forces. Mr. Murray has been an accessory salesman calling on the retail trades in the Southeast for some years.

MILWAUKEE.—Jack Weiner, president of the West Point Garage & Sales Co. of Milwaukee, has announced that in future his company will handle Overland and Willys-Knight motor cars exclusively.

LANSING, Mich.—A. J. Shaw, sales manager of the Duplex Truck Company, announces the appointment of M. W. Estabrook as assistant sales manager. Prior to becoming associated with the Duplex company Mr. Estabrook was connected with the sales department of the Flint Motor Company, in charge of advertising sales promotion and publicity.

SPRINGFIELD, Mass.—New York Tire Jobbers has opened a store at 326 Dwight street. C. Pallot is manager.

CHICAGO.—The Mar Tan Motor Manufacturing Co. has purchased a plant in Milwaukee, formerly owned by the Milwaukee Timer Co. This addition will give the Mar Tan Motor Manufacturing Co. much needed space, enabling it to handle business which could not be accepted at the old factory.

LIMA, O.—Gramm & Kincaid Motors, Inc., has opened up exclusive export offices in charge of William Paul Neth at 44 Whitehall street, 6 State street, Station P, New York City.

DETROIT.—A. J. Walter has resigned his position as retail sales manager of the Reo Michigan Sales, Inc., to enter the automobile insurance field representing the Motor Insurance Exchange of Detroit in Lansing.

SPOKANE, Wash.—The Western Auto Supply company's branch in this city has moved to new quarters upon the completion of a new building in the heart of the business district. The company occupies the lower floor of the structure, which have been fitted out especially for the display of automobile accessories.

MOLINE, Ill.—Arthur O. Roberts, assistant advertising manager of the Velie Motors corporation for the past year, has resigned this position and has joined the advertising staff of the Miller Rubber Company, Akron, Ohio, as a copy writer. Mr. Roberts was succeeded by Max H. Romig, formerly advertising manager with the Barnard & Leas Manufacturing Company of Moline, makers of milling supplies.

CARTHAGE, Mo.—H. E. Stevens of Joplin has been appointed manager of the Jamison-Weise company's Hudson-Essex sales and service establishment.

DETROIT.—Milton D. Straus has been appointed assistant to the president of the Gray Manufacturing Company (formerly the Gray Motor Corporation). Mr. Straus will be in charge of sales, advertising and service for the passenger car division of the business.

KANSAS CITY, Mo.—Joseph F. Reed, for five years of the sales force of the Tate Motor Company, has become sales manager of the Mapel Engineering Company, 416 North Third Street, which manufactures gasoline gages for automobiles and filling stations and oil burners for homes.

MILWAUKEE.—The Foyer Motor Co. of Milwaukee, Buick dealers, is erecting a $20,000 salesroom and garage at 891 Teutonia avenue.

CHICAGO.—H. L. Gillette has joined the Chicago branch of the Federal Motor Truck Company as sales manager. He has resigned as manager of the GMC truck branch in Milwaukee.

ROCKFORD, Ill.—The contract has been let for a new garage for the Velie Motor Company at the corner of Oak and May streets to cost $30,000.

NORWOOD, O.—Papers have been filed with the secretary of state chartering the Economy Chevrolet Sales Co., with an authorized capital of $35,000 to buy, sell and service automobiles and accessories.

SPOKANE, Wash.—C. W. Wells, president of the Wells Chevrolet company, announces plans have been prepared for two-story building and the remodeling of the present quarters, to be completed early in October. Leases on the properties and the cost of buildings involve an investment of upward of $126,000.

DELAVAN, Wis.—G. A. Oldenburg, J. E. Ralston and F. W. Oldenburg have organized the S-L Chevrolet Sales Co. here with capitalization of $25,000. In addition to dealing in Chevrolets they will conduct a general garage business.

NASHVILLE, Tenn.—H. C. Miller, Jr., who formerly owned the Auto Painting & Supply Co. of Nashville, sold his interest in the business recently and joined the Imperial Motor Car Co. of Nashville, as a salesman. The Imperial company distributes the Hudson and Essex line in part of the Tennessee territory.

CHICAGO.—C. C. Goodwyn is now sales manager for the Chicago Packard branch, succeeding R. E. Macduff, whose assistant he was. Mr. Macduff has become eastern district manager.

PALMER, Mass.—W. C. Moulton has been appointed Ford dealer and has opened an establishment in South Main street.

With the Associations

Parts Association Program

DETROIT, Aug. 15.—A program to include a standardized system of bookkeeping, inventory and accounting for parts jobbers members of the National Standard Parts Association was adopted by the merchandising committee of the association at its recent meeting in this city.

Besides serving the individual members and helping them to keep a better check on their store supplies, the system will serve as an aid for the association in gathering data which the association intends to use in its educational campaigns.

A convention and product show to be held in Chicago November 5 to 7 was decided upon by the board of directors. The show will be a regular exhibition of standard products and will be for members only and those outside of the association who receive invitations. One of the nights will be open to those not belonging to the association.

T. B. Blackiston, member of the board of directors and chairman of the merchandising committee, tendered his resignation and was succeeded on the board by D. W. Rogers of the Federal Mogul Corporation and by Sim T. Moe who is the new chairman of the merchandising committee.

Pennsylvania Meet Planned

HARRISBURG, Pa., Aug. 15.—A get together meeting of all the secretaries and officials of all the local city and county automotive associations in Pennsylvania, will take place during the fifth annual Business Congress and Frolic of the P. A. A. in Pittsburgh, Oct. 12, 13 and 14.

Talks by managers of many dealer organizations will be heard and a round table discussion of local association problems of attendance, benefits, activities, shows and so on will take place.

These meetings will take place at the luncheon table both days of the convention and during the opening forum hour on Monday.

St. Louis Outing Held

ST. LOUIS, Aug. 15.—More than 1,500 persons attended the eighth annual steamboat excursion of the Automobile Dealers' Association on the steamer J. S. recently.

There were 33 automobile dealers represented and every accessory house with a membership in the accessory association used tickets.

Ft. Worth Salesmen Elect

FORT WORTH, Tex., Aug. 15.—Officers of the Fort Worth Automotive Salesmanship Association elected at the regular meeting are: Jack Harvey, president; Tom Lewis, secretary-treasurer; Bob Logan, vice president. The directors are Ned Boswell, Ike Sidebottom, George Ringler and H. E. Knight.

Used Car Show Planned

CHICAGO, Aug. 15.—Details of the seventh annual used automobile show, under the direction of the Chicago Automobile Trade Association, are now being drafted. The show will be held at the Coliseum, October 10 to 17. These dates originally were scheduled for the enclosed car show, plans for which have been abandoned, because sanction could not be obtained from the National Automobile Chamber of Commerce.

It is believed that the show will prove more stimulating than usual, because of the time of year in which it will be held. On former occasions the exhibit has been held early in the summer.

The first used car show was held by the Chicago Automobile Trade Association in 1917 and it has been held each year since that time except in 1919 and last year. The public has been accustomed to automobile shows in the fall of the year and the exhibition this year is expected to afford dealers an unusual opportunity to move their stock when the market normally is dull.

The last exhibtion was a profitable one for the exhibitors. Nearly $500,000 worth of business was done during the week. The stringent regulations imposed by the inspectors of the show upon the exhibitors have given the public confidence in the worth of the cars shown. These conditions will again be imposed this fall.

Knapp Leaves Iowa Body

DES MOINES, Ia., Aug. 15.—A. J. Knapp, who for the past six years has been identified with the Iowa Automotive Merchants' Association, has resigned his position as secretary-manager, his resignation to take effect September 1. Mr. Knapp is resigning from association work to associate himself with a large development project at West Palm Beach, Florida, where he will make his home.

Starting with the Iowa association at its inception in May, 1919, Mr. Knapp has seen it grow in number of membership and strength to become a power in the state. He was founder of the Motor Trades Bulletin, the official publication of the I. A. M. A., which has been of great help in diffusing information to the automotive trade of Iowa.

It is probable that Mr. Knapp's successor will be elected at the quarterly meeting of the board of directors, to be held at Waterloo, Ia., on August 20.

Tradesmen Celebrate

SPRINGFIELD, O. Aug. 15.—Members of the Springfield Automobile Trades Association, composed of dealers, salesmen and mechanics, enjoyed an outing at Bryan park near Clifton. The outing started with a parade showing the various cars handled after which their party headed for Bryan park.

Ohio Association Elects

COLUMBUS, O., Aug. 15.—A revamping and reorganization of the Ohio Automotive Equipment Association took place at a meeting of 16 wholesalers in Ohio at Columbus, recently. The organization has been existant for about six years but recently its activities were much limited and the leaders believed that strong organization should be made to cope with the many problems besetting the industry.

A committee on membership consisting of Otto Berger of the Julian-Bantlin Co., Cincinnati; Cecil Walker of the Hardware Supply Co., of Akron and Curtis Sohl of the Griswold-Sohl Co., Columbus, was named to secure all eligible firms as members. This committee started out at once on its membership campaign.

A resolution was adopted to co-operate with the Ohio division of the National Automobile Dealers' Association. A motion was adopted asking the A. E. A. to assign a field secretary to Ohio to have charge of activities in the Buckeye State.

It was decided to hold four meetings yearly and the next will be on October 15 and 16, the place to be selected later by the officers.

Officers elected were: C. E. Justus of the Justus & Parker Co., Columbus, president; T. C. Deardorff of the Toledo Rubber Co., Toledo, vice president; C. H. York of the York Supply Co., Greenville, secretary and Curtis Sohl of the Griswold-Sohl Co., Columbus, treasurer.

Fight Parking Restrictions

LOS ANGELES, Aug. 15.—The Los Angeles Motor Car Dealers' Association has been conducting a determined campaign to bring about a revision of the drastic parking laws which have been in effect here for several months. The association has lined up the support of the entire business community in its fight and victory is in sight. Los Angeles business men declare that different surveys made by their firms conclusively proved that patrons who come in automobiles purchase more than five times as much in value as do customers who come by street cars or foot.

The resolutions adopted by the motor car dealers and the Downtown Business Men's Association set forth the doctrine that the automobile is a potent factor in the production of business and recommend that the business community stand behind any serious movement for the construction of parking garages in the central district as an additional step toward increasing parking facilities.

The Downtown Business Men's Association further went on record as being in favor of either cooperative effort or the use of private capital in the construction of such parking garages.

System of National Roads, Touching All States, Planned

More Than 70 Trunk Highways to Connect Every Capital, Included in Project

WASHINGTON, Aug. 15.—A system of interstate roads, known as United States highways, and touching every state capital, was agreed upon here at a session of the joint board on interstate highways. Final approval is to be given by the board, upon which they will be numbered and charted.

More than 70 roads are included in the system, forming a network over the entire United States. Thirty arterial routes were designated to traverse the country east and west, north and south, reaching virtually every point of historic and scenic interest.

Eight of the roads cross the Rocky mountains and extend across the continent; nine originate along the Gulf coast and terminate in Canada; another starts in northern Idaho and ends at Charleston, S. C., while one begins on the Pacific Coast and ends in southern Florida. One route runs the entire length of New England; another starts in Texas and runs across the Southwest and up the Pacific Coast to Canada.

The joint board consists of representatives of the U. S. Bureau of Public Roads and representative state highway officials, appointed at the suggestion of the American Association of State Highway Officials by the Secretary of Agriculture last February 25.

The first meeting of the board was held here on April 20 at which time tentative recommendations were made with respect to the color and form of direction and warning signs.

Hudson-Essex Holds Sales Congress in Los Angeles

LOS ANGELES, Aug. 15.—A Hudson-Essex sales congress, attended by dealers from all parts of Southern California and Arizona was recently held in the headquarters of Walter M. Murphy Company, distributors, on the occasion of the visit here of Harry G. Moock, promotion sales manager of the Hudson Motor Car Company.

Moock pictured the "car of the future" as a low-hung, closed car, more graceful than machines of the past and steadier on the road.

"Once we needed big wheels and high-hung bodies," said Moock, "but with better roads, cars are coming down. People want easy riding in their cars and in the motor car business the public is boss.

"The coming cars will be hung low. The ideal car of the future will be a closed car; more reliable, more economical, simple in design, useful under all conditions, quiet and smooth running. This will apply to cars in general."

Coming Motor Events

Automobile Shows

Dallas, Tex.—Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis.—Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal.—Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich.—Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla.—Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal.—Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La.—Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York—Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va.—Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt.—Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn.—Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston—Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago—Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City.—Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

San Francisco.—Aug. 22-28
Third annual Pacific Radio Exposition in Municipal Auditorium.

Boston—Oct. 12-17
Annual radio show in Mechanics' Building. Shelton Fairbanks, manager.

New York.—Sept. 18-19
Meeting of National Battery Manufacturers' Association at Commodore Hotel.

Foreign Shows

Berlin, Germany.—Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina.—Oct. 3-13
Pan-American Road Congress.

London, England.—Oct. 8-17
Olympia Passenger Car Show.

London, England.—Oct. 29-Nov. 7
Annual Truck Show.

Races

Altoona, Pa.—Sept. 7

Charlotte, N. C.—Nov. 11

Fresno, Cal.—Oct. 3

Laurel, Md.—Oct. 10
A. A. A. Race, Baltimore-Washington Speedway.

Los Angeles, Cal.—Nov. 26

Monza, Italy.—Sept. 6
Italian Grand Prix Race.

Syracuse, N. Y.—Sept. 19

Salem, N. H.—Oct. 12

Rockingham—Oct. 17

Baltimore—Oct. 24

Conventions

Buenos Aires, Argentine.—Oct. 3-13
Pan-American Road Congress.

Cleveland.—Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland.—Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia.—Nov. 12-13
Automotive Merchants' Association Convention.

Montreal, Que.—Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia—September
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa.—Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis.—Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Eaglesmere Park, Pa.—Sept. 14-17
General meeting of the Automotive Electric Association.

Wrightsville Beach, N. C.—Sept. 7-8
Annual meeting of the North Carolina Automotive Trades Association.

Montreal—Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

Contracts Sent Out For Annual A. E. A. Exhibit

Show Will be Held at Coliseum in Chicago, Nov. 9-14 in Connection With Yearly Convention.

CHICAGO, Aug. 17.—Contracts have been sent out for the seventh annual exhibit of the Automotive Equipment Association which will be held at the Coliseum in Chicago, November 9 to 14, inclusive.

Assignment of space to the various applicants whose contracts have been accepted will be made at the Congress Hotel, Chicago, at 10 a. m., Thursday, September 24.

This year's A. E. A. show, which will be held in connection with the association's annual convention, will be conducted under practically the same rules as last year. The show is exclusively for the trade and admittance will be by ticket or invitation. Tickets are issued to all jobber members of the A. E. A. and their salesmen, and invitations will be sent to a selected list of automotive wholesalers outside the A. E. A. membership. This list has to have the approval of the association. The exhibitors will be the manufacturing members of the A. E. A.

This year a special effort is being made to have a large attendance of automotive distributors and wholesalers from foreign countries. About 1,500 invitations were sent out to the trade in countries other than the United States and Canada early this summer. For several years there has been a growing interest in the A. E. A. show on the part of foreign automotive merchants and it is the belief of the association members that this exhibit can be used to create a large export trade for automotive manufacturers.

Paige Sales and Net Income Set High Mark in 6 Months

DETROIT, Aug. 15.—Both in sales volume and in net income, the Paige-Detroit Motor Car Company achieved new high marks for the half year ending June 30.

The sale of Paige Jewett cars totalled 24,002, representing a net sales total of $38,077,326.66. The cost of selling was $33,512,887.58. The net income after deducting general expenses, miscellaneous charges and federal income tax was $1,892,979.18.

This amount is further reduced by deducting $77,770, the amount paid in two quarterly dividends on the outstanding 7 per cent preferred. The owners of common stock of record June 30 also received a 10 per cent dividend distributed July 15.

After transferring net income for the first half of 1925 to the balance of $7,516,992.12, representing common stock and surplus as of December 31, 1924, to which was added $35,676.89, derived from adjustment of federal income tax for 1924, and $2,542.41 received in liquidation of the Paige-Ohio Company of Toledo the total was increased to $9,448,173.60. From this was appropriated $442,270 paid in cash dividend on preferred and common stock, leaving a balance of $9,005,903.60 as the equity of holders of 616,000 shares of no par value common stock as of June 30th.

SQUEEKS and RATTLES

DARE-DEVIL



"Is she a good driver."
"I should say so. She's already driven four husbands quite crazy."
—London Mail.

Experience de Luxe

Charlotte—What kind of a car has Tom?

Martyne—A pray-as-you-enter!

If the majority really ruled, the locomotives would have to stop at the crossings for the flivvers.
—Arkansas Gazette.

Jack and Jill
Sped up a hill.
A curve up there was sharp.
The car upset;
Jack's rolling yet;
Jill's playing on a harp.
—University Life.

Policeman (producing notebook)—Name, please.

Motorist—Aloysius Alastair Cholmondeley Cyprian—

Policeman (putting book away)—Well, don't let me catch you again.
—Punch.

"My sister's like a radio program."
"How's that?"
"Anybody can pick her up."
—Western Weekly.

Revenge!

Motorist—That man I ran over is the meanest man in town.

Friend—Why?

"He puts tacks in his pockets when he crosses the street."
—Judge.

Here lies the remains of a radio fan,
Now mourned by his many relations;
He went to a powder mill, smoking his pipe,
And was picked up by twenty-one stations.
—Williams Purple Cow.

In Derby, after a narrow escape from being knocked down by a motor car, a dumb man suddenly regained his speech. We learn that a golfer who was passing at the time turned very pale and hurried on.
—London Opinion.

THE DECOY



First Bandit—Slowin' down, ain't he?
Second Bandit—Of course.
—American Legion Weekly.

New Board Race Track Is Being Built at Salem, N. H.

BOSTON, Aug. 15.—New England is going to have a board track that will rival the one at Culver City, and it is to be ready in September so that a race will be assured Saturday, October 17. It is to be built at Salem, N. H., just over the Massachusetts line where a race, held July 4, was won by Ralph De Palma.

Nearly 50,000 went to that race, and the promoters, among them Jack Le Cain, the former racing star, saw the possibilities of speedway events and gave orders for the board track. Work on it started this week and it will cost more than $100,000.

Le Cain has been assured that all the star drivers will compete and that the race will count in the points for the American championship.

CUNNINGHAM GOES TO EUROPE

DETROIT, Aug. 15.—Harry L. Cunningham, secretary-treasurer of Rickenbacker Motor Company, sailed last week for Europe where he will study market conditions for American cars in general and Rickenbacker in particular. Mr. Cunningham was one of the first men in the industry to visit Europe several years ago and has to his credit the establishment of branch houses in Europe for two of the largest automobile manufacturers in the industry. On his trip which is purely business, he will visit France, Germany, Belgium, Holland, England and possibly Czechoslovakia, which latter country is second only to Germany in it's ability to buy and insistence on American-made cars.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON		"41"	
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON		"6"	
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3760	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	5-p	Touring	1,395
.....	5-p	Brougham	1,595
.....	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
		"8-88"	
.....	4-p	Sport Roadster	1,975
.....	5-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	.....	Wanderer	2,400
BUICK		"Standard"	
.....	2-p	Roadster	$1,125
.....	5-p	Touring	1,150
.....	2-p	Coupe	1,195
.....	4-p	Coupe	1,275
.....	5-p	4d. Sedan	1,495
.....	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
.....	2-p	Roadster	1,250
.....	5-p	Touring	1,295
.....	5-p	Sedan	1,495
.....	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
.....	3-p	Sp. Roadster	1,495
.....	5-p	Sp. Touring	1,525
.....	4-p	Country Club	1,765
.....	4-p	Coupe	1,795
.....	5-p	Brougham Sedan	1,925
.....	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
.....	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
.....	7-p	Sedan	3,295
.....	5-p	Brougham	2,995
.....	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
.....	7-p	Touring	3,250
.....	.....	Phaeton	3,250
4400	5-p	Coupe	4,000
4490	5-p	Sedan	4,150
4590	7-p	Suburban	4,285
4655	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER		"SS"	
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3223	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3428	5-p	Sedan 4 d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	675
2110	5-p	Coach	695
2220	5-p	Sedan	775
CHRYSLER		"Four"	
		(109 in. W. B.)	
2390	5-p	Touring	$895
2440	2-p	Club Coupe	995
2590	5-p	Coach	1,045
2680	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,965
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND		"31"	
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
COLE		"MASTER"	
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$6,650
4500	4-p	Sp. Touring	6,150
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA		"St. 8"	
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Brougham	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	885
2695	5-p	Spec. Touring	985
2708	2-p	Coupe "B"	995
2823	2-p	Spec. Coupe "B"	1,095
2995	5-p	"B" Sedan	1,095
3077	5-p	Spec. "B" Sedan	1,195
3020	5-p	Sedan A	1,245
3107	5-p	Spec. "A" Sedan	1,330
2723	5-p	Coach	1,095
2823	5-p	Spec. Coach	1,195
DORRIS		"6-80"	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4810	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
.....	2-p	Sp. Roadster	900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	850
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	5-p	Cabriolet	4,400
GARDNER			
		"6"	
2975	5-p	Touring	1,395
2925	.....	Sport Roadster	1,595
3100	4-p	Cabriolet	1,845
3250	5-p	Sedan	1,595
3320	5-p	Sport Sedan	1,895
3300	.....	DeLuxe Sedan	1,895
		"8"	
3175	5-p	Touring	1,995
3100	.....	Sport Roadster	1,995
3300	4-p	Cabriolet	2,245
3550	5-p	Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HAYNES		"60"	
3295	5-p	Touring	$1,600
3650	5-p	Brougham	2,200
3765	5-p	Sedan	2,300

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ		D-1	
3360	5-p	Sedan	$1,695
HUDSON		"Super Six"	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,250
3425	4-p	Brougham 4 d.	1,595
3675	7-p	Sedan	1,795
HUPMOBILE		"R"	
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		"23-25"	
.....	4-p	DeLuxe Road.	$1,500
.....	5-p	DeLuxe Touring	1,320
.....	5-p	Coach 2d.	1,245
.....	5-p	DeL. Coach 2d.	1,400
.....	5-p	DeLuxe Sedan	1,680
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,275
3340	5-p	Touring	2,275
3450	3-p	Friendly "9"	2,575
3625	5-p	Brougham	2,575
3520	4-p	Victoria	2,475
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
3800	7-p	Suburban Sedan	3,375
KISSEL		"55"	
3130	2-p	Speedster	$1,895
.....	2-p	Sp'dster De Luxe	2,185
.....	4-p	Speedster	1,995
.....	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
.....	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
.....	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
.....	7-p	Touring	1,785
.....	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
.....	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,685
.....	5-p	Brougham 2 d	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
.....	5-p	Victoria De Luxe	2,685
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster De L.	2,585
.....	2-p	Speedster De L.	2,585
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Tourster De L.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Luxe	2,885
.....	5-p	Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,195
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,985
LEXINGTON			
		"Concord"	
.....	5-p	Touring	$1,595
.....	5-p	Touring (Enc.)	1,695
.....	5-p	Spec. Touring	1,795
.....	5-p	Sedan	2,185
.....	5-p	Spec. Sedan	2,445
		"Minute Man"	
.....	2-p	Roadster	2,145
.....	5-p	Touring	2,095
.....	7-p	Touring	2,195
.....	5-p	Lark Touring	2,345
.....	5-p	Cal. Touring	2,495
.....	7-p	Cal. Touring	2,495
.....	5-p	Royal Coach	2,495
.....	5-p	Brougham	2,595
.....	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	$4,000
.....	.....	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,800

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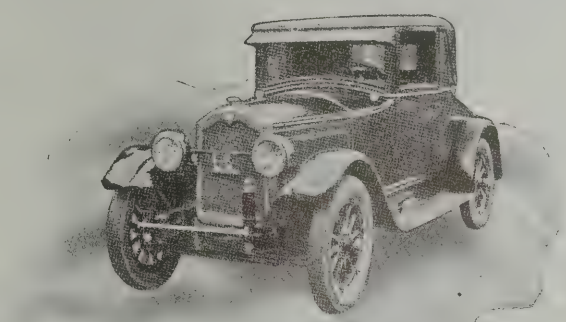
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THERE'S NOTHING LIKE AIR for Shock Absorption



WESTINGHOUSE AIR SPRINGS



Westinghouse Air Springs have, for fifteen years, proven that *Air Suspension* not only gives remarkably smooth riding, but prevents road shocks from reaching the frame and body. The piston, to which one end of the leaf spring is attached, acts directly on a chamber of compressed air which insulates the rest of the car from shocks and vibrations.

The new Junior and Midway Westinghouse Air Springs are made for cars up to 3,000 and 4,000 lbs. respectively.

They are installed with brackets integral with the standard fittings of the car, are interchangeable with new car brackets and easier to install.

The Air Springs and fittings for attachment are supplied direct to dealers and service stations on a wholesale basis. There is a *large margin of profit* for *you.* Selling and installing them means real money.

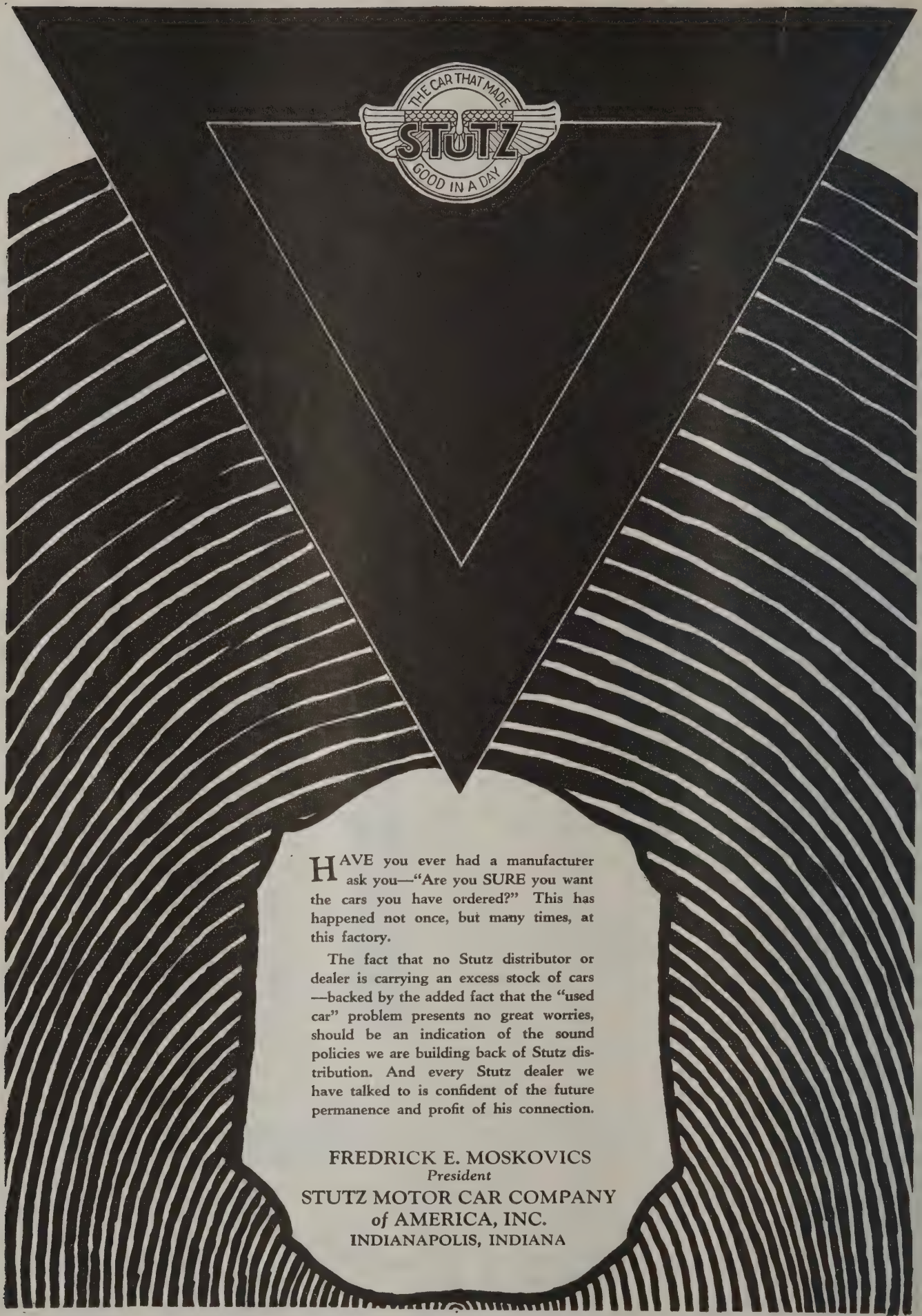
Westinghouse Air Springs are the finest known device for shock elimination.

Let us send you full information and wholesale prices at once.

Address Dept. M.

THE WESTINGHOUSE AIR SPRING CO.
NEW HAVEN, CONN.

New York Philadelphia Cleveland
Boston Atlanta Chicago
San Francisco



HAVE you ever had a manufacturer ask you—"Are you SURE you want the cars you have ordered?" This has happened not once, but many times, at this factory.

The fact that no Stutz distributor or dealer is carrying an excess stock of cars —backed by the added fact that the "used car" problem presents no great worries, should be an indication of the sound policies we are building back of Stutz distribution. And every Stutz dealer we have talked to is confident of the future permanence and profit of his connection.

FREDRICK E. MOSKOVICS
President
STUTZ MOTOR CAR COMPANY
of AMERICA, INC.
INDIANAPOLIS, INDIANA

MOTOR AGE

Vol. XLVIII | Chicago, August 27, 1925 | No. 9

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

TREND of output in automotive industry is pointing down, although many of the largest factories still are working at full capacity. Most of production being used to care for unfilled orders that have been held over from early summer. page 32.

Good management will be theme of discussion at the annual fall convention of the Motor & Accessory Manufacturers' Association to be held in Montreal in October. page 33.

Delayed buying is believed by Detroit authorities to be one of prime causes of the recent great increase in sales volume. page 33.

N. A. D. A. survey finds that most automobile sales of present day are replacements, from two to four transactions generally being necessary before dealer gets back his investment with a profit. page 34.

Radio dealers of Illinois, Indiana and Ohio meet with Gibson Company in sales school. Nebraska Buick dealers study radio in meeting at Lincoln. page 34.

Firestone nears end of negotiations for tract of land in Liberia for rubber plantation. Lease virtually ratified. page 32.

Merger of General Motors truck division with Yellow Cab Manufacturing Company, forming Yellow Truck & Coach Manufacturing Co., to become effective Sept. 1. Page 35.

Car rental officials meet to arrange plan to protect public from careless and irresponsible drivers. Page 36.

Series of sales congresses is planned by N. A. D. A. to start September 9. Used car plans and dealer profits will be subjects stressed. Page 37.

Invitations are sent out by National Automobile Chamber of Commerce for the second World Motor Transport Congress to be held in New York, January 11-13. Page 43.

Alfred Hacking, secretary of Motor Manufacturers' & Traders' Society of London, sees great market in British Isles for American automobiles. Page 43.

European bars against automobiles from the United States are gradually being lowered, declares secretary of foreign trade committee of N. A. C. C. Page 38.

Pierce-Arrow sales manager sees great change in buying habits of the public, following 9,000-mile tour throughout the United States. Page 38.

Auburn Automobile Company declares 100 per cent stock dividend on common shares, and increases capitalization from $750,000 to $1,500,000. Page 39.

Hudson-Essex reports production of Essex cars thus far in 1925 has reached 100,000, which is 15 per cent more than entire output of 1924. Page 39.

A. A. A. gets behind campaign to reduce war excise taxes on automobiles, parts and accessories. Page 37.

California dealers charge that jobbers and manufacturers are pursuing lax methods in extending credit to "fly-by-night" operators. Page 35.

U. S. Bureau of Standards issues statement denying impression that alcohol fuel must have high ratio of compression. Page 36.

In Next Week's Issue—For Winter Business—"Slick Up" Now.

"ANYWHERE ANY TIME"

Builds Big

TIRE BUSINESS

Ford Dealer Who Develops Huge Trade in Casings and Tubes Trains Salesmen to Sell by the Set

By A. W. ROE

GROWING from a small beginning to what is easily one of the largest tire retailing establishments in the South in the short period of nine years is the record of the Adams Tire Service of Mobile, Alabama. By concentrating unusual efforts on service, Adams has developed a business that covers the city of Mobile, the county of Mobile and the surrounding environs.

Adams is here, there and everywhere in this territory, at all hours of the day and the night.

"Anywhere—Anytime," is a slogan that Adams has capitalized and made into more than a mere catchword. "As near as the nearest telephone," might be another motto of this company, for the arms of its service reach far and wide over the area it serves.

Back of Adams Tire Service are men of vision who are responsible for laying the foundation stones of the business and the erection of a superstructure of service that is unique in the annals of tire retailing.

Nine years ago, L. G. Adams, who has held the Ford agency in Mobile since 1912 and who has developed it from a "hole in the wall" in a rented show room in an unpromising location to a quarter-of-a-million dollar home on Government street, Mobile's fashionable thoroughfare, looked about him and decided to launch a small tire business.

He put in a small stock of 30x3½ tires in the already mentioned "hole in the wall." From this insignificant origin has grown a business the stock of which now represents an investment of $60,000 in tires alone, housed, not in the three-story plant of the Ford company, but just across the street from it in a plant that provides something new in tire retailing establishments.

To Have Six Tire Stations

In addition, the Adams Tire Service operates three substations in and near Mobile and will add soon two other sub-stations, making six in all, given over to the ramifications of the tire business.

To Mr. Adams, himself, belongs the credit for seeing the opportunities and shaping the bigger policies of the now extensive business, and to J. W. Lord, manager, who has been at the helm of the tire service's craft for the last eight years, belong the credit, as Mr. Adams says, of looking after the countless details and advertising so that "Anywhere—Anytime" has become a slogan associated indissolubly with the name of the "Adams Tire Service" in the minds of the motoring public of Mobile and vicinity.



L. G. Adams, president of the Adams Motor Company and the Adams Tire Service, Mobile, Ala., who has developed one of the largest tire retailing businesses in the country

After coming to the then infant business Mr. Lord first put his house in order by departmentizing each division of it. Then he looked around for new avenues through which to reach the public. Complete night service had already been installed, but the manager saw that in order to make further expansion feasible it was necessary to go out into the highways and byways, to speak biblically, and comb them for trade.

Elaborate Publicity Program

Thus it was that he turned to a rather elaborate system of publicity, including newspaper advertising, billboards and direct mail. The company is running at the present time ten, 50-foot bulletins, one, 100-foot board and one, 150-foot board, said to be the biggest and longest billboard in Southern Alabama. The messages on these boards are changed frequently; they are never allowed to grow stale, but "service" is the word that is played up on all of them. Mr. Lord considers the slogan, "Anywhere—Anytime," which is printed conspicuously on every tire cover the company sells as being the best publicity the company has ever used.

Then it was that Mr. Lord educated his salesmen to sell tires by the set. The salesmen were instructed in



View of parent plant of the Adams Tire Service, showing awning-covered "terminals" in the rear

the gentle art of suggestion. Just as automobile dealers have profited by the policy of selling the car fully equipped with accessories, Mr. Lord has found that his innovation of re-tiring the car all round has a permanent place in the sales end of the business.

The passage in 1923 of a city ordinance, prohibiting the giving of Sunday tire service by any establishment within the city limits of Mobile, furnished the occasion for the opening of tire station Number Two, located about three miles from the heart of the city. Although the ordinance was repealed soon after its passage, station Number Two had already established its right to live and caused the company to think of putting in other sub-stations.

After Wholesale Patronage

Consequently, station Number Three was set up to capture wholesale and commercial business in the shipping area of the city. In May of 1924, station Number Four was opened on the Cedar Point road, about three miles from the city, and it has prospered because it catches business from baseball, tourist and outing enthusiasts. Two other stations are to be opened soon, making five sub-stations that the Adams organization will operate in conjunction with the parent station on Government street.

With this network of tire stations the Adams Tire Service is now able to give more efficient and quicker service than would be possible if all tires went out from the parent station. Each station is equipped with a complete stock of tires, and has its own service trucks, operated by skilled tire men.



J. W. Lord, manager of the Adams Tire Service

"We now employ an effective relay system," Mr. Lord said. "It works something like this. If a customer, stalled on the road, 'phones in here at Station Number One and tells us he has a flat, we ascertain from him exactly where he is being detained and the make and size of tire that he needs. Then we consult our map and find out which station he is nearest and 'phone the manager of that station to take the job in hand.

Free Tire Service Anywhere

"We give free tire service to our customers even though they be as many as 50 miles from our main station. If a man buys his casings or tubes from us we give him service on them. We mean by this that if he is one or 50 miles from our place of business, we will go to him and put an extra tire on his wheel without charge, bring in his flat and repair it, charging for the job only the amount that is necessary for repairing the tube, which is usually about 50 cents.

"Each station operates as a separate unit, and each has always shown a profit. Each station sells gas, and if a man is out of gas, upon request we have five gallons delivered to him free of charge no matter whether he has been our customer previously or not. He usually *is* after we make one such delivery. We have delivered gas as far as 45 miles."

Adams has been selling tires on terms for three years and has had marked success with this plan, direct mail being the main agency through which the company calls the attention of desirable accounts to the time-payment plan.

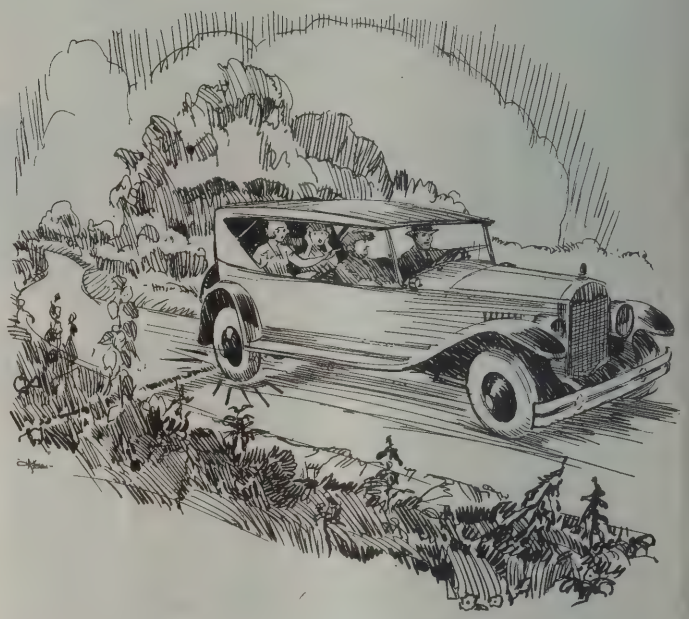
Mr. Adams keeps a unit record of the number of tires each salesman sells. Various prizes are offered, usually monthly, to stimulate efforts among the salesmen. Prizes and conditions are changed often to avoid monotony. One month the big prize went to the man who took off the greatest number of competitors' tires and replaced them with Adams's.

The parent tire station on Government street is the last word in convenience and attractiveness. The front is built of tile brick of two colors, so attractively arranged as to appeal to women, many of whom patronize the station. From the entrance on Government street, cars drive through to the service station in the rear. Instead of this being in a covered shed, where the fumes and heat would make the place almost unbearable for workmen and patrons, the company has erected five awnings that extend out from the stock rooms very much like the fingers of a big railroad terminal. The entire floor space of 11,760 square feet is concreted. The place presents a very genteel appearance and an orderliness that appals to the most discriminating class of trade. As many as 28 cars can be serviced at the same time without undue crowding.

The tire service employs 57 persons and has 15 service trucks engaged in road service work.

BIG BUSINESS—*LITTLE OVERHEAD*

Novel Installation Yard Recommended in Connection With the Sale of Bosch Shock Absorbers Costs Little and Has Big Possibilities



HARWOOD was pleased with himself, not that this was anything out of the ordinary, but this time he was especially pleased. Two weeks ago he had bought a new car, one of America's finest, everyone said so, even the wife, so there could be no question about it. Harwood thought of its beautiful lines, its sturdy power plant, its comfortable cushions. Yes he would do it. Would invite the boss and his wife out to the cottage at the lake to spend the week end. But alas for the plans of mice and men.

All had gone well until Harwood started to take a short cut. The boss was with him, up in front, while the ladies rode in back. Then came the darkest hour. Across the road stretched a ditch, a left-over scar of some buried pipe, filled, 'tis true, but a bad job at that. Harwood saw it, but too late. The flexible rear springs bent under the blow, then released their pent up energy, as the best of springs will do, and two shrieks penetrated the woods, as two bobbed heads struck the top.

The event was not serious, no harm had been done, but for Harwood the day was spoiled, the effect he had hoped to create with the new car had been marred. He was one of a million prospects, one of several million who yearly buy new cars, and demand the maximum that balloon tires, well designed springs and shock absorbers can afford. All but the latter were there and these would be added the first time Harwood came to a place where shock absorber installation was being done in a businesslike manner.



Derebey, who runs this snappy appearing electrical station, was quick to grab this new profit producing idea

Help Shock Absorber Sales

"Experiences of this sort," I was told by the Bosch sales manager, "are the things that make it easy to sell shock absorbers, and with an outdoor installation system, that everybody can see, it makes things still easier." And the method of outdoor installation which was started at the two large stations in Springfield, Mass., and at Chicago have not only justified their own existance but have shown the possibilities of similar profitable business for the dealers and specialized shops in the smaller communities.

Overhead expense is the thing which makes the profits fade away. There may be a substantial discount on a tire, a battery or a spotlight, but if the cost of the building, the management and a hundred and one other items eat up all the margin, then the boss himself finds it hard to eat.

In practically every shop there is a man used as a helper, or in a minor mechanical capacity. Such a man can be trained to make shock absorber installations, for with the Bosch system detailed instructions are provided covering each make and model, while special fittings and a cleverly designed universal type of bracket make it possible to handle all jobs with three types of equipment, an initial order of ten sets being enough for the dealer to start on. The adjustable feature also helps in the original installation as well as making it simple to adapt one type to balloon or cord tire equipment and to varying load requirements.

In the smaller communities and even in most large ones, it is often possible to get the use of a vacant lot adjoining or near the dealer's place of business, and the arrangement of this space can be made so attractive that the appearance alone is of great advertising value.

Profitable Side Lines

Specialized electrical stations are finding that side lines such as this one can be profitably handled, not because they require electrical trouble shooters, but because they add one more item which can be sold with no appreciable increase in the overhead.

One typical illustration of an up-and-doing electrical shop is the Albany Park Battery Station, located on the northwest side of Chicago and owned and operated by Chester H. Derebey.

This service station is official representative for Exide batteries, Stromberg carbureters, American Bosch, Delco, Remy, Klaxon, Gray and Davis, Briggs and Stratton, Atwater Kent and Connecticut, these accounts having been obtained due to the up-to-date business methods employed.

For example, Mr. Derebey was one of the first in his territory to install a constant potential charging system. He early put into effect the *charge-for-service* idea in connection with his battery work. He has an addressograph and a mimeographing machine for getting out advertising matter to the prospects in his territory.

Is it any wonder that he was quick to grasp the outdoor installation idea to bring more sheckles into the treasury?

But wanting to get the reason back of his adoption of the idea, I said, "How does it happen that you, as an electrical specialist, take on this mechanical line?"

Registration Plan Is Effective

And Derebey said: "That's easy. First, you have to do a pile of electrical work to make as much from the labor as you do in putting on a forty dollar set of shock absorbers. That's one thing. Then, being electrical specialists, we find the registration plan the best thing that ever happened for bringing business our way. When a man buys a car with Bosch equipment, his name is given to the Bosch branch, a card is filled out and we get a copy.

"The car purchaser comes to us for service and inspection of his electrical equipment, sees our installation facilities, hits a bump or two and the rest is easy. We have an ignition man, a carbureter man and two battery men. One of the latter does the shock absorber installation work —that's his job. When we are rushed on shock absorbers we can go easy on battery repairs for they will wait. It only means letting a customer have his rental battery a few days longer in rush periods."

In the case of the Albany Park Battery Station, no mechanical work or greasing is done on cars and it was found necessary to put up a sign which would make this clear. Where dealers in small towns would have such an installation rack, however, it could be worked in very well with washing and greasing, while the rack could also be used in connection with mechanical work such as bearing adjustment.

A Business Getter



Cars having shock absorbers installed at the Chicago branch



Outdoor installation yard of the American Bosch Magneto Corporation in Chicago

Aids to Quick Engine Starting

RICHNESS of the air-fuel mixture determines the number of revolutions that must be made by an automobile engine before an explosion is obtained, said J. O. Eisinger, of the Bureau of Standards, in a paper delivered at the semi-annual meeting of the Society of Automotive Engineers. Various other factors also affect the time for starting the engine, as determined by a series of tests conducted at the bureau.

Less fuel is used in starting if the mixture is comparatively rich, but the primary advantage to the driver is that it gets the engine started more quickly on a cold morning. The more volatile the fuel used, the more quickly the engine can be started, and aviation gasoline gave better results than commercial motor fuel.

The problem of starting in cold weather depends to a large extent on the temperature of the charge and the degree of vaporization of the fuel. The quantity required for starting may be very different for different water jacket temperatures. More complete vaporization and quicker starting result from a decrease in throttle opening or by choking, which reduces the pressure in the intake system; choking gives somewhat better results than throttling. The use of ½-inch throttle and choke orifices greatly reduced the starting time.

The experiments also indicated that, from the standpoint of starting, it is desirable to locate the carbureter jet so that the fuel will need to be lifted the least distance vertically by the air stream and that the jet of fuel should not be obstructed. More fuel reaches the cylinders in a given time, and the engine starting time is considerably reduced, for a given rate of fuel flow, when the jet discharges vertically upward and a small jet orifice is used, because the fuel stream has a greater velocity and rises to a greater height. Moderate spark advance also greatly aids in quick engine starting, an advance of about 35 degrees giving a much shorter starting time than an advance of 10 degrees and somewhat shorter time than advances of 50 or 80 degrees.

What About Radio?

RADIO merchandise is being retailed through many automotive establishments. Among these automotive establishments are to be found accessory stores, battery and electrical shops, garages, and automobile dealers who do a general business in new and used cars and supplies and equipment of all kinds.

Automotive jobbers in many sections of the country are becoming the wholesale distributors of radio products and it is only natural that to a considerable extent they would seek outlets for this merchandise through the same channels that they have been associated with in the distribution of automotive merchandise.

And yet there are some automotive merchants who stand definitely opposed to engaging in the radio business in conjunction with their automotive business. There are others who right now are actively engaged in putting in radio departments, and still others who are found to be giving serious thought to the matter.

What should the automotive merchant do about radio?

Does the radio business naturally fit in with the automobile business?

Is radio merchandising a profitable business?

Can the automotive merchant sell radio without neglecting his automotive business?

These are some of the questions that occur to every automotive merchant who gives the least thought to the radio business.

Such questions as these cannot be answered with theoretical discussions. The answers must come from the experiences of dealers who have tried the radio business.

Therefore, MOTOR AGE will open its columns to a full discussion of this subject by dealers who have had experience in selling radio. We want car dealers, garage men accessory dealers, battery and electrical shops to tell us fully and freely just what their experience with radio has been. If they approve of radio as a sales field for the automotive merchant we want them to say so and tell why. If they disapprove we also want to know the reasons.

From the letters of dealers who have had experience with radio, MOTOR AGE editors will prepare articles summing up and discussing all the phases of the radio business and quoting from the experience of individual dealers. Names of dealers, however, will not be published if a request is made that they not be, but all letters to receive consideration must bear the signature of the writer.

Please address letters to the Editor of MOTOR AGE, 5 South Wabash avenue, Chicago, Ill.

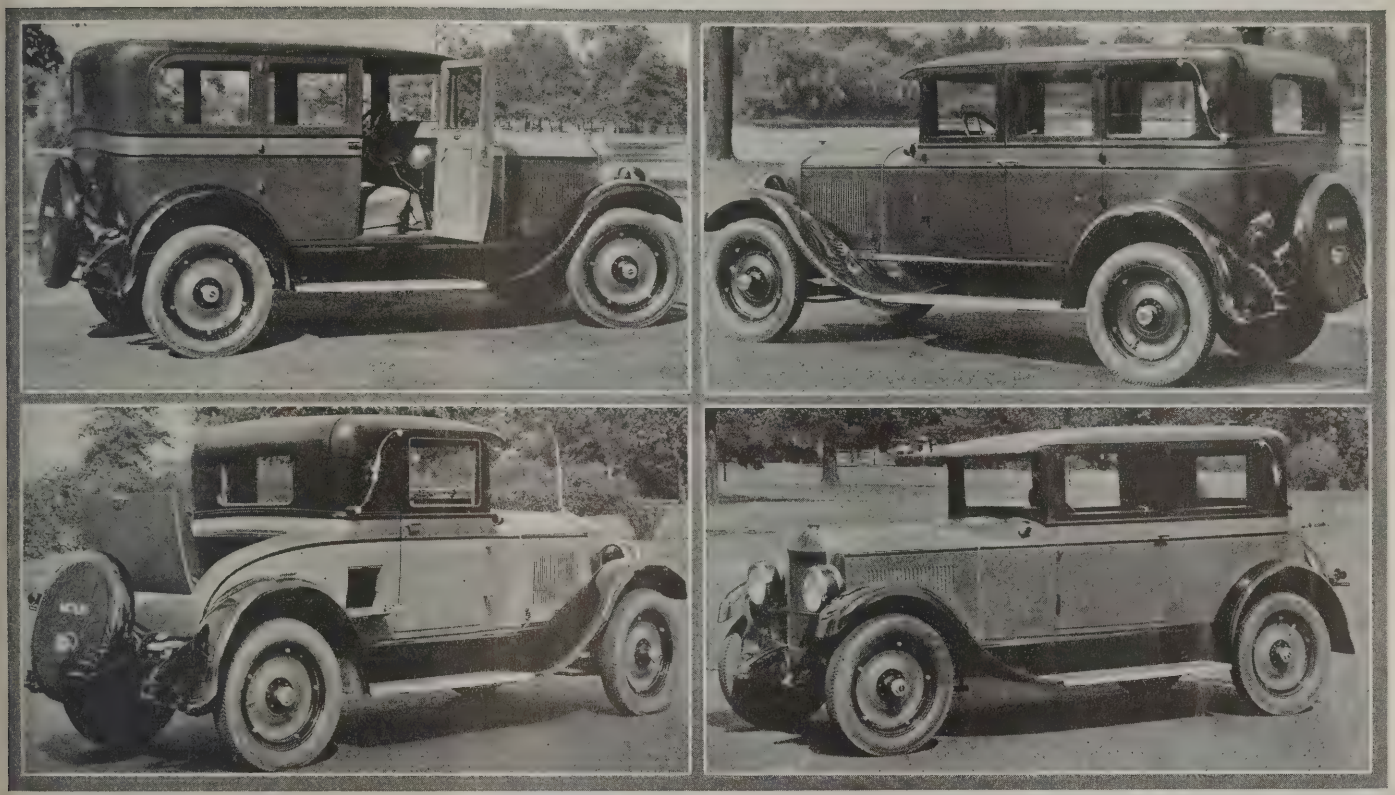
Watch next week's issue for the first article on "What About Radio?"

Tell Your Radio Experience to Motor Age

If as an automotive merchant you have had experience in selling radio merchandise, please tell MOTOR AGE about it. What you have learned may be of great help to a fellow dealer. Information contained in letters from dealers will be made the basis of articles to be published in MOTOR AGE on the subject, "What About Radio?" The more letters we get the better the articles will be. Send your letter to the Editor of MOTOR AGE, 5 South Wabash Ave., Chicago, Ill.

More About Radio in Next Week's Motor Age

Refinements Adding to Comfort and Appearance in Moon Models for 1926



Group of four Moon models for 1926. Top, left to right, three-quarter view of the Deluxe four-door sedan and the standard sedan. Below, left to right, the cabriolet roadster and the coach DeLuxe

IN the Moon cars for 1926 the basic lines of the car have been retained in keeping with the new day engineering policy now preferred in the automotive industry. The Moon Motor Car Company has for several years advocated and had in effect this policy of eliminating the yearly model idea in the cars this company manufactures. Changes in the Moon cars consist in reality of the refinements which have been incorporated in the cars to add to their roominess and comfort and to their appearance.

The shape of the radiator shell of the Moon cars for 1926 has been improved by deepening the radiator so that both the shell and the radiator have a much better appearance. The fenders have a deeper crown and an increase of 1 in. in width while the substitution of moulding for the raised center panel has added much to the appearance of the fenders. The front fenders are made much longer and with a longer and more graceful sweep, which lends a European effect to the fenders. The running board is much shorter and wider, necessitated by the change in the fender length.

All chassis sheet metal has been redesigned and a tank cover has been added

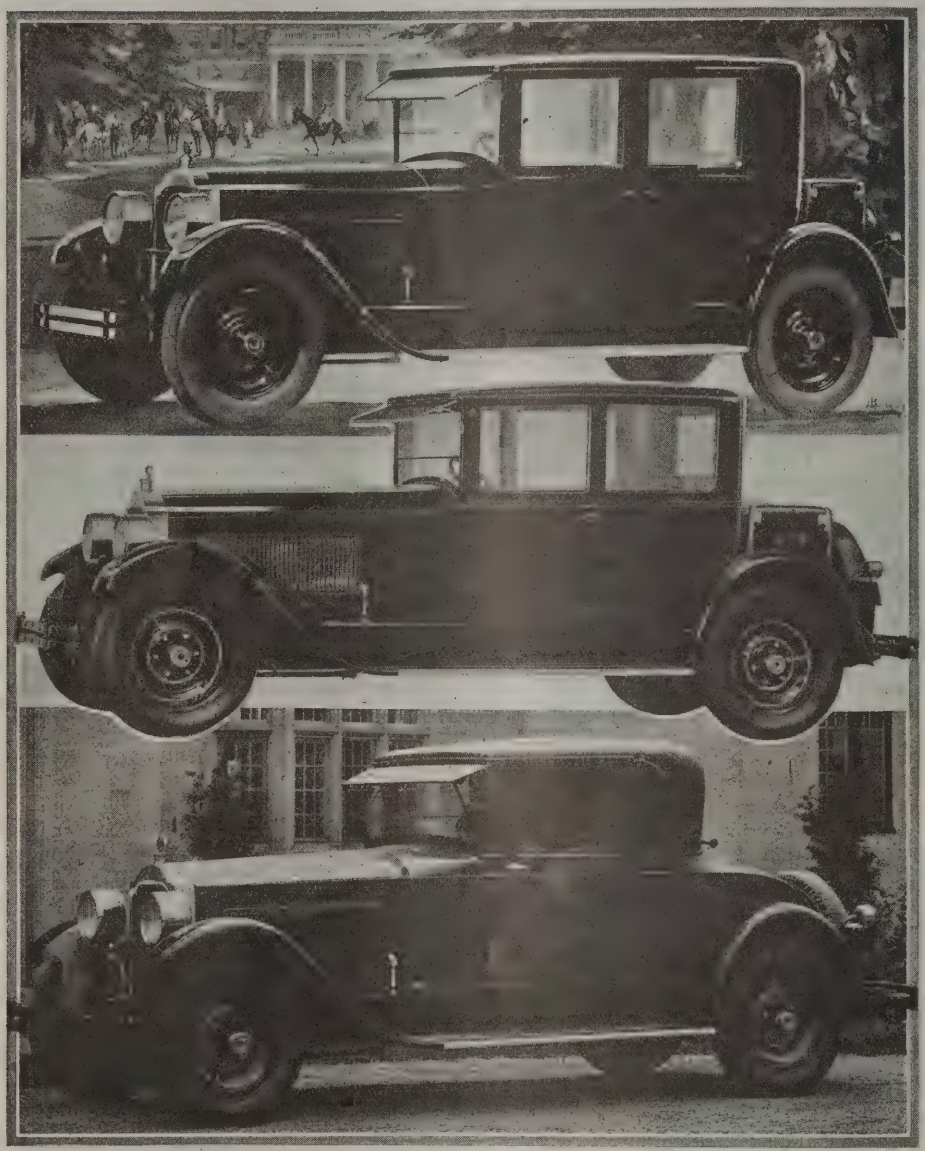
(Continued on page 42)



Interior of the Moon cabriolet roadster. The rear window can be lowered to any point desired

Packard Adds Four Passenger Coupe, Club Sedan and Holbrook Coupe

Former Two Are Mounted on Both Six and Eight Cylinder Chassis While Latter Is Available on the Eight Only—Roominess Features New Bodies



Three of the New Body Models on the Packard Eight Chassis, Top to Bottom, Five-Passenger Club-Sedan, Four-Passenger Coupe and Holbrook Two-Passenger Coupe

A NEW four passenger coupe and a five passenger club sedan together with a new special Holbrook coupe now are being offered by the Packard Motor Car Company. The four passenger coupe and the club sedan are mounted on both the six and eight chassis while the Holbrook coupe is offered only on the eight chassis.

The four passenger coupes and the club sedans both have large decks at the rear with attractive railings and each carries a large water and dustproof metal trunk.

The club sedan is mounted on the 133 in. wheelbase six cylinder chassis and on the 143 in. wheelbase eight chassis. The price of the Packard Six club sedan is $2725 while the price of the Eight club sedan is $4890.

Dimensions of the club sedan body are alike for both the six and eight chassis. The six is upholstered and trimmed in the same material as other of the six cylinder enclosed cars. The same options of paint, trim and upholstering for all Packard eight cylinder cars are given on the new eight club sedan.

The trunks on both six and eight club sedans give unusual storage room for parcels or provide a place for several suit cases or traveling cases. They are 44⅜ inches long, 19⅜ inches deep and 15½ inches wide.

Roomy Rear Seats

The rear seats are 49 in. wide, giving ample room for three persons and have the deep upholstering and springs together with the comfortable contours and width and height of cushions that mark other Packard enclosed cars. Two hassocks made of the same material as the carpets are provided for foot rests. The ample leg room in the rear seat is made even greater by cutting away the back of the front seat at the bottom for additional toe room. Four wide doors give access to both front and rear seats independently of each other. The front seat has a width of 46 in. and is of the same upholstering as the rear seat. Curtains for the rear windows are carried on concealed rollers.

The four passenger coupe in the six cylinder line is mounted on the 126 in. wheelbase chassis and the 136 in. wheelbase chassis is used for the eight coupe. Paint, upholstering and trimming on both these cars is the same as that on other Packard enclosed models, with the same distinctions between six and eight cars and the same options on the eight.

The driver's seat is set a little ahead of the two-passenger seat across the rest of the rear of the body. To the left of the rear seat is a parcel compartment with an opening in the top 8¾ by 17¾ in. The doors have the same opening as in the seven passenger sedan bodies.

The fourth seat which folds back under the cowling when not in use has deep spring upholstering and is 17¾ by 17⅝ in. The driver's seat also is quite large with a seat cushion 22 in. wide by 17⅝ in. deep. The back measures 23½ in. across. The two passenger seat is 39 in. wide and 21 in. deep. Curtains on concealed rollers are provided for the rear windows.

Rear Deck Trunks

Trunks carried on the rear decks of the coupes are considerably larger than those on the club sedans but are of the same materials and construction. They are 44⅜ in. long, 21½ in. wide and have a depth of 19⅜ in. They are fastened securely to the large deck in the same manner as that employed on the club sedans and in a like manner are readily removable.

The six coupe is listed at $2585 and

the eight coupe at $4650. Equipment on both coupes and both club sedans is the same as that on other enclosed models, including snubbers on the six and stabilators on the eight, bumpers front and rear built into the chassis, motometer, dash gasoline gauge, rear view mirrors, automatic windshield cleaner, cigar lighter on dash, cowl ventilators, sun visors and a vanity case on the coupe.

The new Holbrook coupe, an attractive addition to the Packard array is mounted on the 136 in. wheelbase chassis; it is a two passenger car, complete with full equipment listing at $5775.

There is an exceptionally large amount of space for stowing luggage in the rear deck in a compartment, access to which is obtained through a hinged dust and water proof door set into the deck. Another compartment 10 in. wide and extending practically the width of the body is located just behind the seat.

Through special design and construction the three piece "vacuum" type windshield with which this car is fitted allowed an almost unrestricted view forward while its appearance enhances the particular style of car.

Equipment is the same on the Holbrook coupe as on other Packard eight closed cars and the same options are given on painting, trimming and upholstering.

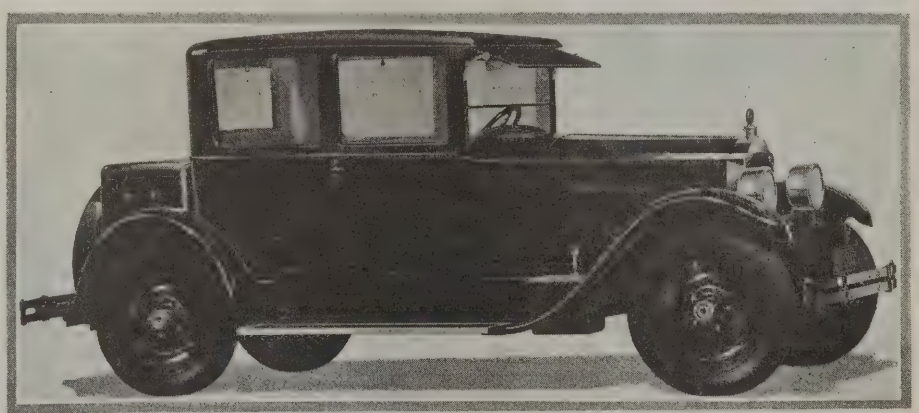
New Models, Lower Prices Aid Sales

SAN FRANCISCO, Aug. 22.—The last week in July and the first week in August might well have been called "New Car Fortnight" in San Francisco, for the motoring public within that period got its first glimpse of the new models of some dozen makes of passenger cars. This inspiring show, coupled with price reductions in most lines, makes the first two weeks of August look like a record for this month in San Francisco territory. Certainly the month will be far ahead of the same period last year.

Among the new models shown were seven new Moons, featuring the coach de luxe; the new Chandlers, in which the Comrade Roadster and paneled radiator design attracted much attention; sixteen types of Buicks, master six and standard six chasses; new Nash models, with the Ajax Six, in two body styles, five-passenger touring model and five-passenger sedan; the new Diana, produced by Moon; new Star models, and the latest Oakland Six.



Packard Four-Door Five Passenger Club Sedan Mounted on the Six-Cylinder Chassis. The Top View Shows the Comfortable Contour of the Seats



New Four-Passenger Coupe Mounted on the Packard Six Chassis. The Trunk at the Rear Is Metal and Exceptionally Roomy

DEVELOP STEAM MOTOR

COLUMBUS, O., Aug. 22.— Papers have been filed chartering the Universal Steam Motors Co., of Columbus with an authorized capital of $100,000 to develop a rotary steam engine for motor cars. The incorporators are Harry C. Dunning of Chicago, the inventor; B. L. Thuma, A. F. Wise, E. C. Neidlander and Carl D. Preston. Mr. Dunning has worked for six years perfecting the engine which uses kerosene as fuel. It is a six cylinder engine and great power is claimed for the invention. One of the engines invented by Mr. Dunning is on display in the lobby of the new Neil House. For the time being working models for the purpose of producing the engines in quantities will be made. It has not been decided where the factory will be locataed.

The New Buick Electrical System

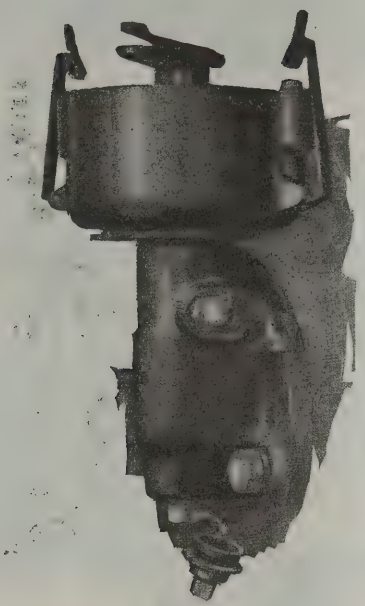


Fig. 4
Ignition unit showing timing adjusting screw and cap

Two-Unit Delco Electrical System, Used for the First Time on This Car, Contains Details of Interest to the Shop Electrician

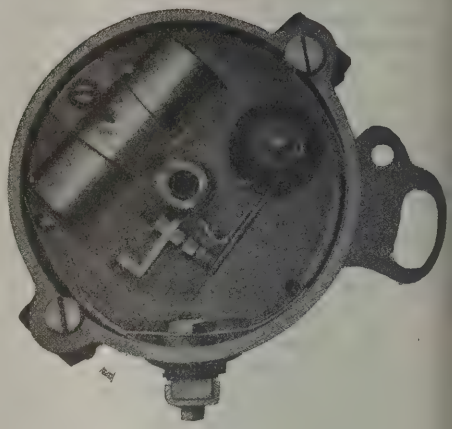


Fig. 3
Interrupter showing breaker point adjustment and replacable condenser

FOR more than ten years automotive electricians have been familiar with the Delco type of motor generator used on Buick cars. Now a change has been made as described in the July 30, 1925 issue of MOTOR AGE and the forehanded trouble shooter will file away for future reference all information he can get on the new system.

In Fig. 1, the electrical circuits are shown for the Master Six, the circuits for the Standard Six being the same except that there is no tonneau light and no pillar light. The starting circuits are conventional in that the live battery terminal is connected to the starter switch. The switch, however, is mounted directly on the starting motor as shown more in detail in Fig. 2.

On the starting motor shaft is a pinion which is brought into mesh with the flywheel ring gear by the operation of the starter pedal. After the pinion has been brought into mesh further motion of the starting mechanism operates the starting switch. This construction makes it practically impossible to put any strain on the ends of the flywheel or pinion teeth, for it is only after meshing has been completed that the starting circuit is closed. In Fig. 2, it will be seen that a roller clutch is incorporated in the starting motor so as to prevent damage to the armature in case the driver of the car does not release the starting pedal as soon as the engine starts.

Referring again to the wiring diagram at Fig. 1, it will be seen that from the live starting switch terminal a connection comes to the ammeter and from the other ammeter terminal connections go to the generator cutout and to the No. 1 terminal of the lighting and ignition switch. Turning on the ignition allows current to flow through the ammeter to the coil and here we have a departure from the old motor generator system, for the ignition can now be checked up by means of the ammeter current without the necessity of disconnecting the two small wires from the motor generator. The operation of the lights is similar to that on other Buick cars except that the dimmer switch is a separate unit, controlled by a lever at the center of the steering wheel.

This switch serves to send current to either one of the two filaments in the head lamp bulb, these bulbs being the new Mazda type No. 1110 which have two bright filaments, one used for normal driving and the other to deflect the normal light beams in a downward direction when passing other vehicles. The ignition circuit is conventional, the interrupter being equipped with a condenser easily replaceable should occasion require. The generator is of the third brush type and carries the ignition unit. The interrupter construction is shown at Fig. 3 and the ignition unit mounting and location of the timing adjusting screw is shown at Fig. 4.

Ignition

The ignition is timed by fully advancing the spark lever on the steering wheel The valve cover is then removed, so that the valve action may be noticed. The engine is then turned over by hand until the intake valve in the No. 1 cylinder closes. The rotation of the engine is then continued until the 17-degree mark on the flywheel rim is in line with the mark on the edge of the opening in the flywheel housing, as shown in Fig. 5. It is then necessary to take off the dis-

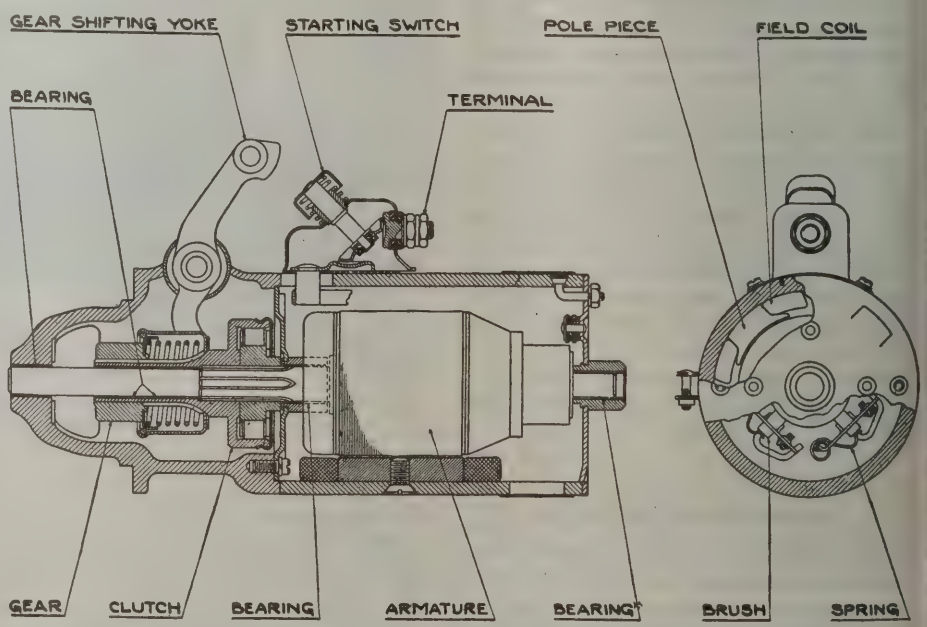


Fig. 2—Sectional view of Delco starting motor used on Buick

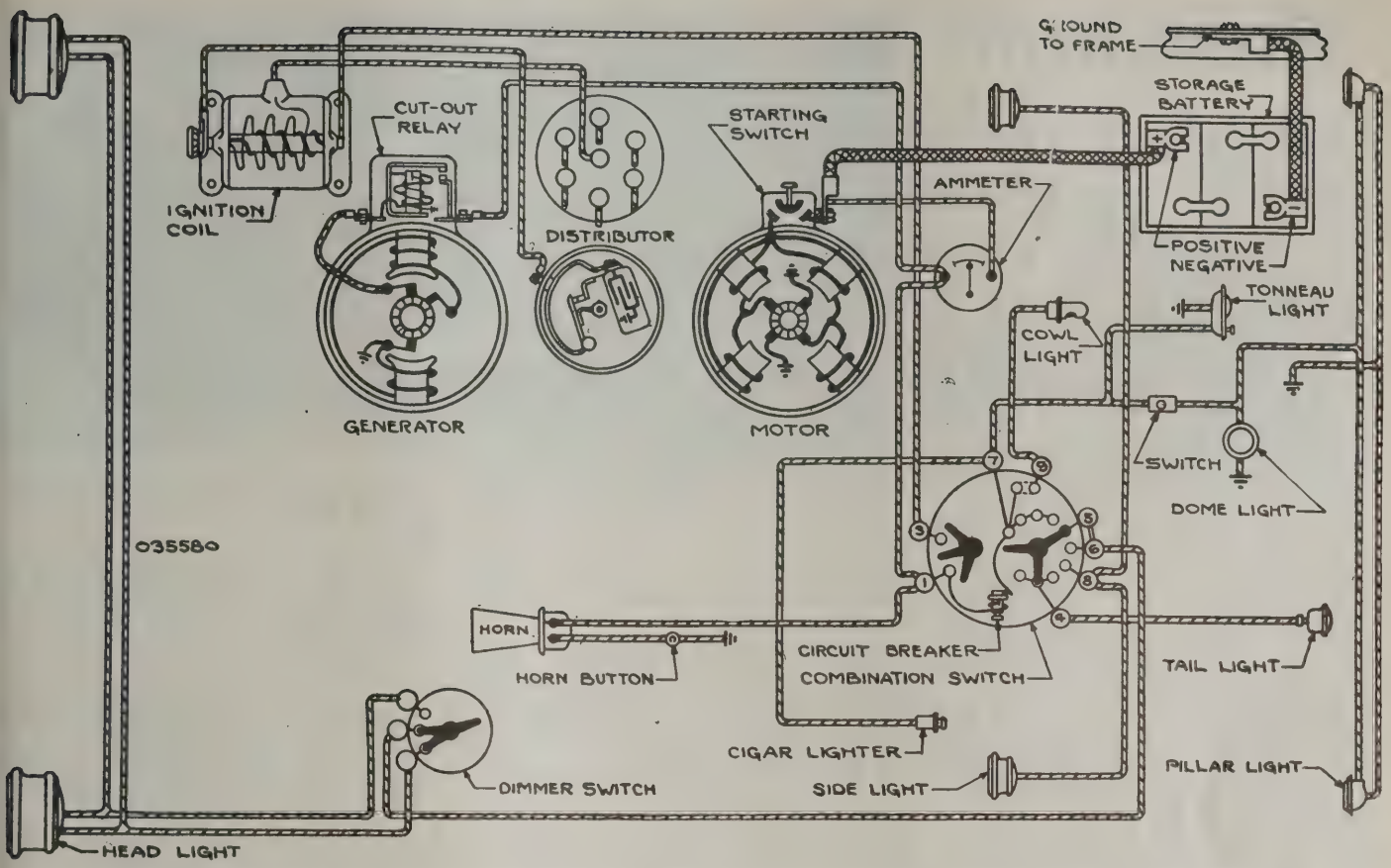


Fig. 1—1926 wiring diagram for Buick Master Six (Standard Six the same but no tonneau or pillar lights used).

tributer head and remove the hex cap at bottom of distributer housing as shown at Fig. 4. The timing adjusting screw with the hex head at the lower end of the distributer shaft is then loosened so that the rotor turns freely. Then turn the rotor until the breaker arm is on the nose of the cam and adjust the breaker points to .020 inches. Set the rotor in a position approximately on the No. 1 contact button and tighten timing adjusting screw slightly, so that rotor does not turn freely. Turn rotor backward until the contacts are just closing on the front side of No. 1 lobe of cam. Turn rotor forward to take out movement of automatic advance. Hold rotor in this position by hand while completely tightening the adjusting screw at the bottom of the distributer. Replace the hex cap and the distributer head. The spark plugs should have a gap of .025 in. The firing order is 1-4-2-6-3-5.

Lubrication of the generator is taken care of by means of an oiler which requires a few drops of engine oil every 500 miles. This oiler is at the rear of the generator. A Zerk connection is provided on the distributer housing and should receive attention every 500 miles. The track in the distributer head should be greased with a small amount of vaseline jelly two or three times during the first 2,000 miles of driving. The track will then become glazed and thereafter it is only necessary to wipe out the distributer head with a clean cloth. A small amount of vaseline jelly should be applied to the surface of the breaker cam each 1,000 miles.

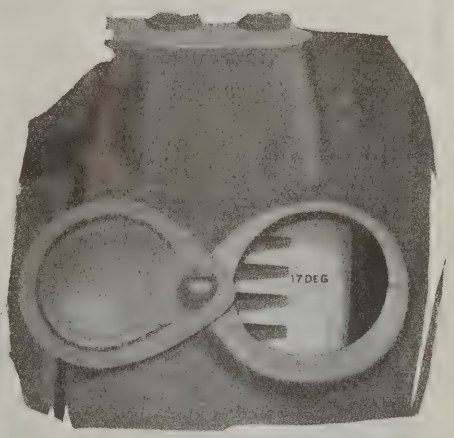
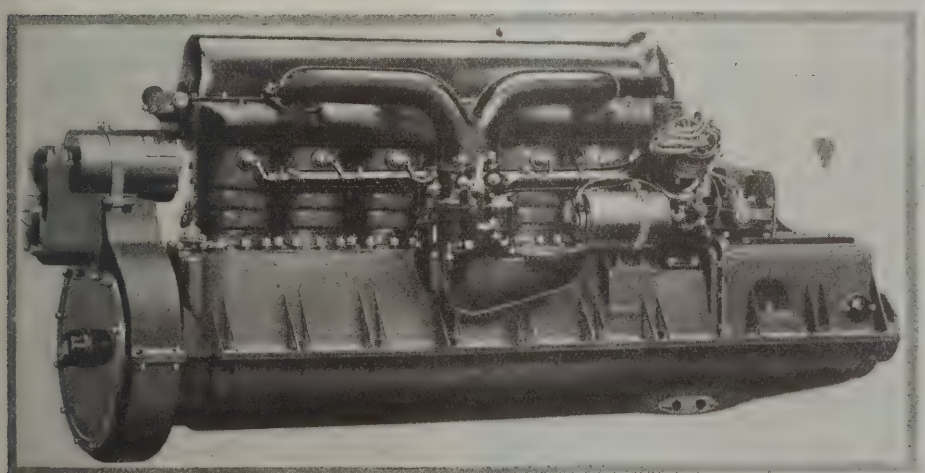


Fig. 5
Flywheel setting for timing ignition in advance position



Marine Engine Now Being Produced by the Packard Motor Car Co., Detroit. This Engine was Developed From the Company's Model 1500 Aviation Engine and Develops 260 h. p. at 2500 r. p. m. The Six Cylinder Engine Sells For $6,000 and the Twelve-Cylinder For $12,000

Brougham Added by Velie



Velie Brougham Which Is Mounted on the Standard Chassis and Has a Rather Novel Arrangement of the Belt Line Moulding

VELIE Motor Corp., Moline, Ill., has added a new body type, to be known as the brougham, to its regular line. The brougham has four doors and accommodates five passengers. A single moulding extending from the radiator shell joins a double moulding at the cowl, giving a pleasing stream line effect. Body finish is of two-tone Duco, while the fenders are brilliant black. The upper back is finished in black leatherette in contrast to the gun metal gray of the body below the moulding. A curved visor, a continuation of the roof line; cowl lights, full nickel radiator shell and four-barrel radiator, lend a distinctive appearance to the car.

Upholstery is of gray corduroy with velour trimming. Rear quarter windows are operated by Clement single lift regulators, door windows by regulators of the Dura four-turn type. The windsheld is of the one-piece, ventilating type. Doors are provided with Eastman chain door stops.

Instruments are grouped in a glass covered satin silver oval panel, giving the instrument board a clean cut appearance. This panel is illuminated by a cleverly concealed lamp, contained within the panel itself. The ignition switch is located at the left of the steering post in balance with the choke plunger to the right of the post. All light controls are operated by a lever located on the steering post along with the gas and spark control levers, all of which are of the finger type.

The new Velie brougham body is mounted on the standard Velie chassis. Standard equipment includes full 6 in. balloon tires and Lockheed hydraulic four-wheel brakes, has rear view mirror and automatic windshield wiper.

Construction Details of Apperson All-Weather Glove Finish Body

ADDITIONAL details are available at this time, concerning the Apperson all-weather glove finish fabric body construction recently announced and described in the July 16 issue of MOTOR AGE.

Fabric body construction necessitates a strong framework, built of selected hardwood, properly dried, carefully machined, and carefully glued and screwed together, with generous forged irons at all points where strength is required. This is very similar to the regular type of construction sheet steel bodies.



Interior of the Apperson All-Weather Glove Finish fabric coupe roadster. Part of the fabric on the body panel is visible

However, instead of covering this prepared framework with sheet metal, as has heretofore been customary since the abandonment of wood panels on automobile bodies, Apperson uses a covering of expanded steel similar to that used in reinforcing concrete. This metal lath is set in rabbets and securely nailed.

Over this wood framework covered with expanded steel, is stretched one layer of cotton sheeting and a heavy layer of cotton wadding, which is then covered by stretching a piece of canvas tightly over both. This is then covered with "Meritas" leather cloth, a material made especially for this purpose and is different from the ordinary imitation leather in that it is two-ply or laminated fabric bonded with special oil cement, making a waterproof covering. This Meritas cloth coating is very hard and will retain its lustre almost indefinitely, it is stated.

There are many points in favor of this type of construction, the Apperson company states. It is equally as strong as sheet metal; it is quiet, reducing to a minimum all interior rumbles, and eliminates rattles or squeaks.

It retains its lustre under all climatic conditions—dust and mud do not mar the surface, it can be wiped off with a damp cloth without impairing the finish. In event of accident the damaged portion can be replaced very quickly by replacing the damaged panel with a new section of material. To facilitate this operation, the panels are applied in sections joined together with semi-concealed moulding.

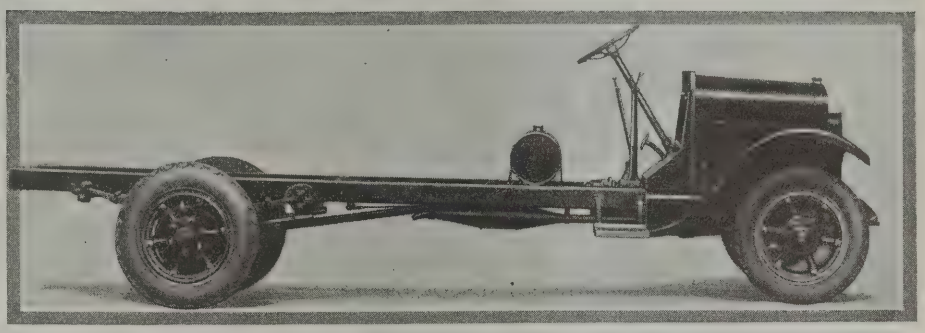
New 2-Ton Federal Truck With Knight Engine Announced

PROMPTED by the success of the Knight-engined one-ton truck, the Federal Motor Truck Company has just produced a new two-ton Federal-Knight listing at $1650.

Besides incorporating the sleeve-valve engine and other modern features such as a full floating rear axle and full pneumatic tire equipment not found in the former one and a half to two ton truck manufactured by this company, the new model is capable of handling loads up to 4000 pounds in excess of body weight at a constant high road speed. A standard wheelbase length of 144 inches allows a loading space back of the seat amounting to 119 inches, while for special work a 156-inch wheelbase chassis can be supplied. The weight of the standard chassis is 3,000 pounds.

From the 3 5/8 by 4 1/2 in. bore and stroke Knight sleeve valve engine of 21 rated h. p., drive to the gearset is through a 10 in. single plate Borg and Beck clutch and a three-speed gearset.

A two-piece tubular propeller shaft with three metal type universals connects the powerplant with the Timken heavy duty, full floating, bevel gear rear axle providing a standard gear ratio of 6 3/7 to 1. The differential is carried on heavy tapered roller bearings inside the pressed steel housing which is fitted with two axle bearing mountings on each side. In line with the policy of the Federal Truck Company, this model also can be supplied with a worm drive rear axle if desired.



Side view of the Federal 2-ton chassis, equipped with the Knight sleeve valve engine and which lists at $1,650

Both service and emergency brakes which operate on the rear wheels are of the internal expanding type and operate on 16 in. dia. drums having a face 2 1/4 in. wide. The front springs are 38 by 2 1/4 in. while those on the rear are 52 by 2 1/2 in.

Mounted on six spoke cast steel wheels with demountable rims, standard tire equipment includes 30 by 5 in. pneumatic cords on the front with 32 by 6 in. on the rear. For a slight additional charge oversize are also available while if desired solid tires can be had if a worm type of drive is ordered.

Fuel is fed to the thermo-syphon cooled engine by a vacuum tank from a 15 gallon cylindrical tank mounted on the chassis frame under the seat position. Standard equipment includes hood, front fenders and step, dash and toe boards, Alemite chassis lubrication system, oil pressure gage, speedometer and tools. Included in the electrical system are generator, starter with Bendix drive, motor driven horn, head and tail lamps, ammeter, and heavy truck type 18-plate battery.

LACQUER SHOP NEAR FINISH

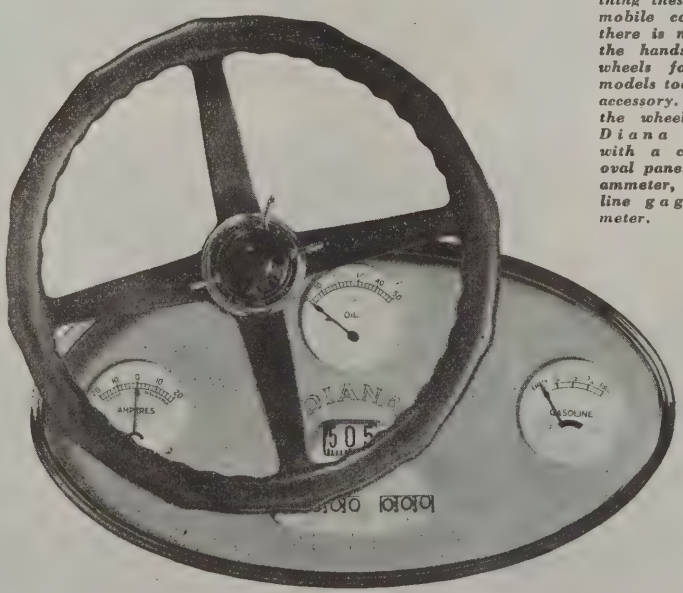
TOLEDO, Aug. 22.—The plant of the new Poly-Arts Spray Shop, Inc., capitalized at $100,000, now being built on Detroit avenue, is rapidly nearing completion. Preliminary operations have already been started. The company will put into operation the new spray guns of the DeVilbiss Manufacturing Co. for applying lacquer finishes to automobiles and other articles. Temporary plant is in the old Ames-Bonner Brush Co. building in West Toledo. Isaac Kinsey, Jr., son of the late Isaac Kinsey, who was long a leader in affairs at the Willys-Overland plant, is president of the new company.

WILLYS BUILDS IN OAKLAND

OAKLAND, Cal., Aug. 22.—Ground has been broken and construction started on the first unit of the large distributing plant to be built here for Willys-Overland, Inc. The new building, covering 88,000 square feet of floor space, is to be ready for occupancy October 1. It will be of brick, reinforced concrete and steel, of the latest "sawtooth," all-daylight construction.

Diana 8 Wheel and Dash Layout

The all-wood steering wheel seems to be the thing these days in automobile construction and there is no denying that the handsome walnut wheels found on many models today are a fitting accessory. At the left is the wheel used on the Diana Eight, together with a close-up of the oval panel containing the ammeter, oil gage, gasoline gage and speedometer.



MOTOR AGE'S PICTURE PAGES



SCHOOL DAYS. Safety Zone Crossing in Washington, D. C., where pedestrians are taught the Three R's in crossing street.





OVER THE LEFT FIELD FENCE. Gov. Fuller, of Massachusetts, swings mighty bat in ball game during Boston automobile dealers' clambake. The picture above shows one good reason why people attend clambakes. Gov. Fuller, incidentally is a Packard distributor and the big to-do pictured here was held at his summer home, Rye Beach, N. H.

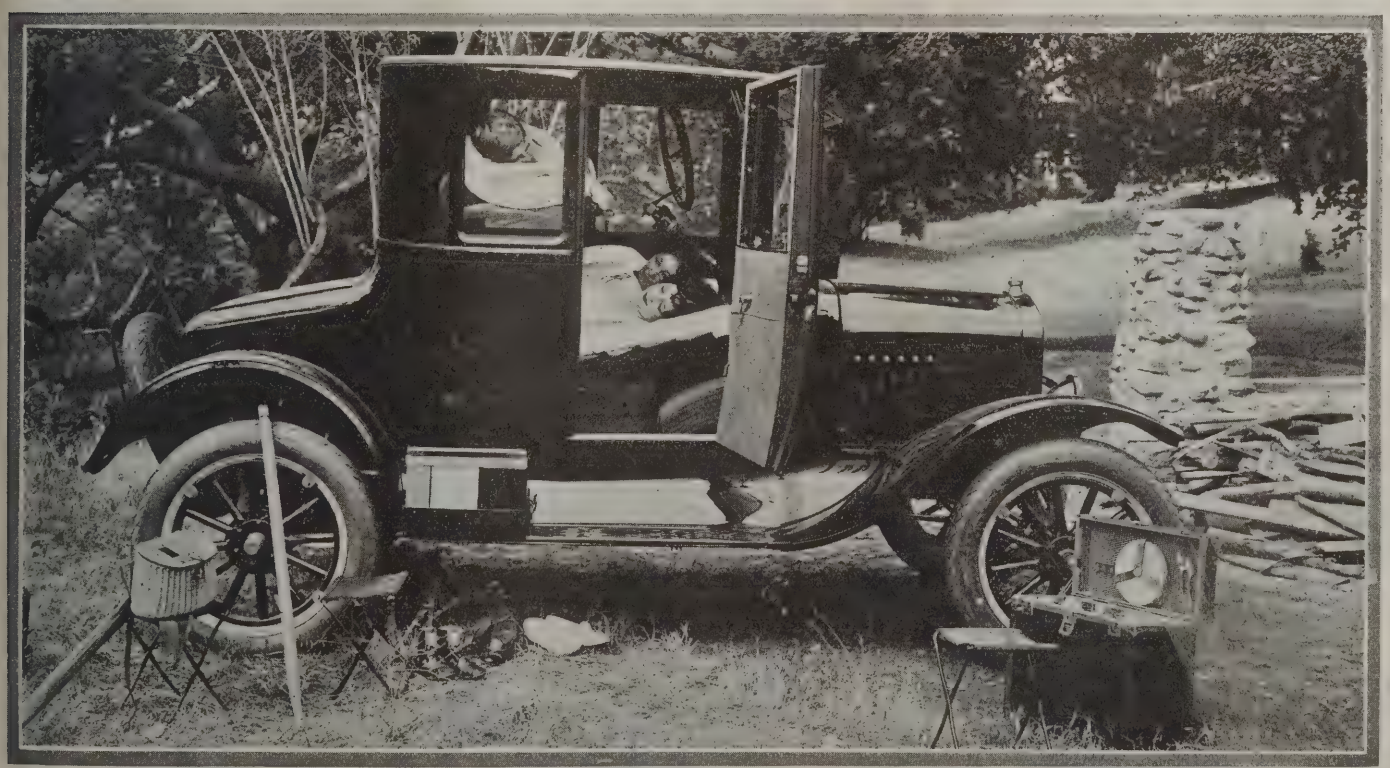
OF AUTOMOTIVE INTEREST



FREE WATER—YES. Concrete drinking fountain helps draw business for gasoline station near Sacramento.



ALL LIT UP. Boston traffic officer equipped with signal light strapped to his hand. The light is operated on a small storage battery



ALL THERE BUT THE PORTER. These are not Pullman berths. On the contrary the picture shows how a Ford coupe can be turned into a camping bedroom by using a development manufactured by the Price Coupe and Auto Bed Co. of Los Angeles. The "upper berth" is big enough for a child. Two sleep below.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▪ ELECTRICAL ▪ FLAT RATES
SHOP ▪ LEGAL ▪ PAINT & TRIM ▪ ACCOUNTING

Rear Axle Gear Ratio on a Dodge Brothers Car

Q.—I would like to know what would be the gear ratio of a Dodge Brothers car carrying a fifty tooth ring gear and a twelve tooth pinion gear, using a 28 by 4 wheel and tire?

The size of the tire is not considered when determining the rear axle gear ratio. In the case of a fifty and twelve arrangement the ratio would be 4 1/6 to 1 or 4.16 to 1.

2.—Also what would be the gear ratio using a 3 to 1 ring gear and pinion using a 28 by 4 tire and wheel?

The ratio would be 3 to 1.

3.—I also would like to know how many revolutions per minute would a Dodge Brothers motor have to turn over to drive the car 90 miles per hour?

Assuming a 4.16 to 1 ratio the engine would have to turn over 4100 revolutions per minute approximately to do 90 miles per hour. Assuming a 3 to 1 ratio the theoretical engine speed necessary to make 90 miles per hour would be 3275 revolutions per minute.

4.—What would be the best gear ratio to use on a Dodge Brothers tuned up for racing on a half-mile dirt track?

The best ratio is determined only by actual try out. We would suggest that it be not lower than 3 7/8 to 1 and not higher than 4¼ to 1.

5.—I would like to have a diagram for attaching an oil pump to a force feed oiling system on a Dodge Brothers car that you published some time previous in MOTOR AGE. Would pay for issue containing this diagram as I have looked through MOTOR AGES and cannot find this issue.

The issue in question does not cover installation of an oil pump as it was assumed that the reader would use the regular eccentric pump used on the stock Dodge Brothers car. The diagram showed a method of connecting the system after the crankshaft has been drilled. We are sending you the page from the issue mentioned which contains the diagram and directions.

6.—I would like to know also what speed does a magneto turn over in relation to the motor speed.

On a four-cylinder engine using conventional two spark magneto the magneto armature turns at crankshaft speed. On the six cylinder one and one-half times crankshaft speed and on an eight cylinder, twice crankshaft speed. This ratio is necessary because the number of sparks required per revolution will be one-half of the number of cylinders and as the magneto delivers two sparks per revolution the ratio must be so arranged that the magneto will deliver a spark to one-half the number of cylinders at each revolution of the crankshaft.

7.—At what speed does battery turn over in relation to motor speed?

Your question is not clear, but we assume you refer to the relative speed of a battery ignition system camshaft in which case the camshaft always travels at one-half crankshaft speed.

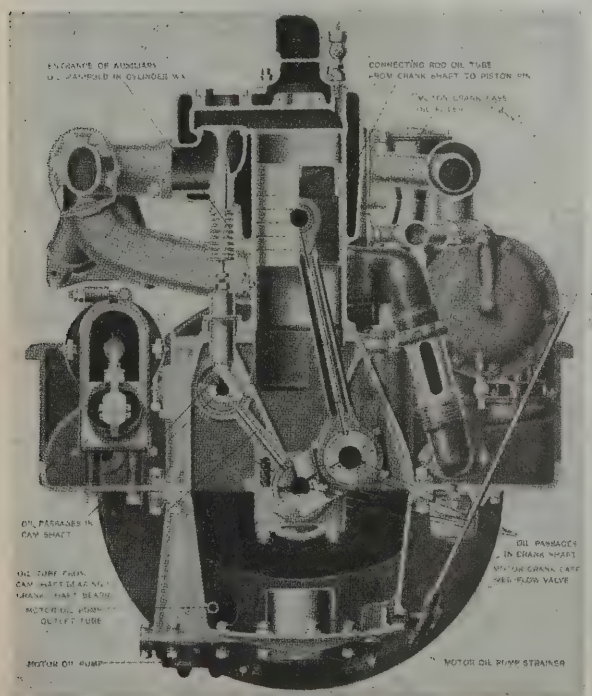
8.—Does a breaker shaft turn over any faster in a magneto than it does in a battery ignition system?—Merle Nelson, 329 Reynolds street, Springfield, Ill.

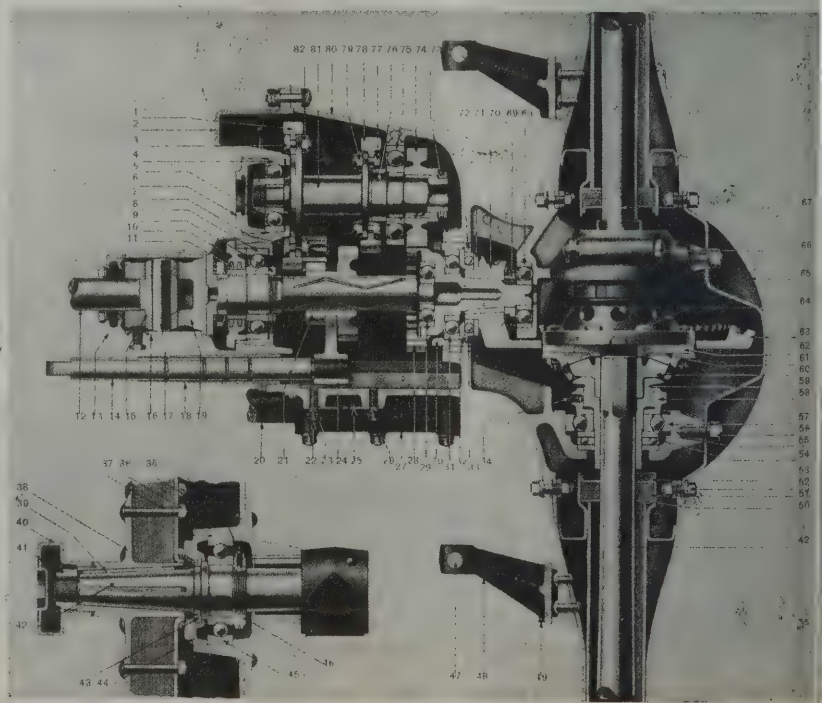
On four cycle engines used in motor cars the armature of the magneto turns faster than the camshaft or armature shaft of a battery ignition system.

A 1914 PACKARD FOR TOWING

Q.—Could you furnish me with details of the 1914 Packard six rear axle and transmission, also details of the engine as I think one of these cars would make a splendid tow car.—Robert H. Ludington, 597½ Dundas street, Woodstock, Ont., Canada.

The transmission being mounted on the rear axle, we are showing a cross sectional view which gives details of both units. We are also showing an end sectional view of the engine which indicates the path of the oil in the lubrication system. Oil is pumped to the hollow camshaft which acts as a distributing manifold. The oil is then distributed to the main bearings and through the crankshaft to the connecting rod bearings. Oil ducts in the connecting rods then carry oil to the piston pins.





Above: Transverse sectional view of 1914 Packard engine; right: Axle and transmission of 1914 Packard

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Front Entrance to a Building on a Corner is Waste

Q. Kindly furnish us with plans for a building to be put on a lot 75 by 140 corner location. The front of the 75 foot space will be the main entrance, in other words it is from this direction that the general flow of traffic comes.

The showroom, offices, parts stock and accessories should be handled in the space as outlined in our rough sketch. We wish to provide space for showing about five cars. The accessory and parts department are not to be slighted, as we go into that quite extensively. The shop works about four men regularly. This building will have a full basement, with a ramp from the rear. Wash rack in basement. No boiler room will be required as the building will have city heat. All the space which will be available without crowding too much will be used for storage. Fleck Motor Sales Co., Bismarck, N. D.

There is a great waste of space in this building caused by the entrance on the main street. Since it is on the corner, we see no reason why you should not use the side street as a means of getting to your garage and shop, giving over the whole of the frontage to showrooms, offices, and accessory sales. It is true that this drive-through idea with an entrance on the main street and an exit on the side street is very nice, but when we consider that about half of the length of the building and 15 feet of the width is given over to passage that might just as well occur in the side street, it would seem that some more economical use of the space would be preferred.

There is one advantage, however, in the layout we have made and that is that the shop, showroom, offices, etc., are all in one compact group where heating will be much easier and better than if the shop were separated from the rest. With this arrangement all the rest of the building is practically storage space and need not be heated above 40 or 50 degrees at any time.

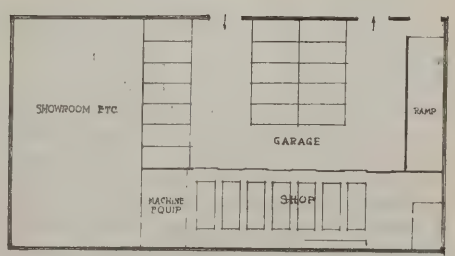
In the small sketch you will note that we have made an entrance on the side street directly into the garage, but have left the exit the way we have arranged it in the large sketch. The shop is along the back wall and in order to save space a series of sliding doors are arranged just back of the car spaces. This makes a very good arrangement and we believe would be quite a space saver for you.



The Small Sketch Shows One Method of Eliminating a Front Entrance as Laid Out in Our Large Plan

Why the Bearing Burns Out

Q. Adivse why the rear main bearing on a Chevrolet model 490 persists in burning out. We have had new main bearings put in this car twice and the rear main bearing will burn out in a day or so. We understand that the front and rear main bearings are oiled by splash system and the center main bearing is oiled by pressure. Advise if it would do any good to bore a hole and groove the upper portion of the rear main bearing. Advise the proper way to install rear main bearings in this motor to prevent the rear main bearing from burning out. Motor Inn Garage, Leeds, N. Dak.



Your mistake is apparently in failing to drill out a hole in the rear main bearing to coincide with the oil hole in the cylinder block. If you will examine the rear main bearing closely you will find that there is a sort of funnel construction in the casting just above the bearing which is intended to catch oil and feed it through a hole to the crankshaft. Accordingly the bearing should have a hole in it to register with this funnel and there should also be grooves cut in typical criss-cross fashion, so as to feed oil to all parts of the shaft.

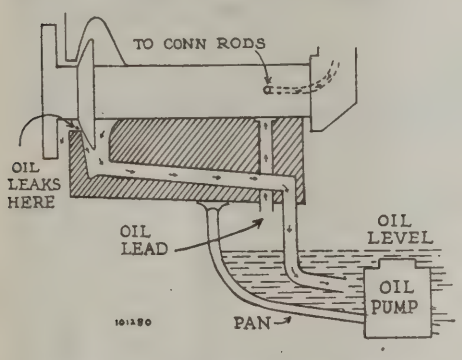
The bearing cap also has a hole and is also grooved. The front main bearing is constructed in similar fashion. It might also be well to check the crankshaft to see that it is not sprung, although failure to connect up the bearing with the lubrication passage doubtless accounts for the experience you have had. The use of a line reamer for finishing up the main bearings after they have been cast is a part of the recommended procedure, and together with straight shaft should give satisfaction.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Persistent Leak at Rear Main

Q.—We sent you an inquiry by night letter in regard to an Oakland which throws oil through the rear main bearing and received a reply suggesting the use of an oil drain pipe. We installed a pipe in accordance with your suggestion but it did not improve the condition. We are sending you a diagram of this bearing and would like additional information if possible.—McKenney Garage, R. No. 5, South Tacoma, Wash.

We are publishing your sketch so that other MOTOR AGE readers will have a chance to see what you have done and to write you direct if they have any suggestions. We assume that there is no connection between the oil pipe which carries oil to the main bearing and the one which is used for a drain. These appear to cross each other in your sketch, but we assume that they do not connect. If there should be a connection it would be easy to see how oil would be forced in the wrong direction. With the force feed system connected at the front of the bearing and excessive oil leaking out of the rear of the bearing it apparently shows a poor fit of the bearing to the crankshaft.



Reader's sketch showing steps taken to prevent oil leak

In making a thorough check it would be well to see if the crankshaft is straight and that the rear journal is not eccentric. Any appreciable amount of eccentricity will tend to enlarge the bearing so that oil will flow in excessive amounts toward the rear. In fitting the shaft to the bearing it is first fitted to the upper half and checked by the use of Prussian blue and then the bearing cap should be fitted in like manner until you have a very nearly 100 per cent bearing surface.

As a tight fit is not permissible with pressure lubrication it is even more desirable to use a mandrel made .0015 to .002 in. greater in diameter than the rear journal of the crankshaft. A chance for leakage always exists where the rear main bearing cap makes contact with the upper half of the bearing. On some cars babbitt lined shims are used which butt up against the shaft to prevent leakage along the crack between the shaft and the upper part of the bearing. It is certain that if any appreciable amount of oil leaks from the rear of the bearing that oil is rapidly flowing along the shaft or else that the drain is insufficient to take care of it.

Another possibility that occurs to us is excessive leakage of explosion pressure past the pistons which maintains pressure in the crankcase and prevents the oil drain functioning.

Now and Then a Miss

Q. We are having considerable trouble with a 1925 Maxwell Sedan with mileage of 450. After running from six to ten miles or when the engine gets thoroughly warmed up the motor starts to miss on Nos. 2 and 3, not regularly but intermittently, sometimes every 50 yards and then 100 and then 200 yards. Have changed plugs, coil, carbureter, vacuum tank and distributer. The engine runs well when cold and until it gets hot. Have had head off and touched up the valves, checked the valve stems also the seat, for clearance. Also checked the wiring for loose connection. Can you offer a solution or suggest a remedy? C. D. Robbins, 48 Smith street, Winnipeg, Man. Canada.

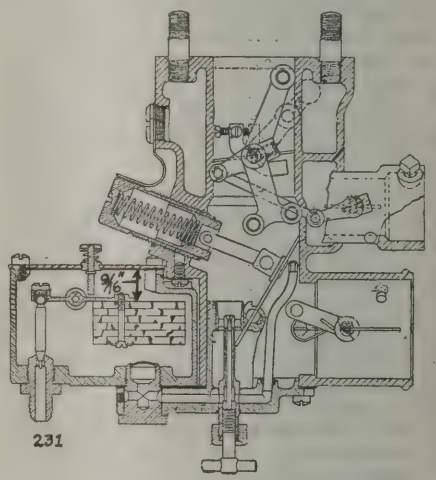
We would recommend your checking the spark when the engine has become heated to the point where missing occurs. You can remove a wire from a plug and hold it about 3/16 inch from the engine and run the engine at about the speed at which missing is noticed. Listen to the spark, using a tube of brown paper rolled up if necessary with one end held to your ear and the other end held near the spark. If the missing is found to be due to the spark failing every now and then, it is possible that there is a poor connection in the ignition switch.

A poor connection in the ignition switch can sometimes be detected by having the interrupter points touching and turning on the switch and watching the ammeter. The hand should show a steady discharge, but if the needle flickers it indicates a poor connection somewhere in the circuit. High resistance is sometimes encountered where the ignition unit sets in the socket of the engine. This does not usually give trouble on new cars but sometimes on old cars where the grease and dirt form an insulating film and prevent the ignition unit being well grounded. As the condition occurs when the engine gets hot it is possible that the clearance between the valves and tappets is not sufficient, and this should be checked when the engine is warmed up. It is also possible that a valve stem sticks when hot. You might get some idea of the condition by cranking the engine by hand so as to feel the compression when the engine is hot. Another possibility is that there is an air leak in cylinders No. 2 and 3 when the intake manifold is at a high temperature. This could be checked by squirting gasoline on the intake manifold gasket.

Alloy Steel Stands High Temperature

Q.—In regard to burnt valves on a Maxwell car want to tell you that your remedy proved a success. I reamed out the valve guides just enough to remove all foreign matter and enlarged the oiling holes in the crankcase one-eighth of an inch which proved to be the remedy on this car. Now I have one more question. I understand there is a valve on the market that the manufacturers claim will stand twice the heat without warping that the ordinary valves do. Would you recommend these valves for cars that are inclined to burn their valves. What company makes these valves.—A Reader.

It is contrary to the policy of MOTOR AGE to recommend any particular item of automotive equipment. It is possible, however, that you refer to certain valves which are made of alloy steel, which material would stand a high temperature. Names of concerns making alloy steel valves will be given by separate letter.



Marvel carbureter on 1916 Oakland

Using Ammeter Shunt

Q.—When a 0-16 voltmeter is connected to a 100 ampere shunt and the needle is on the figure 2 what is the proper reading.

This does not mean anything as a voltmeter is not supposed to be used with a shunt.

When a 0-100 millivoltmeter is connected the same way and the needle points to figure 2 what is the proper reading.—Charles Tuckfeld, North Branch, N. Y.

If the ammeter shunt is designed to be used with the millivoltmeter then it means that 100 amperes flowing through the shunt will cause the millivoltmeter to read full scale deflection. Accordingly with the needle at the 100 point it means 100 amperes flowing through the shunt and with the needle at the figure 2 on the scale it would mean 2 amperes flowing through the shunt.

Clearing Up Electrical Troubles

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Testing for Reversed Coils in Rewound Armatures

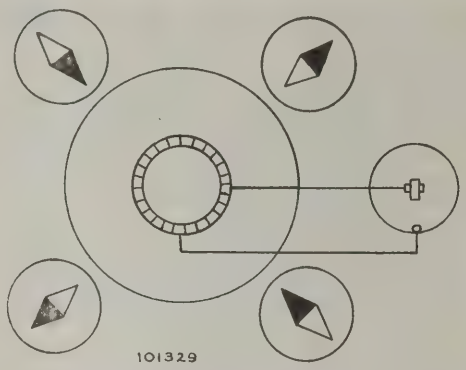
Q. We are having trouble in re-winding the Auto-Lite G. P. No. 2116 armature as used on the Overland four. The trouble we have here, the armatures when in the generator cuts in too slow or starts to charge at too high a speed. The cut in should be from 450 to 500 r. p. m. and the best we can get is 700 r. p. m. As far as we know we are winding it the same as the new armatures are wound, and we have checked the armatures several times, but cannot locate the trouble. Supply armature diagram and give possible causes of this trouble. We would like to have this information at once as we have discontinued winding until we find a remedy.

If you have any books with diagrams of the armature winding of all various types of armatures, please state the price. B. J. Holtcamp, 222 S. Locust street, Centralia, Ill.

We are showing the armature winding diagram for the Auto-Lite generator armature No. G. P. 2116, this information being obtained from the Universal Armature Winding Manual. Additional sources of supply on armature winding diagrams will be given by separate letter. The coils are wound clockwise, there being six turns of No. 17 single cotton covered enameled copper wire in each coil. There are two coils per slot wound together using wires of different colors. In order to clear the generator frame the winding must not project more than ¾ in. beyond the core. The last coil is the dead coil used to balance the armature only. The ends of this coil should be taped up and buried.

The most likely cause of trouble is incorrect winding and the diagram should help you on this. After the armature is wound, it may be desirable to check up to see that you have no reversed coils and that the magnetic poles are in the proper place. We are showing one showing one sketch which illustrates a method of checking for a reversed coil. Either one cell of a storage battery or a dry cell is used and connections are made to opposite ends of the same coil. You could start in by connecting from commutator bar No. 4 to commutator bar No. 14 which would give one of the coils. Most of the current would flow through this coil so that if the armature stood on end and a compass is moved around the armature, you will find a strong magnetic pole in one place.

Then the connection from the dry cell or storage cell should be shifted one bar, so that you next check from No. 3 to No. 15 bar. The polarity of the coil should be the same as the previous one as indicated by the same end of the compass needle being attracted. The points of attraction will be the same for coils in the same slot, but will shift the distance of one slot on the third test which would be from bar No. 2 to bar No. 16. In this



Compass test on armature to check commutator connections

way the connections to the commutator willl be shifted one bar at a time and the compass moved around as the test is continued. The same end of the compass needle should point toward the armature all the way around.

The other test is made by connecting a dry cell or one cell of a storage battery to positions on the commutator corresponding to the brush positions when the armature is in use. If the compass indication is weak it is possible to use more dry cells or more storage cells in series. The compass when moved around the armature will now show four magnetic poles and if the point of connection of the battery is considered as being the equivalent of the brush position, then the compass indications should point to a place on the armature corresponding to the neutral zone between the magnetic field poles. This will show that the armature is correctly connected so as to have the main brushes on neutral. About the only other possible reason for having the machine cut in late would be that insufficient number of turns are used in the armature, or that the armature has been turned down so that there is too large a gap betweeen it and the field poles. In case the armature at some time or other had rubbed on the field poles it is possible that the laminations are shorted due to the edges being burred over. This would result in overheating after the armature is put in service.

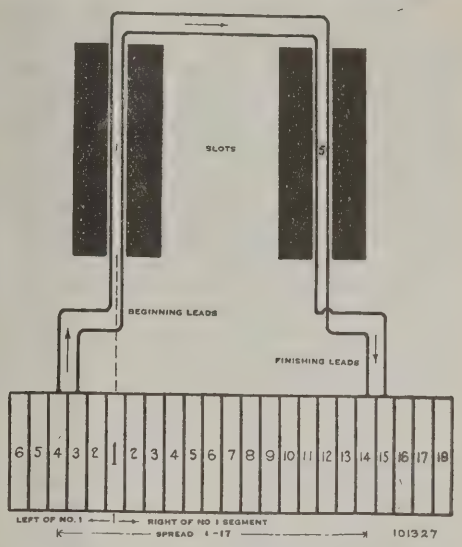
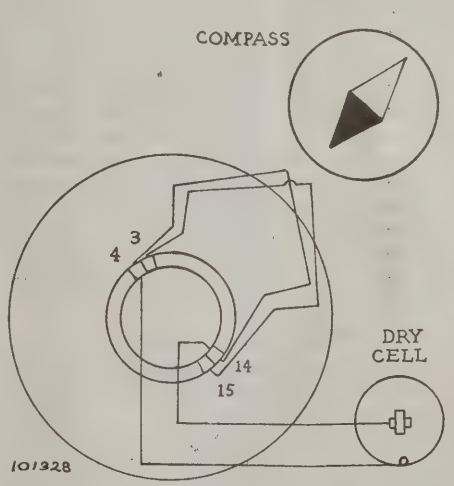


Diagram of Autolite G. P. No. 2116 armature



Testing the rewound armature for a reversed coil

SHORT CIRCUIT BETWEEN TWO SEGMENTS

Q.—I am a steady reader of MOTOR AGE and find your questions and answers very interesting and helpful. I had a Ford come into the shop the other day which would run all right with the switch on the battery position. Whenever the switch was turned to the magneto position, however, it would lag and pound. The other mechanic and myself had an argument as to the cause of the trouble. He said it was due to the valves and I was almost certain it was in the commutator so I removed the commutator and found it in bad condition with a fine strip of one of the segments across No. 1 and No 2 points. After installing a new commutator it worked fine. Why did it work on the battery side and fail to work on the magneto without moving the spark lever in either direction?—S. C. Thomas, c/o Automotive Repair Co., 7001 Kelly boulevard, Pittsburgh, Penn.

The voltage of the battery current is approximately constant while the voltage from the magneto is not only alternating instead of direct but it also varies with the speed. From what you say we assume there was a sort of short circuit between two of the segments. It is possible that this connection was not perfect and that when operating on 6 volts it did not act like a short circuit. The Ford magneto on the other hand develops a higher voltage, which may have sent enough current through the short circuit to cause trouble.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Monthly Operations at a Flat Price

IT IS, of course, perfectly possible to sell car owners on the general application of the flat rate system, but the one big point many dealer establishments and shops in general are overlooking is the selling at a fixed price a monthly inspection and adjustment service. Such a group of operations when properly selected constitute what often is called "Preventative Service" and simply means that if these things regularly are done by the dealer to the customer's car, such a car will perform better over longer periods of use before major service or repair operations are necessary.

The public is motor-wise enough to know that cars cannot operate indefinitely without attention of some kind. Carbureters have to be adjusted; tappets must be taken up occasionally; strainers will get clogged and must be cleaned; the water gets low in the battery; brakes need adjusting and body squeaks will occur.

Although the makers of motor cars have made it much easier for the car owner to perform some of the more simple service operations, most owners are not systematic in their work and would rather spend a few dollars letting the dealer's service department or some shop do the work. It's a messy job to fill differentials and universals no matter how you look at it and not a car owner who would not rather have someone else do the job for him.

Weak on Merchandising

The trouble has been that that too few automotive establishments have properly merchandised such service. A car owner gets the idea he must pay quite a price for such operations as he ordinarily performs himself, but if his attention is called to a definite price covering certain jobs on his car he is pretty apt to have the work done at the service station or garage rather than attempt it himself.

Just the other day a car owner cited a case to us. He said he did a little work on his car which a service station could have done in a few minutes but which took him about an hour. On top of this he ruined a $4 white shirt, so all told the job cost him considerably more than it would had he taken it to the service station. He made the remark that had he been told or seen advertised a flat price for the job in question he surely would have never attempted it.

Often a car owner starts to lubricate his car, that is, fill the differential, transmission, etc., and then finds out he either has not the kind of lubricant necessary, a gun for forcing it in, or other work which he did not figure on manifests itself. Then the car goes to the service station, where it should have gone in the first place.

All of this suggests a schedule of operations which every dealer or shop can get up and sell at a flat price to car owners. It may not cover all makes, as it will be more on some cars and less on others. For example, one Chicago dealer recommends that the following service is necessary each month for the good performance and economic upkeep of the car he sells. If contracted for the service costs $9 per month and includes:

1—Tuning engine.

Adjust tappets; adjust carbureter; adjust ignition; adjust water pump; adjust oil pump; adjust fan belt; adjust manifold; clean plugs; clean commutators; clean vacuum tank; clean strainer to carbureter.

2—Adjust brakes.

3—Grease and oil (grease and oil included).

4—Adjust steering.

5—Align wheels

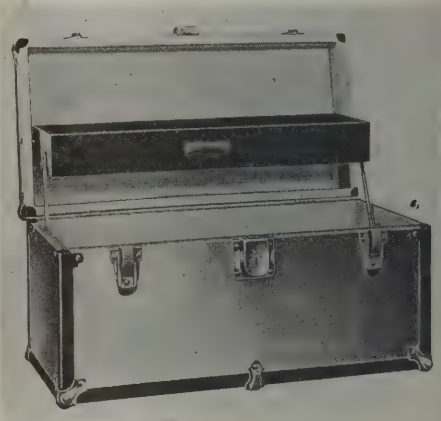
6—Inflate tires.

7—Inspect battery.

8—Adjust shackles.

9—Tighten body bolts.

10—Take out rattles and squeaks.



THINGS THAT HELP FLATE RATE

A place for everything and everything in its place works out just as well in using flat rate as anywhere else. A tool chest for each mechanic insures an orderly shop and makes possible finding a tool when necessary. If a tool is kept in a certain place a mechanic always knows where to find it and anything which saves time is a decided asset in using flat rate.

MOTOR AGE'S FLAT RATE FORUM

No. 28

FLAT RATES FOR RICKENBACKER

REAR AXLE OPERATIONS

Manufacturer's Official Designation		Time
D-1	General Overhaul of Rear Axle	7½ hrs.
D-2	Renewing Pinion Carrier	4½ hrs.
D-3	Renewing of Ring Gear and Pinion	6 hrs.
D-4	Renew Differential Gear and Spider	4½ hrs.
D-5	Adjust End Play, Back Lash, Renew Hub Felt and Retainer, Axle Shaft and Bearings	3 hrs.
D-6	Renew Rear Axle Housing	9 hrs.
D-7	Renew Rear Wheel (each includes)	1 hr.
D-8	Remove End Play in Rear Axle Pinion	1 hr.
D-9	Renewing Rear Axle Differential Carrier Gasket	2½ hrs.

Using Flat Rate Manual

Pittsburgh, Pa.

To the Editor of MOTOR AGE:

Would you kindly send us by parcel post, C. O. D., three copies of MOTOR AGE's post, Flat Rate Manual as printed in your magazine of April 30, 1925. We have been using this guide continuously since its issue, and have had remarkable success with it.

Yours for "Flat Rate"
Automotive Repair Company.

QUEBEC CLAIMS BEST ROADS

QUEBEC, August 22.—Check-up of provincial roads by Government officers recently shows that 6,000 miles of improved highways throughout the province of Quebec provide farmers with the quickest and best transportation facilities to be found anywhere in the world. Over $35,000,000 has been spent by the highways department during the past five years, and $6,000,000 more is being spent in 1925 to insure pre-eminence as the tourist paradise in eastern North America. Good roads, historic mementoes and scenic beauties are being held out to the world as Quebec's main attractions.

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Rear Fender Bumper for Fords

AN accessory which is said to be constructed along practical and scientific lines for long efficient service is found in the No. 09 Rear Fender Bumper for Fords, offered to the trade by the Kentucky Wagon Manufacturing Company, Louisville, Ky. In construction this bumper is similar to the company's earlier product, the No. 08 "KYW" Medium Balloon Fender Bumper except that the No. 09 has special Ford connections. The manufacturers say it is rigid and firm, yet resilient, having good design and adding to the appearance of Ford cars. The No. 09 lists at $14. The company makes a number of other bumper models and will gladly furnish details to any dealer applying for information.



Fender bumper for Fords

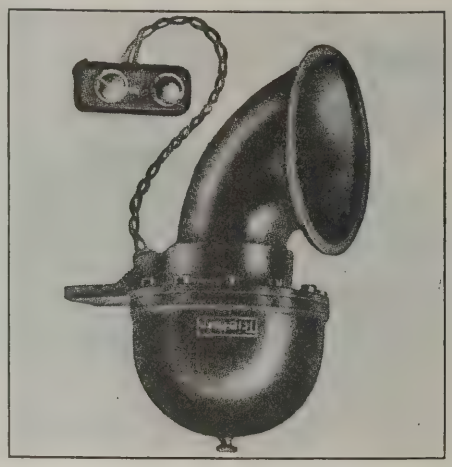
Nestler's Tube Compound

THE Nestler Rubber Fusing Company, 245 West 55th Street. New York has brought out a self-sealing compound for use in the inner tube. The compound is injected into the tube through the valve stem and is effective, it is claimed, in instantly sealing holes not larger than 1/8 in. in size as well as comenting porous places and leaks around the valve. Injection is accomplished with a hand pump after removing the valve inside. The makers guarantee the produce not to injure tire, tube or valve while it will not loosen patches. The substance comes packed in two sizes of cans, a one pint size for 4½ and 5 in. tires, retailing for $1 and a half-pint size for 3½ and 4 in. tires, retailing for 55 cents.

Dains Nu-Matic Bumper

ACCESSORY dealers will observe a departure from the more conventional bumper practice in the Dains Nu-Matic Bumper which recently was placed on the market. This is a product of the Dains Nu-Matic Bumper Company which has offices at 628 Main Street, Peoria and a plant also at that address.

The outstanding feature of the Dains bumper is its air and oil cylinders which provide what is said to be unusual cushioning service. It has an oscillating vibrating tubular shock frame with sufficient flexibility to absorb shocks from heaviest impacts. The device is made in three sizes, for the light car, the heavy car for trucks and buses and can be used on any car made.



Tria Horn

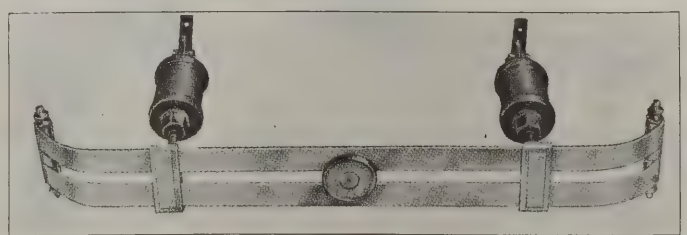
Bouncing Balloons Are Not Enough

A striking advertisement issued by one of the large agencies conveys the thought that there is a difference between the "clever" ad and the "selling" ad.

The same might be said of the "clever" window display and the "selling" window display.

Not long ago an accessory merchant who deals in tires sought to attract attention by putting in the window a number of toy balloons which were kept moving with electric fans. A sign said something about balloon tires but the comment was drab, offering no especial appeal, and the balloon tires in the window only suggested that they were balloon tires.

One purpose of the show window display is to attract attention. This accomplished its next shot is to capture buying interest. The public is aware that the trade sells balloon tires but it does not know what especial buying benefits can be found at some particular store. The clever window display even, should have tie-ups stressing these benefits.



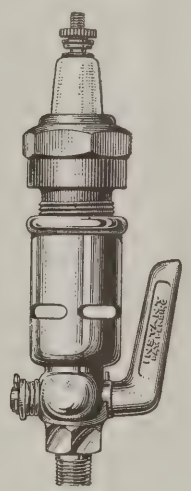
Dains' Nu-Matic bumper

The Tria Horn

THE Tria Horn which is made in Berlin, Germany, is being distributed in the United States by Isotta Fraschini, with offices at 785 Fifth avenue, New York, and a western distributing establishment at 2427 South Michigan avenue, Chicago. Orders for the horns are received at either of these addresses. This is a horn which is said to be especially well designed to give long service and produce a far-reaching pleasing double tone fog horn sound. It mounts to best advantage on the dashboard under the engine hood, the distributors furnishing full installation instructions. List price $38.

Instant Spark Plug Cleaner

AN interesting automotive product is found in the Instant Spark Plug Cleaner which recently has been placed on the market by The Trindl Company, 2917 S. Wabash avenue, Chicago. Twenty seconds is all the time necessary, it is stated, for this device to clean a spark

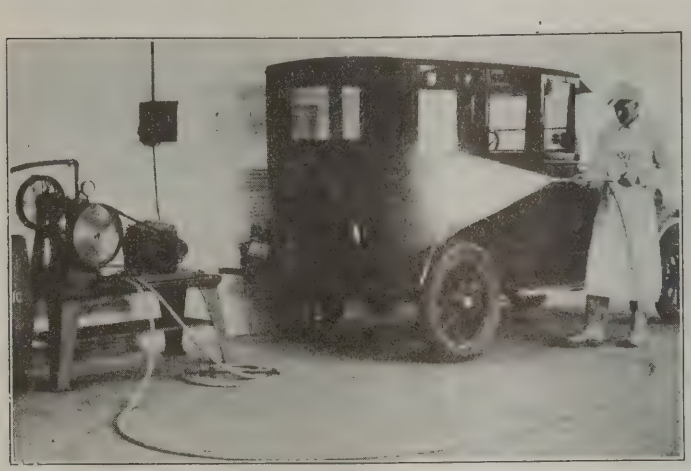


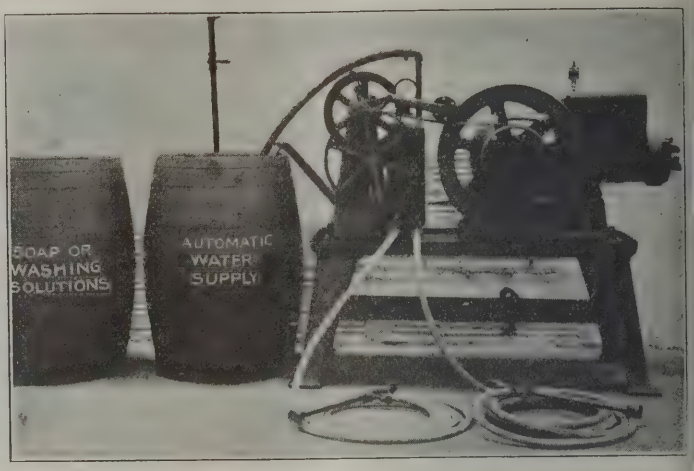
plug regardless of how badly it is fouled. The feat is accomplished without soiling the owner's hands. The cleaner is installed permanently in one of the petcock holes of the engine. For engines not having petcocks a special adapter is provided at a cost of 30 cents. The cleaner lists at $2.50.

AC Air Cleaner for Dodge

AC SPARK PLUG CO., is now furnishing AC Air Cleaners, complete with all attachments, for the 1920 to 1925 models of Dodge Brothers cars and Graham Brothers trucks. A retail price of $7 has been placed on the installations.

GETTING MORE OUT of the SHOP





Here Is Shown the Set-Up for the Speed-Spra. It Can Be Driven by Electric Motor or Gasoline Engine. Among its Features Is the Exceptional Fineness of the Spray

Speed-Spra For Washing Motor Car

Since it is being generally realized that a clean car is easier to work upon and that one of the most important steps in the refinishing of cars is the cleaning of them prior to painting, apparatus for cleaning chassis and bodies is being developed to quite an extent.

One of the most recent additions in this line is the washing apparatus known as the Speed-Spra, made by the Hayes Pump & Planter Co., Galva, Ill. To better understand how the Speed Spra works it must be understood it is driven by a 3 h. p. electric motor or engine, and delivers through the "Velvet-Spra" gun operated by the washer a broad, soft, soaking spray, or a strong, driving spray for use on the under side of fenders, chassis, etc.

In operation, the washer turns on the broad Velvet-Spra and goes over the entire car, soaking it thoroughly. That takes only 1 or 2 min. Then, turning the handle of the Velvet-Spra gun to the driving spray, he starts work on fenders, wheels and springs.

The feature of this washing apparatus is the exceptional fineness of the spray. It causes the water to penetrate caked dirt and grease-soaked dirt so the latter falls off in chunks and in a demonstration to a representative of Motor Age a car was washed in less than 20 min.

In the Speed-Spra, cold water is drawn from a supply barrel into the pump, placed under pressure and forced through a length of hose into the Velvet-Spra gun. There are no compressed air or mixing tanks, nor valves to operate. The pump itself is automatic, regulating its own pressure, and keeping the pressure constant, whether one or two leads are in operation.

With a quarter turn of the handle of the gun, the stream can be changed from a driving, cleansing spray, to a broad, soft, soaking flushing spray, or shut off altogether.

One of the outstanding advantages of the Speed-Spra is the automatic by-pass or governor, which maintains even pressure, and returns any surplus water or solution to the supply. When the gun is turned off, the water flows back into the supply barrel, and the motor or engine idles, consuming not more than 5 per cent of the current required when the gun is operating.

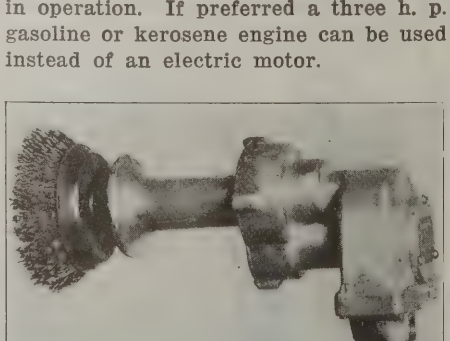
Another feature is that it is not dependent on city water pressure. A supply barrel, provided with an automatic float, furnishes the water. When the water level drops, the water flows in from the tap. When it is full, it shuts off automatically.

The apparatus requires floor space only 2 ft. by 5 ft., exclusive of the barrel. It can be placed anywhere, and can be installed by simply connecting the barrel with a water tap, and the motor to the electric circuit.

Uses Cold Water

An extra barrel may be utilized to contain soap or washing solution. It is operated by a three h. p. electric motor. An automatic control cuts down the motor to idling speed when the gun is not in operation. If preferred a three h. p. gasoline or kerosene engine can be used instead of an electric motor.

The prices of the Speed-Spra vary from $300 without the electric motor or gasoline engine to $515 for the No. 5 machine which is fitted with a direct current, 115 to 230 voltage electric motor. Two 25 ft. lengths of high pressure lead hose are furnished with the outfit.



Standard Turbine Air Motor for use with wire brushes, grinders, etc.

The Air Motor

The Standard Turbine Corp., Scio, New York has brought out a device known as the Air Motor to be used in connection with a wire brush for scaling paint from motor vehicles, in connection with grinding wheels and other similar operations in the automotive shop.

The Air Motor is said to be ideal for the above purposes, principally on account of its light weight and consequent ease of handling. The turbine consists of a wheel operating at a speed of 12,000 r. p. m. mounted on ball bearings and geared to the low speed shaft operating the wire brush.

The low speed shaft is laid in a long sleeve bearing and arranged also with a ball thrust bearing to take up any thrust imposed in applying the brush. The air is admitted to the turbine wheel by means of a valve operated by a trigger. The turbine wheel itself consists of a small steel forging tested to a maximum speed of 100,000 r. p. m. The bearings are grease lubricated, the grease connections being arranged for the Alemite system. The exhaust is through the center of the low speed shaft, assisting in keeping the brush clean.

The standing torque of the motor is greater for equivalent air consumption than any reciprocating motor it is said. The no-load speed of the motor is always such as to be less than one-third of the tested safe speed of the wheel. The motor has an all-aluminum casing and its total weight is 9½ lbs. without the brush, about 11 lbs. with the brush. The motor is free from vibration.

EDITORIAL

Why Radio Appeals

MERCHANTS who sell radio equipment do so with the natural expectation of making a profit. Many automotive merchants have taken up this line of business and some have made a profit and some have not. Those who have not made a profit usually attribute their failure to the price cutting carnival that we have observed in so many places where radio is sold. The fact that the radio business was so new and so much progress in design being made from day to day was largely responsible for the lack of stability in prices.

Still we find more and more automotive merchants putting in stocks of radio merchandise. Thus far radio is largely a fall and winter business. The automobile business in most sections of the country still falls off to some extent in these very same months, despite the many commendable efforts that have been made to keep the level up. It is the desire to supplement their automotive business with a line that will keep up the sales volume and profit production through the winter months that has led many dealers to engage in selling radio.

The average automotive dealer who takes on radio does not permit this supplementary line to interfere with his automotive business. He organizes his establishment so that he can give the right kind of attention to radio without in the least neglecting his automotive business. Many of his radio customers come from the ranks of the car owners that he already has contact with, and in many cases radio sales are made while the car is in the shop.

If the automobile dealer has his business so organized that he can sell radio without interfering with his automotive sales, and if he finds that his radio business returns him a profit that helps him to maintain a better establishment the year round, then he is justified in going into it. It is for him to determine. Certainly it would not appeal to him if there were no opportunity for profit in it.

Be Optimistic

AS September approaches the great industrial and financial leaders of the nation are predicting a period of unusual business development and progress. All summer the automobile business has been good and it has continued at a brisk rate later in the season than usual. There has been and there continues to be a quantity demand for automotive transportation. If general business continues to improve as the captains of industry predict, it should result in a tendency for the automotive business to remain at a higher level than is usual for the fall and winter months.

There is a lesson in this for the dealer. Be optimistic. Be conservation on the side of good business. Don't become hysterical and start trading wild for any kind of old used cars simply for the sake of making immediate sales. Let good judgment prevail. It looks now as if there will be plenty of profitable business for the automotive industry. Why run your head off looking for unprofitable business?

Let the Public Know

IF the millions of motor vehicles in operation had the little attentions and adjustments they are in need of today to make them perform infinitely better, a vast amount of profitable business would immediately accrue to the automotive sales and service places.

Millions of hours of profitable labor would be sold and cash registers would swell with hundreds of thousands of dollars received from comparatively small merchandise sales.

One reason that this business does not come into the service stations and sales rooms today is that no effort is made to bring it in. The public doesn't know that a small replacement or adjustment that might cost only 50 cents or a dollar would make so great an improvement in the performance of an automobile. Or if the car owner does know what his vehicle needs he may put off having it done because he does not know how cheaply it can be done. No one has ever told him.

A case in point is a man who for a year had been planning to replace his spark plug leads and terminals. He was confident this replacement would give him more dependable and reliable service from his car. He had no idea what such a service should cost, but from past experiences with other repairs he had visions of a bill that might total many dollars. Se he thought he would do the job himself when he got time. So he went along a year or more in the constant dread that some day his ignition circuit would fail him and he would be stalled on the road.

Finally he got to the point of stopping at a service station for the express purpose of purchasing the necessary insulated wire and the new terminals. He casually told the proprietor what he wanted to do and asked him how long it would take the service station to do the job. He was surprised when the answer was about a half hour. Immediately he gave instructions for the shop to go ahead with the job and in a half hour he had his car back with the job done skillfully by an expert at a cost very little more than the materials alone would have amounted to. And the car owner was saved a dirty and trying job that probably would have been none too well done when he got through with it.

There are literally millions of little jobs like this, or of a similar nature, that should be done on the automobiles running the highways every day. But the service stations are making no effort to get this business. They are not telling the public how cheaply these jobs can be done and what satisfaction comes from them. It is a vast field and one that will yield dollar profit to the service station and tremendous satisfaction to the car owners.

Automotive Production Remains High

Trend of Output Pointing Down in Factory Centers

Builders Working Now Largely to Care for Unfilled Orders—Progress in This Direction Good

DETROIT, Aug. 22.—While production in several of the different automobile factories in the Greater Detroit area is still at nearly full capacity, yet the trend of the manufacturing output is pointing down.

Perhaps the best indication of this is the fact that orders for the various makes of passenger cars are not as easy to obtain now as they have been in the past. This is true, not only of those which have enjoyed normal outputs, but also of those makes which have done record businesses.

The output now is being used to catch up with the orders that have been on the books for some time. Some companies are making remarkable progress in this direction and have made great inroads into their unfilled orders. Those companies that have been doing a normal business are letting their orders control their production.

When the time arrives when the unfilled orders are no longer on the books, it is almost a foregone conclusion that the output will take a big drop and will continue on its way down until the annual rush starts again in the spring, because it is regarded as certain that the different manufacturers will control their output by the demands placed on them by their dealers and branches.

While it is only a matter of speculation, yet the coming months may see production drop to an unusually low figure for reasons mentioned above. And then again it may not, for the manufacturers wishing to maintain sales lines devoid of radical ups and downs may govern their production accordingly. As yet it is too early to predict just what course will be followed, except that production will drop.

RUBBER SURVEY STARTED

WASHINGTON, Aug. 22.—A survey of the consumption of crude rubber in the United States during the first seven months of the present year is underway by officials of the rubber division of the Department of Commerce, it was announced here this week. Questionnaires sent out by the division requesting statistics are just beginning to trickle into headquarters here and it is not expected that complete figures will be ready for several weeks. Officials admit that those already in hand indicate there has been no decrease in consumption of rubber and none is to be expected despite the high prevailing price of rubber.

CLOSED CAR SHOW PLANNED

LOS ANGELES, Aug. 22.—The Los Angeles Motor Car Dealers' Association has definitely decided to hold a Closed Car Salon this fall, either in the last week of October or the first week in November, according to an announcement by Secretary Burt Roberts. The exhibition will be staged in the Biltmore Hotel. Each distributor will be permitted to exhibit only one closed job of each make of car he handles. It is necessary to make this limitation owing to the amount of display space available at the hotel. There will be no admission charge, the show being financed by a flat assessment against the exhibitors, which is expected to amount of approximately $175 each. The show this year will run five days as against three days last year.

CONTEST OFFICE MOVES

WASHINGTON, Aug. 24.—The office of the Contest Board of the American Automobile Association has been moved from Franklin, Pa., to the general headquarters of the A. A. A. in Washington. The Contest Board has charge of sanctioning and supervising all races and contests held under the auspices of the A. A. A.

PIONEER DEALER DIES

ATLANTA, Ga., Aug. 22.—Ben W. Holt, who, with Fred Rawlings, was formerly Georgia state distributor of the Cadillac, and who was one of the pioneers in the automobile business in the Southwest, died at his home in Saundersville, Ga., a few days ago.

CHEVROLET CUP AWARDED

BALTIMORE, Aug. 22.—A gold cup awarded monthly by the Baltimore Chevrolet Dealers' Association to the ranking salesman, was awarded last week to R. W. Wilson, of the Stallings-Ripple Chevrolet Sales Company, for his work performed during July. It was the second month the award was made, the first recipient being L. C. Weller, of the M-M-T Motor Company, for being the ranking salesman in June.

Willys Sees Production of 25,000 Cars in September

TOLEDO, Aug. 22.—Increase in business for September is predicted by John N. Willys, president of the Willys-Overland Co., upon his return from abroad and after a survey of conditions as he found them here.

He estimates production in September for his company will be 25,000 cars which is considerably more than is being made this month.

Last week production schedules were narrowed down by the factory and some men laid off. It is believed that this is only temporary and due largely to the immediate effect of the price changes.

Firestone Nears Completion Of Plan to Grow Rubber

Lease of 1,000,000 Acres in Liberia Is Virtually Ratified by Government Official

AKRON, O., Aug. 22.—Harvey S. Firestone, president of the Firestone Tire and Rubber Co., has virtually completed negotiations with the Liberian Government for the leasing of 1,000,000 acres of rubber plantation land in the African republic.

Edwin Barclay, Secretary of State of Liberia, was in Akron to work out final details of the transactions. He arranged for a long time lease on the property. This is expected to be approved as soon as he returns to that country.

After receiving assurance from Secretary Barclay that officials of Liberia were ready to approve his proposition, Mr. Firestone announced that he will place under cultivation the entire million acre tract. He is planning to send a large force of men there to prepare the land for growing rubber trees. This marks the first effort of an American manufacturer to grow rubber on such a large scale, although the question has been agitated for years.

Mr. Firestone has long been interested in projects for American rubber factories growing their own rubber, and has waged a strenuous fight against the British monopoly of the rubber producing industry.

Three-quarters of the acreage of all the rubber plantations in the world are now controlled directly or indirectly by Great Britain. Most of the remaining supply of rubber is produced by the Dutch. America, the largest consumer of rubber in the world, has controlled until now only a small percentage of the total acreage of rubber producing plantations.

It is learned on good authority here that a $100,000,000 corporation will shortly be formed to operate the Liberian plantation on a gigantic scale, which will assure American manufacturers of an adequate future supply of rubber. Mr. Firestone predicts that Akron will not only be the center of the manufacturing world but will become also the headquarters of the rubber growing industry of America. This would be brought about, he indicated, through the formation of a mammoth corporation, designed to grow rubber in foreign countries, financed by American capital.

"The National Automobile Chamber of Commerce estimates that 1,500,000 more planted acres of rubber trees are needed if the supply is to meet the demand within the next few years," Mr. Firestone said.

Delayed Buying Seen as One Cause of Sudden Sales Rise

Many Believe Prospective Buyers Waited Until After New Models Appeared

DETROIT, Aug. 22.—The recent increase in the number of automobile sales made throughout the country is not entirely attributed to the bringing out of new models.

There are those who believe that the price reductions and the new models are responsible for the phenomenal increase reported by dealers and distributors within the past ten days. But opposed to them in this particular belief are those who contend that the recent buying is nothing more than delayed buying, buying which should have been done two months ago.

Those who hold to this opinion express themselves this way: The motoring public, especially those who were most likely to buy passenger cars knew two months ago that new models would be on the market before long. They preferred to wait until the time when the new models put in their appearance. When they did they bought. This buying could have taken place two months previously. Now it is easy enough for salesmanagers to say that the price reductions and the bringing out of the new models has caused the increase but then the drop in the sales, although the industry as a whole showed increases, previous to their coming out was nothing more than a reservoir out of which the present sales record was to come.

In answering these arguments, it is pointed out that the sales for May and June were above those of past years and that the recent increases are simply an answer of the public as regards the bargains the various manufacturers offered. As for the people not buying until the new models came out, that was true only to a small percentage, as they claim this tendency was not as noticeable this year as in the past.

NEW CHRYSLER DEALERS

CHARLOTTE, N. C., Aug. 22.—Signing of a number of contracts with automobile concerns in this territory, which will act as Chrysler dealers, was announced by W. T. Hoppe, president of Hoppe Motors, Inc., recently organized and designated distributor for the Chrysler line. The newly-signed Chrysler dealers included Franklin Sales Company, Aberdeen, N. C.; Frazer Motor Company, Chester, S. C.; Lutterloh-Shuler Motor Co., Fayetteville, N. C.; Thomas L. Craig, Gastonia, N. C.; Williamson Motor Co., Lumberton, N. C.; Craig Motor Co., Lancaster, S. C.; L. T. Lineberger, Lincolnton, N. C.; Jarrett & Hamilton, Spencer, N. C.; B. B. Higgins Motor Co., Shelby, N. C.; Nance Motor Co., Troy, N. C.; J. Ray Barkalow, well-known in automotive trade circles in this territory, is in charge of wholesale sales for this company.

Hitching Posts Gone in Pilgrim City

PLYMOUTH, Mass., Aug. 22.—In this historic little town where stands the famous Plymouth Rock, at the spot the Pilgrims landed, the last relic of the horse age has passed. Workmen have started throughout the town and begun removing the last of the old hitching posts where residents and visitors tied old Dobbin while on business, sightseeing or at worship. The selectmen decided that the posts, particularly those in Town Square, interfered with the parking of motor cars and the spaces were ordered levelled off. And Capt. Myles Standish, from his high perch on the monument a little to the North near the coast seemed to be smiling as the work went on.

Hudson-Essex Prices Are Cut from $55 to $100

DETROIT, Aug. 22.—New price reductions on Essex and Hudson models have been announced here. The amounts range from $55 to $100. New prices, showing amount of reduction in each case, are:

	New Price	Old Price	Reduction
Essex			
Coach	$795	$850	$55
Hudson			
Coach	$1195	$1250	$55
Brougham	1495	1595	100
7-Passenger Sedan	1695	1795	100

O. J. GUDE DIES

NEW YORK, Aug. 22.—O. J. Gude, advertising man, died at Bad Nauheim, Germany, recently, and his body is being brought here for burial. He was co-defendant with the Ford Motor Co., John Wanamaker, Panhard & Lavassor and others in the Selden patent suits filed in 1903.

WILL STUDY U. S. ROADS

NEW YORK, Aug. 22.—Sir Henry W. Maybury, British minister of transport, is due here tomorrow. He will study American road systems, with particular reference to methods of construction. A delegation of automobile men will meet him at the pier and a lunch or dinner is to be given in his honor in a week or two, by the National Automobile Chamber of Commerce.

KERBY JOINS DURANT, LTD.

TORONTO, Aug. 22.—Roy D. Kerby has severed his connection with General Motors to go to Durant Motors of Canada, Ltd., as sales manager, filling the position made vacant by the death of R. D. McKellar. Mr. Kerby in linking up with the Durant organization has renewed a previous association with R. H. Mulch, general manager of Durant, as both held executive positions with General Motors of Canada.

Good Management Will Be Theme of M.A.M.A. Meeting

Toronto Convention in October Will Hear Speakers From All Divisions of Industry

NEW YORK, Aug. 22.—Information for executives is the foundation on which the Motor and Accessory Manufacturers' Association is building the program for the annual fall convention, to be held in Montreal in October. The general theme will be "Good Management," and the addresses and discussions of a four-day session will be devoted to fundamentals and experiences in management in all divisions of the automotive equipment manufacturing industry.

There will be subjects of particular interest to general merchandising and credit executives, but the entire program is being worked out in such a way that all sessions will have features of value for men in all divisions of manufacturing management, the association announces.

The convention speakers will include a number of nationally known business authorities and several others with wide reputations, particularly in the automotive field. Merle Thorpe, editor of *Nation's Business*, published by the Chamber of Commerce of the United States, is among the speakers from whom acceptances have been received. Others will be E. P. Chalfont of the Gill Manufacturing Co., president of the M. & A. M. A.; W. T. Morris of the American Chain Co., president of Automotive Equipment Association; T. M. Simpson, secretary of the Continental Motors Corp.; F. E. Titus, vice-president of the B. F. Goodrich Co., and W. E. Wissler of the Herring Motor Co., automotive equipment wholesaler in Des Moines, Iowa. Other speakers are under consideration by the program committee.

Separate sessions will be devoted to general management, merchandising management and credit management.

The program is being developed by a committee headed by B. M. Asch, president of Asch & Co., in co-operation with the association staff, headed by M. L. Heminway, general manager.

Production in July Marks New High Level for Period

WASHINGTON, Aug. 22.—July production of motor vehicles totaled 397,094, a new high record for the month. This compares with 402,848 in June, 1925, and 270,935 in July, 1924. The figures are for the United States and Canada, trucks included. July passenger car output was 357,883 and truck output 39,211, a gain over June for commercial vehicles, when the figure was 38,042.

The total production for the first seven months of the current year, it is shown by the Department of Commerce figures, was 2,570,610, against 2,325,496 for the corresponding period of 1924.

Midwestern Radio Dealers Meet With Gibson Company

Nebraska Buick Salesmen Also Hear of Potential Profits in Session at Lincoln

INDIANAPOLIS, Aug. 22.—The Gibson Company, automotive wholesalers, staged here one of the most effective and intensive meetings ever held in this city in its dealers' Radio Sales Educational meeting which in a few hours condensed a highly instructive and helpful sales course on radio to about 240 radio dealers and interested merchants of Indiana, Ohio and Illinois. The meeting was staged under the direction of J. M. Bloch, secretary of the Gibson Company and the active manager of the concern; E. M. Gass, manager of the Radio Department of the company; and A. H. Webber, merchandising manager of the company, who also acted as the meeting chairman.

The second floor of the big Gibson Building was transformed into a meeting room with a very complete display of radio sets and parts and batteries and power units. On the same floor where the dealers and interested merchants gathered informally in the morning was a large space set aside for the luncheon which the company served to all its guests.

Among the speakers were Frederick Bremier, assistant manager of the cemmercial research department of the Curtis Publishing Co., who epitomized the finding of the extensive radio merchandising research made by the Curtis company some time ago. He showed why merchants of Indiana, Ohio and Illinois can look for sales of from one to one and a half million sets in this territory and showed that there is the country a potential market for the sale of 15,000,000 sets.

R. M. Klein, general manager and Harry E. Sherwin, sales manager of the F. A. D. Andrea Company, makers of FADA, which the Gibson Company distributes in 70 Indiana, five Ohion and 13 Illinois counties gave complete descriptions of the qualities of this type and the merchandising and commercial policies of the concern which have been effective in the protection of the jobbers and dealers.

NEBRASKA BUICK DEALERS STUDY RADIO

LINCOLN, Neb., Aug. 24.—That the opportunities for substantial profit in the merchandising of radio products are becoming widely appreciaated by automobile dealers, particularly throughout Nebraska and the west, was evidenced by the enthusiasm shown by the Nebraska Buick salesmen and dealers who attended the meeting of dealers held by the Nebraska-Buick Company in Lincoln, recently. At this meeting the newest models of the Music Master line were shown.

A similar meeting was held at Omaha, which was attended by a large number of present and prospective dealers in that territory. At this meeting it was brought out that more and more automobile dealers who handle the better class of cars are being granted the Music Master Franchise.

Present at these meetings were C. L. Carper, Vice President, Nebraska Buick Auto Company; Fred D. Williams, General Sales Manager, Music Master Corporation; L. A. Dunn and C. A. Brinston of the Zenith Radio Corporation; Robert W. Porter of the Thompson Radio Corporation; Allen Williams, northwest manager of Music Master Corporation, and H. N. McMenimen of the Music Master home office at Philadelphia.

Sunday Contract Not Binding

MILWAUKEE, Aug. 22.—A contract for the purchase of an automobile, made on Sunday, although otherwise dated, is not binding and cannot be enforced, Judge A. J. Braun told Louis Karlic in civil court in Milwaukee. Karlic was suing L. R. Shainck for $100 for the balance due him on an automobile. Karlic had purchased a second hand car, valued at $230, from Shainck and paid him $150 down on it. The deal took place on a Sunday but the contract was dated Monday. Mrs. Karlic did not approve of the transaction and the car was returned. Shainck gave Karlic $50 and told him he would pay the remainder when the car was sold. In the meantime the car was wrecked. The plaintiff's attorney brought out the fact that the original transaction took place on Sunday, whereupon the case was dismissed.

July Hupp Sales Break All Previous Records for Period

DETROIT, Aug. 22.—July sales of automobiles by the Hupp Motor Car Company broke all previous records for the same period. According to O. C. Hutchinson, general sales manager, it was one of the three largest months in the history of the company. Compared to July 1924, the sales for last month were 59 per cent higher with the sales volume in dollars registering an even larger increase, due to the eight cylinder car.

The records for the June and July sales of this year, Mr. Hutchison said, were 76 per cent better than those for the same months last year.

Factory shipments of Hupmobile eights to distributors reached the highest total they have yet attained, surpassing the June record by 400 cars and doubling that of May. Heavy production is being maintained this month in an effort to catch up with the sales stimulus brought about by reductions at the beginning of the season.

N.A.D.A. Finds Most Sales Of Today Are Replacements

Two, Three and Four Transactions Generally Necessary Before Original Investment Is Obtained

ST. LOUIS, Aug. 22.—Two, three and four sales are generally necessary for an automobile dealer to finish a transaction begun with the sale of a new car, according to studies that have been made by the National Automobile Dealers' Association. One exceptional case showed 47 transactions before the dealer was able to clear himself of his entire original investment in an old car he had accepted as part payment in the delivery of a new car.

In studies which the N. A. D. A. has been carrying on for the last four years, it was brought to light that the number of new car sales influenced by the old car was steadily increasing until in 1924 it had reached more than 70 per cent for all lines of cars. Some low priced cars of large sales volume had a much lower ratio, in some stataes as low as 10 per cent of the new car sales were made on the basis of trading an old car. In the higher priced classes, hundreds of dealers were doing a 100 per cent trading business.

These factors reveal with considerable certainty that the new car sales field of today and future years is more and more restricted to a replacement business.

Willys-Overland Makes 1926 Distribution Plans

SAN FRANCISCO, Aug. 22.—General plans for the 1926 distribution and sales programs for the Overland and Willys-Knight organizations in central and northern California in particular and the entire Pacific coast in general, were laid at a meeting held in the Hotel Whitcomb here.

Among the scores of distributors of and dealers in these cars attending the two-day meeting were: Carroll J. Rogers, chief supervisor of Willys-Overland, Inc.; S. Robert Swiss of the United States Advertising Corporation, Toledo; L. E. Longfellow, manager of the car order depaprtment; H. C. Macaire, California supervisor of sales; J. W. Hawk, manager San Francisco branch, Willys-Overland Pacific Company; L. J. McCracken, manager Los Angeles branch; J. H. Alfred, Portland and Seattle, Pacific Northwest manager; Arch Browning, distributor, Salt Lake City; H. H. Hotchkiss, distributor, Phoenix, Ariz.; G. H. Bryant, special Pacific coast representative of the United States Advertising Corporation, and every distributor of the Overland and Willys-Knight for all of California.

The meeting was the eighth of a series of nine zone meetings planned to cover all of the United States, the last one being in Seatttle. Analysis of the past six months' sales showed material gain over 1924.

Yellow Cab-General Motors Merger Effective Sept. 1

Majority of Stockholders Vote for Consolidation Plan in Meeting at Portland, Me.

CHICAGO, August 22.—Announcement has been made by John Hertz that operation of the Yellow Cab Manufacturing Co. and the truck division of General Motors Corp. under the name of the Yellow Truck & Coach Manufacturing Co., will be effective September 1. Mr. Hertz will be chairman of the board of directors of the new company.

Stockholders representing 490,000 shares of the 600,000 shares of the Yellow Cab Manufacturing Co. stock outstanding, voted for the merger which was negotiated by Hertz.

The truck division of General Motors will be acquired by Yellow Cab Manufacturing Co. through stock ownership of 500,000 shares of the Yellow Cab stock, par value at $10 a share. The truck business which is being taken over, was valued at $16,000,000 on April 30, 1925.

Meeting in Portland, Me., stockholders also have authorized the board to issue and distribute 150,000 shares of preferred stock, par value at $15,000,000, to be paid as a stock dividend pro-rata to holders of the 600,000 shares of Class B stock of the Yellow Cab Manufacturing Co.

The board of directors will be increased from thirteen to twenty-one. A change was authorzied in the capital stock by retiring $575,000 class A stock and by adding 200,000 of preferred stock of the par value of $100 a share and 1,000,000 shares of common stock of the par value of $10 a share.

Hupp Produces 10,000 Eights in Seven Months

DETROIT, Aug. 22.—Hupmobile has produced its ten-thousandth eight, a five passenger sedan which was completed at the factory here last week. Its production is said to be a record in that the 10,000 cars were produced within seven months of its first announcement.

Production for the present month has been set at 2,000 eights, which if reached will surpass that of the largest previous months in the eight cylinder division.

According to O. C. Hutchinson, general sales manager, "the record achieved by the Hupp organization in producing 10,000 eights in a little over seven months following its first announcement has never been approached by a builder of fine motor cars. It represents a public demand for more than $20,000,000 worth of Hupmobile eights."

Velie July Business Shows Large Increase Over 1924

MOLINE, Aug. 22.—Velie Motors Corporation reports a 69 per cent increase in July shipments over July of last year. Company officials say that Velie business for the last ten months has shown a sizable increase over corresponding months of a year ago and predict that August shipments will exceed those of August 1924 by approximately 100 per cent. They report that on August 10 unfilled shipping orders on hand for August exceeded shipments for the entire month of August, 1924, by 45 per cent.

Business for the 12 months ending August 31 will, it is said, show an increase of nearly 40 per cent over the like preceding period and will represent the largest similar period for Velie since the war boom.

Velie has discontinued manufacture of the Phaeton but will continue to build the Club Phaeton.

C. W. Hadden, General Sales Manager for Velie, is visiting Velie distributors at Mountain states and Pacific Coast points during August.

Venice Forced to Build Roads

VENICE, Aug. 12.—(By Mail).—Centuries of romantic isolation enjoyed by the city of Venice as an island, will be only memories because the automobile has forced authorities to consider plans for a highway between Venice and Padua.

The gondolas have been the single means of travel between Venice and the rest of Italy, except the railroad which crosses the lagoon on a pontoon bridge.

Definite plans for the highway have been completed and are in the hands of government authorities who are responsible for a decision. Indications are that the road will be authorized.

KEENE GOES TO COAST

CLEVELAND, Aug. 22.—The Swan Carburetor Company announces the transfer of C. F. Keene from the Kansas City territory to the Pacific Coast territory, where he will act as district manager for the Perfection Heater & Mfg. Co. and its subsidiary, the Swan Carburetor Company. Mr. Keene, during his automobile racing days, spent many years on the Pacific Coast and built and raced various cars.

NASH SETS RECORD

MILWAUKEE, Aug. 22. — Fifty-one Nash cars were delivered at retail in Milwaukee during the week of August 2, setting a new record for the Nash sales company, and besting by 50 per cent the highest number of Nash cars ever delivered in any one week previously. A most wonderful reception has been accorded the new special six and advanced six since their introduction late in July, according to officials of the Nash Sales Co. One of the big Nash selling points in Milwaukee is the saving of from $30 to $60 on freight effected because of the location of the plant in Milwaukee.

California Dealers Charge Jobbers With Lax Methods

Tradesmen Declare Manufacturers Also Responsible in Increase of "Fly-by-Nights"

LOS ANGELES, August 22.—An indictment of what is described as "reckless credit extension" by many manufacturers and distribution of automotive equipment, accessories and replacement parts, is presented in a bulletin recently issued by the Southern California Automotive Dealers' Association and the Los Angeles Automobile Trade Association. It is held by the executive officers of these bodies that established automotive businesses are being disrupted by the ease with which irresponsible individuals can obtain equipment and merchandise, and continue in business, without possessing the requisite capital to justify the credit allowed them.

The associations charge that there is a veritable army of fly-by-night operators of automotive establishments of various kinds who get started in the automotive business, and stay in it for periods of varying duration by "the extension of credit entirely unwarranted, and by the apparent willingness of competitors of the distributor or manufacturer who opened the account to continue holding the sack just as soon as the account proves itself worthless to the party originally financing it."

"In summing up the situation," says the bulletin, "we are brought face to face with the realization that somebody does pay these bills, and then to the painful realization that the manufacturer, distributor or jobber who fosters and assists these accounts is actually in competition with his customer who discounts regularly. This matter cannot be looked at in any other way.

"A manufacturer, distributor or jobber opening an account which is not in a position to finance itself for at least 90 days, and who extends credit to a concern which has proved by its past record that it is not able to discount its bills, is actually in competition with his choicest customer, the man who does discount promptly. And the time is coming when the automotive merchant who is seriously engaged in erecting a business in the automotive industry will be compelled to ask the manufacturers, distributors and jobbers of the commodities which he handles just who they want to do business with—the fly-by-nighter, the cut-throat artist, the discount salesman, the here-today-gone-tomorrow dealer, or the responsible merchant with an established reputation. Nobody can compel the manufacturers, distributors and jobbers to adopt sane business methods in respect to credit extension, but the responsible automotive merchant can most assuredy convince them that they must make their choice as to which class of trade they want to do business with."

Rental Agents Meet to Map Out Plan to Protect Public

All Who Hire and Misuse Cars in Any Way Will Be Placed on Operators' Black List

SPRINGFIELD, Ill., Aug. 22.—That by renting motor cars to irresponsible persons, Illinois hire-a-car dealers are arming such individuals with potential death dealing weapons, is the contention of States Attorney J. A. Fullenwider of Sangamon county. He called a meeting here of the central Illinois rental agency proprietors in order to map out a plan for the protection of themselves and the public.

Upon the suggestion of the public prosecutor, a complete rogues gallery will be opened which will blacklist all persons who have mishandled a rented car. Through it, a person who has driven a hired car to the risk of the owner of the machine, as well as endangering other drivers, cars and pedestrians, will be unable to rent a machine from any agency in the state.

That the majority of cases of damage caused by rented automobiles is credited to minors, is regarded as an argument towards preventing the rental of public cars to any one under 21 years of age. Contracts entered into with minors are void, and an attempt will be made to prevent minors from executing such contracts with rental automobile dealers.

That the need of regulation in the hired car field is great, is the opinion of the state's attorney and police department here. Reports of accidents in which rented machines are involved, are increasing throughout Illinois and, in numerous instances, the drivers were not financially able to meet obligations resulting when the machine they were handling collided with that of another.

By the means of state and national rules and regulations, the public will be protected to a greater degree than has been the case in the past, as well as the proprietors of the establishments which supply "drive it yourself" cars, and which have become very numerous of late years.

FORD TO SCRAP SHIPS

DETROIT, Aug. 22.—Within a month the first of the 149 lake ships included in the fleet recently obtained by Henry Ford from the U. S. Shipping Board, will arrive in the River Rouge. A force of men will commence cutting the 1,500 tons of steel in each of the vessels. The "scrapping" process will require eighteen months, it is estimated.

WILLS SAINTE CLAIRE DEALERS

MARYSVILLE, Mich., Aug. 22. — Dealers who have recently taken on the Wills Sainte Claire line are: Marksman Auto Company, Fall River, Mass., Humphries Motor Company, Inc., Sharon Hill, Pa., Blasky & Pruitt, West Palm Beach, Fla.

SPOKANE SEES AJAX

SPOKANE, Aug. 22.—More than 4,000 persons inspected the Ajax car in Spokane during the premier showing early in August, in the display rooms of the Spokane Nash Motor Company, Spokane's distributors, according to Joseph Bain, sales manager of the company. "We are greatly pleased with the way the newest addition to motordom has been accepted in Spokane," said Mr. Bain. "We sold 14 cars in less than a week. All but one were sedans."

TO PRODUCE HOLYOKE TIRE

HOLYOKE, Mass., Aug. 22.—The New England Tire & Rubber Company is working out plans for reorganization to again produce the Holyoke tire. L. A. Laporte, who became president just before the company went into receivership last spring, is working hard to put it upon an operating basis again. He stated that the company hopes to resume production again by September 15 or October 1. Plans for a reorganization contemplate a new company incorporated under Massachusetts laws with a capitalization of $825,000. This company will take over the liabilities of the old company. A line of balloon tires will be produced as well as the Holyoke Chainess Tread.

OHIO REGISTRATIONS UP

COLUMBUS, O., Aug. 22.—Ohio motorists, in addition to paying more than $2,000,000 in gasoline taxes since March, have also paid almost $1,000,000 more for auto tags so far this year than they paid during the entire year of 1924, according to Thad H. Brown, secretary of state. Secretary Brown's report shows $12,636,702 paid for tags up to July 31. This is $2,146,793 more than they paid during the same period last year. It is also $939,474 more than the entire sum of last year. Receipts for the last five years have shown a steady increase from $4,682,064 for the first seven months of 1920.

SEEKS STUTZ STOCK

NEW YORK, Aug. 22.—Stockholders of Stutz Motor Car Co. have been asked to release 10 per cent of their holdings within ten days after February 15, 1927, in order to provide an option of one tenth of the capital stock to be sold to F. E. Moskovics, president. Directors agreed to this rather than increase the capital when Mr. Moskovics stipulated that he be permitted to buy 10 per cent of the stock. Stockholders will receive $10 a share.

N. A. D. A. MEET IN MOBILE

MOBILE, Ala., Aug. 22.—The Mobile Chamber of Commerce has announced that the city of Mobile has been selected for the holding of an automobile trade congress by the National Automobile Dealers' Association, the date for the congress being Thursday, Nov. 5, 1925. This meeting, which is one of several the N. A. D. A. is holding throughout the country, will bring together about 100 representative dealers in the Alabama, Mississippi and Florida territory.

U. S. Bureau Denies Alcohol Must Have High Compression

Fuel Allows But Does Not Require Higher Ratio—Needle Valve Opening Must Be Larger

WASHINGTON, Aug. 22.—The Bureau of Standards, in a statement just issued here, corrects the erroneous statements made recently that a high compression ratio is necessary in alcohol as a fuel for internal-combustion engines.

"That this is not true," says the statement, "is fortunate, as manufacturers would be very loath to alter their engines in such fashion as to render them unsuitable for operation with gasoline.

"The fact is that alcohol permits, but does not require, the employment of a much higher compression ratio than gasoline. Should alcohol or other fuels of equal antiknock value become generally available compression ratios could be increased, and as a consequence higher efficiencies could be attained. In the meantime the chief advantage to be derived from the use of an antiknock fuel is that it permits satisfatcory operation with an engine too badly carbonized for satisfactory operation with gasoline.

"The use of alcohol does require larger metering jets or a larger needle valve opening in the carburetor. This is necessary both for the reason that alcohol is more viscous than gasoline and because a much richer mixture of alcohol and air is required for complete combustion than of gasoline and air. Fortunately this change can be made ordinarily with little difficulty."

UNIFORM GASOLINE SIGNS

MILWAUKEE, Aug. 22.—Gasoline filling stations in Wisconsin are to be provided with uniform signs for the display of their gasoline prices, the department of markets of the state has announced. The department amended its order requiring gasoline price publicity when oil jobbers at a joint hearing approved of the uniform sign system. All filling stations will be provided with a standard type of frame for their price signs which are required under the publicity order to prevent unfair competition by secret discounts or rebates. The uniformity of posting is intended to make easier the projected rigid state supervision.

EDMUND & JONES EARNINGS

DETROIT, Aug. 22.—For the first half year Edmund & Jones Corp. reports $2,573,729 sales with $191,046 net earnings equivalent to $4.26 per share on common before preferred sinking fund. Common dividend was increased from $2 to $3 per share, payable quarterly. The directors authorized sale of 10,000 shares unissued common giving rights to common stockholders of record Aug. 14 to subscribe for one share of new for each four of old common owned at $26 per share, rights expiring Aug. 31.

N. A. D. A. Will Start Series of Sales Congresses in September

Used Car Plans and Dealer Profits Will Be Subjects Before Dealers in 21 Cities

ST. LOUIS, Aug. 22.—A series of sales congresses is to be conducted by the National Automobile Dealers' Association during September. The dates given out for the various cities in the first announcement are:

Des Moines, Iowa, Sept. 9.
Peoria, Ill., Sept. 10.
Ft. Wayne, Ind., Sept. 11.
Buffalo, N. Y., Sept. 14.
Lockport, Sept. 15.
Niagara Falls, Sept. 15.
Batavia, Sept. 16.
Canandaigua, Sept. 16.
Rochester, Sept. 17.
Syracuse, Sept. 18.
Utica, Sept. 21.
Schenectady, Sept. 21.
Albany, Sept. 22.
Poughkeepsie, Sept. 23.
Kingston, Sept. 23.
New York, Sept. 24.
Brooklyn, Sept. 25.
New Haven, Sept. 28.
Bridgeport, Sept. 28.
Hartford, Sept. 29.
Boston, Sept. 30.

Sales plans, used car plans and dealer profits will be discussed in all the programs, all of which will be identical as far as topics to be discussed are concerned.

Under the head of sales plans national authorities will discuss the best methods for training salesmen to follow definite sales plans and how successful sales plans are built and developed. Market analyses from the standpoint of successful methods used by prosperous dealers and distributors also will be discussed.

Automobile dealers throughout the country lost 8.2 cents for every dollar of car sales on used cars during 1924. This was about one cent less than the losses in 1923. The N. A. D. A. has conducted a campaign of education on the used car situation for four years which has been largely responsible for the reduction in used car losses. In 1922 dealers throughout the country lost $126,000,000 on used cars and in 1924 they lost $40,000,000. How this great reduction in used car losses was brought about and what plans are afoot to still further reduce losses will be discussed at the forthcoming sales congresses.

How successful dealers are able to make 5 per cent net profit will be another interesting item on the programs.

Speakers and details of the various programs have not as yet been announced but the N. A. D. A. announcement of the campaign says that while all the meetings will have the same subjects, not all the speakers will appear at all of the cities.

All the congresses are being arranged in co-operation with local associations and dealer committees. Dealers who wish to attend are urged to see the president or secretary of their local association for information concerning the time and place of the meeting in their vicinity.

Police Learn to Repair Fords

NEW YORK, Aug. 22.—To give the motorized police of New York City an intimate knowledge of the construction and operation of the 722 Ford cars recently purchased by the city, a special Ford school has been established by the New York Police Academy at Thirty-fourth street and Lexington avenue. More than 2,800 police sergeants and patrolmen detailed to the motor division of the police force are enrolled in the Ford school in a course which completely covers every phase of the Ford engine, electrical, clutch and drive system.

"Fords are rapidly taking over the important features of the police department's patrol work," Police Inspector John J. Noonan explains, "and it is our intention to make every officer as familiar with his Ford as he is with his revolver."

Sixty especially selected men of the division, in addition to their week's instruction in the Ford school of the Police Academy, spent a week in the Ford Motor Company plant at Kearny, N. J., to learn Ford methods in shop work and construction. They will have charge of the precinct police garages.

DEALERS CLOSE SUNDAYS

SPOKANE, Wash, Aug. 22.—Automobile dealers of Spokane, through the Spokane Automobile Chamber of Commerce, have ruled against Sunday opening, and as a result all showrooms will be closed here in the future. Lack of business resulting from Sunday opening and sentiment against a seven-day week for employes led to the move.

HOOD HOLDS CONVENTION

BOSTON, Aug. 22.—The Hood Rubber Company held the biggest convention in its career here the past week when men from all over the country were present with the factory executives and workers going into all details of the rubber business. There were more than 200 branch managers alone in attendance. The convention was under the direction of T. R. Stearns. L. Lawrence Muench was in charge of the sessions on production; W. W. Duncan, general sales manager, had charge of the sales promotion meetings; A. R. Howell directed the discussions on advertising policies. The delegates were housed at Nantasket Beach instead of in Boston, and there were dinner parties and entertainments each evening, ending with a banquet at Pemberton Inn, where the principal address was delivered by President F. C. Hood. He gave facts and figures to substantiate his statement that the Hood Rubber Company was enjoying the most prosperous year in all its history.

A. A. A. Pushes Campaign to Remove War Excise Taxes

President Henry Shows There Are Four Times as Many Paying Car Levies as Income Tithes

WASHINGTON, Aug. 22.—Calling attention to the fact that there are four times as many people paying excise taxes on automobiles and parts as there are people paying income taxes, a statement broadcast from the national headquarters of the American Automobile Association this week emphasizes that any program for the reduction of national taxation in the forthcoming session of Congress must take cognizance first and foremost of the burden that the continued excise tax places on the motorists of the country.

"With a surplus of $350,000,000 in sight for the fiscal year 1926," President Thomas P. Henry of the A. A. A. declares, "it stands to reason that the special tax imposed on motorists as a class by the government can be removed without risking a deficit in federal finances."

The A. A. A. statements called on all motorists to urge their representatives in Congress to support the repeal of the excise tax. It pointed out that the total excise tax paid by motorists on automobiles and parts for the fiscal year ending June 30, 1925, was $122,742,440.29. This total is based on the figures of the Internal Revenue Bureau and is equivalent to $29.00 per motor vehicle. The total tax paid by motorists in 1924 including federal, state and municipal taxes amounted to $555,028,548.00.

"The motor vehicle excise tax," President Henry continues in the statement, "is essentially unsound. Even as a war measure it was unsound to base the tax on the assumption that the automobile is a luxury. Ninety per cent of all cars are used more or less for business purposes, while more than 60 per cent of the total passenger car mileage is strictly for business use.

"The tax is discriminatory in its effect on both an instrument of commerce and a commodity."

FINNISH DEALER VISITS MOON

ST. LOUIS, Aug. 22.—Frejvid Borg, managing director in the Motor Kompaniet at Helsingfore, Moon distributors for Finland, has just arrived in St. Louis for a several week's conference at the factory. Borg, a progressive type of the younger business man of Finland, was shown about the city by Edmund H. Serrano, director of exports for the Moon Motor Car Company and expressed his amazement at the size of the automobile industry here. Borg expressed keen interest in the various manufacturing operations through which the Moon car passes from the raw product to the finished job and was particularly impressed with the inspection to which every Moon part is subjected before being incorporated in the car itself.

European Bars Against U. S. Automobiles Being Lowered

N. A. C. C. Official Sees Great Improvement in Export Situation During Trip

NEW YORK, Aug. 22.—Legislative bars to American automobile sales in Europe are being lowered in several important instances, George F. Bauer, secretary of the foreign trade committee of the National Automobile Chamber of Commerce, said on his return from a three months trip to the continent.

Germany is preparing to replace the present license system, which has virtually excluded American cars, with a tariff arrangement under which sales in considerable volume may be expected, Mr. Bauer reported. Early action on this program is looked for.

Austria may follow the lead of Germany and there is even hope that France may decide to reduce the current tariff if reciprocal action is taken by the United States, Mr. Bauer said. He found that the lowering of the Finland tariff, which discriminated against American imports, has greatly stimulated sales there.

"Customs restrictions and lack of financing facilities are the principal restraining factors in the foreign field today," said Mr. Bauer. "The people for the most part want automobiles and will buy them if prices and terms are right. Progress is being made toward admitting American cars on a basis that permits fair competition, but a great deal still remains to be done along these lines, and in the way of extending credit facilities,

"In Germany for instance, interest rates are 10 to 12 per cent, and there is no credit available for financing dealers or retail sales. As soon as the European nations lay aside their petty jealousies and establish themselves on a basis that will inspire the confidence of investors, capital should be made available for automotive transactions.

"Only in Sweden and Denmark did there seem plenty of money for financing sales, and the terms, it must be said, were hardly sound. In many instances only 10 per cent cash was required and the balance spread over two or three years.

MARMON CHANGES OPEN CARS

INDIANAPOLIS, Aug. 22.—Nordyke & Marmon Company announces that it has added considerable equipment and refinement to its five passenger phaeton, and to its seven passenger touring car and raised the prices of each of these open vehicles to $3,295, the same price as the vehicles in the standard closed car line. Among the equipment and accessories added to the phaeton and touring cars are fender mirrors, top boot, tonneau cover or boot, and nickeled rear vision mirrors, with nickeled windshield frame and other refinements of finish.

DEERE RAISES DIVIDEND

MOLINE, ILL., Aug. 22.—Deere & Co., which has maintained a preferred stock dividend without interruption since its incorporation in 1868 but was forced in 1921 to cut its rate to 3 per cent and has since gradually increased it, this week placed the stock on its customary 7 per cent basis, the directors at the same time authorizing the payment and retirement of the outstanding portion of the $10,000,000 gold note issue of 1921. The notes are to be paid from receipts from inventory liquidation and not from any profit earned by the company. The action on $14.25 accumulated back dividends of the preferred stock has not been determined but the directors say it will be paid "as rapidly as circumstances permit." The gold notes to the extent of $2,500,000 have been previously retired, leaving $7,500,000 to be called in at this time.

CAPITAL TO VIEW AJAX

WASHINGTON, Aug. 22.—The new Ajax will be formally introduced to the Washington public in the near future, it was announced here this week by E. M. Wallace of the Wallace Motor Co., Washington Ajax distributor, located at 1709 L street, northwest. "Opinion throughout the industry and among those who have opportunity to view the car," says Mr. Wallace, "unhesitatingly pronounce the new Ajax the crowning achievement of C. W. Nash."

NEW GARDNER DEALERS

ST. LOUIS, Aug. 22.—Dealers recently added to the organization of the Gardner Motor Co. follow:

Lukavsky Motor Co., Los Angeles; Lyndale Auto Service, Minneapolis; J. A. Davidson, Oxnard, Cal.; Ventura Motor Co., Ventura, Cal.; Frank E. Todd, Sheridan, Wyo.; Sible Motor Sales, Mount Vernon, Wash.; Kaufman Motor Sales, Chicago, Ill.; E. A. Moberly, Carlsbad, N. M.; Smith Automotive Co., Oregon, Wis.; Dunn & Gillis, Minneapolis; Hancock Square Garage, Quincy, Mass.

FREEMAN JOINS GARDNER

ST. LOUIS, Aug. 22.—C. L. Freeman, who has been identified with some of the most important automobile builders in America during the last 10 years, has joined the Gardner Motor Company, Inc., as assistant general manager. Mr. Freeman is a highly trained technical expert who has served many famous motor car builders in the capacity of consulting engineer. Just prior to joining Gardner, he designed and engineered one of the outstanding motor car successes of recent years.

OAKLAND BRANCH SOLD

DALLAS, Tex., Aug. 22.—The Oakland factory branch at Dallas has been sold to F. L. Toepperwin according to announcement of C. W. Matheson, vice-president of the Oakland Motor Company who was here this week. Paul A. Stevenson, formerly manager of the branch, is made district manager for all Texas except the Panhandle section,

Sales Executive Sees Big Change in Buying Habits

Pierce-Arrow Manager Believes Seasonal Business Curves Rapidly Being Leveled

BUFFALO, Aug. 22.—Back from a 9,000-mile trip through the United States to observe business conditions in the automobile industry, L. E. Corcoran, general sales manager of the Pierce-Arrow Motor Car Company, declared today that the motor car buying habits of the public have undergone a pronounced change.

"In contrast with former years, automobile sales this year have continued at high levels during the summer months," said Mr. Corcoran. "This is one of the several evidences that the unhealthy condition of peak buying activity in spring and fall, and sales stagnation in mid-winter and mid-summer, is rapidly being wiped out.

"Buyers in increasing numbers are coming to the conclusion that it is just as sensible to buy in one month as it is in another, regardless of the season. The habit of buying in the spring is a heritage from the old days when there were few closed cars and automobiles were suitable only for fair weather driving. The ability of manufacturers to produce all-season closed cars at prices close to those of open models has changed all this.

"The habit of buying in early fall was the result of the uneconomic practice of some makers of announcing radical changes and new models in mid-summer. The more stable manufacturers for several years have been pursuing the sound policy of continuously making gradual improvement and refinements without announcing yearly models. Buyers of cars built under such a policy know that they will not be subjected to artificial depreciation losses and therefore do not hesitate to buy in any month of the year."

WISCONSIN PLATES PLACED

MILWAUKEE, Aug. 22.—An order for 650,000 automobile license plates for the year 1926 has been placed with the Wisconsin state prison plant at Waupun, Wis., by Fred R. Zimmerman, secretary of state, whose department is in charge of auto registration. The color of the 1926 plate will be black numerals on a cream background. Normal demand for automobile plates is about 600,000, Mr. Zimmerman announces, but increased registration for 1926 is indicated in the present automobile sales situation, he believes. For the first half of the year 1925, during which most of the registration takes place, there were registered 541,927 automobiles, records in Zimmerman's office show. He estimates that the total number of 1925 registrations will reach 606,900, making this year a record year.

Auburn Declares 100 Pct. Stock Dividend on Common

Capital Is Increased to $1,500,000—Unfilled Orders Said to Be Heaviest in History

AUBURN, Ind., Aug. 22.—At a special meeting of the stockholders of the Auburn Automobile Company a stock dividend was declared of 100 per cent on the common stock of $25 par value, increasing the capital of Auburn from $750,000 to $1,500,000.

E. L. Cord, vice-president and general manager, who has just recently bought out the former control, in his report to stockholders advised that unfilled orders on the books of the Auburn Automobile Company were the greatest in the history of the company.

"Earnings for July approximated $1.50 per share on the new capitalization of 60,000 shares after setting up a reserve for taxes and estimated earnings for the month of August will approximate $2.25 per share", stated Mr. Cord.

"Within the last year the Auburn Automobile Company has retired $500,000 in preferred stock and is in exceptionally nice position. In the past twelve months we have not used any credit whatsoever, having had sufficient working capital to operate our business.

"We anticipate that the complete year of 1925 will far exceed the best year that Auburn ever had in both numbers of cars and earnings."

Immediately following the stockholders' meeting the directors had a special meeting and voted the issue of the stock dividend and authorized the payment of a quarterly dividend of seventy-five cents per share payable October 1 to stock of record September 20.

The resignation of F. B. Hitchcock as a director was accepted and L. B. Manning was elected to complete that portion of his unexpired term.

FAGEOL EARNINGS HIGH

OAKLAND, Cal., Aug. 22.—Books of the Fageol Motor Company, of this city, opened to the public early in August, showed that the corporation during the first half of 1925 earned more than $300,000 in net profits, or nearly six times the preferred dividend requirements for the entire year. The company earned approximately 36 per cent on its preferred stock, or at the rate of 72 per cent a year, while the earnings on its common stock were at the rate of 13½ per cent or 27 per cent a year. The company is paying no dividend on the common stock, but is building up a surplus to enable it to strengthen its position as a manufacturer. Inasmuch, however, as the preferred stock divided amounts to only $57,000, while the company earned at the rate of $2.70 on its common stock of $10 par, it is apparent that a healthy dividend could be paid on the common. At the end of July, the Fageol factory here was working at capacity production on motor stages and trucks.

1909 Packard Is Still "Asset"

WASHINGTON, Aug. 22.—After 500,000 miles travel a 1909 Packard is listed among the assets of an automobile mechanic in bankruptcy court here. He admits that he has changed tires.

Automobile Club experts figure that the car has averaged 85 miles a day for sixteen years, or the equivalent of twenty trips around the equator. The old machine will be sold to satisfy creditors at an appraised value of $25.

NEW MARMON DEALERS

INDIANAPOLIS Aug. 22.—Nordyke & Marmon Company sales department announces that it has closed 12 new dealer arrangements in nine states in recent days thus keeping up the extension of dealer organization which has been going on rapidly for more than a year. The new Marmon dealers are:

Whieldon Motors Co., New Castle, Pa.; Hall Motors, Santa Anna, Cal.; Reo Motor Sales, Decatur, Ill.; Thompson Marmon Service Co., Chicago; Washington Auto Co., Yakima, Wash.; James P. Marchington, Newport, R. I.; Flint Marmon Sales, Pontiac, Mich.; Marmon South Side Sales & Service Co., Chicago; Coleman & Nelson, Williamsport, Pa.; Luckett & Major, Madison, Ind.; Stephens Bergen Motor Co., Inc., Hackensack, N. J.; Franklin Sales & Service Co., Wilmington, Del. Four new associate dealers have also been appointed; Schmidt & Blackford, Charleston, Ill.; James A. Smith, El Paso, Ill.; Lacon Auto Service, Lacon, Ill., and Campbell & Todd, Lewiston, Ill.

PIKE'S PEAK CLIMB SEPT. 7

COLORADO SPRINGS, Aug. 22.—The seventh annual Pike's Peak Hill Climb race contest, the biggest competition of the kind in the United States, will be held as usual on Labor Day, Sept. 7. The races are held under the rules and with the sanction of the contest board of the American Automobile Association. Spencer Penrose has given a new trophy that will be contested for annually; the cup a mammoth silver bowl of unique design is, aside from its intrinsic value, a grand prize, being more than one hundred years old and purchased by Mr. Penrose in England.

NEW AUBURN DEALERS

AUBURN, Ind., Aug. 22.—New distributors and dealers who hove recently been added to the Auburn organization include:

Joseph Twomey, Inc., West Roxbury, Mass.; South Hills Auburn Co., Mt. Lebanon, Pa.; M. E. Eaker, Clarion, Pa.; Jones Motor Car Co., Throop, Pa.; S. E. Marcott, De Pere, Wis.; Harry Koons Motor Sales, Bellefontaine, Ohio; Lund & Ramsey (Los Altos Garage), Los Altos, Calif.; J. H. MacIntosh, Sacramento, Calif.; Brunson W. French, Hollywood, Calif.; Barnesboro Body Co., Barnesboro, Pa.; Auburn Sales Co., Sharpsville, Pa.; Providence Auburn Co., Providence, R. I.; E. G. Gauntt, Fort Wayne, Ind.; A. E. Sworm, Sanborn, New York; Smith Amos Corp., Homstead, Fla.; C. W. Sahl & Co., Modesto, Calif.; J. P. Strom, 1221 MacDonald Ave., Richmond, Calif.; Siemon Motor Co., Greensburg, Pa.

Over 100,000 Essex Cars Produced Thus Far in 1925

Output to Date 15 Per Cent More Than Entire Number Built During 1924, Says Official

DETROIT, Aug. 22.—Upwards of 100,000 Essex cars have been manufactured so far in 1925, the first six cylinder car to attain that number, according to one of the Hudson officials who also stated that this number was 15 per cent more than the entire number of Essex built during 1924.

With production on a volume basis it seems likely that the output for 1925 will see twice as many Essex cars built as for all of last year, despite the fact that 1924 was considered a remarkably successful Essex year.

Not only has the sale been phenomenal in the United States but the demand is also brisk in Great Britain, the Continent and in the various colonial fields. In Canada, the Essex demand has been almost twice as great as in this country.

"This unusual measure of success", said a Hudson official", is all the more remarkable because no new model was introduced, and because more than 95 per cent of Essex business has been centered in the coach model, a type of car which Essex created and named. Essex business has been consistently good with no spurts or let-downs."

BOSTON PLANS RADIO SHOW

BOSTON, Aug. 22.—Boston's annual radio show will be held at Mechanic's Building during the week of October 12 and already space has been sold to a number of the big battery companies who have gone into the radio field, as well as some of the autoombile accessory corporations. It will be the fourth show and this year Boston newspapers will feature it extensively.

HAWAIIAN BUSINESS GOOD

SAN FRANCISCO, Aug. 22.—White Truck business done in the Hawaiian Islands for the first half of 1925 was the largest ever done there by this company, according to G. A. Urquhart, vice-president of the White Company, who recently returned from a visit to Walter Beall, formerly of San Francisco, and now general manager for the Schuman Carriage Company of Honolulu, White truck distributors for Hawaii.

FORD CONTROL DENIED

DETROIT, Aug. 22.—Referring to a report published in the New York Morning World recently which stated that Henry Ford had indirect control of the Hudson Motor Car Co., A. Barit, secretary of the company, speaking officially told MOTOR AGE: "The statement that Ford is indirectly in control of the Hudson Motor Car Company is absolutely false. Such rumors have been afloat for a year and a half and have been denied before. There is absolutely nothing to it."

Along Automobile Row

DETROIT.—Schiesel and Crump, 8057 Gratiot avenue, Woodward Motor Sales, 3945 Woodward avenue, Goodwill Motor Co., 8442 Twelfth street and Savage Sales and Service, 815 West Grand boulevard, have been appointed associate dealers for the Oakland line in Detroit.

MINNEAPOLIS.—T. S. Hoff, wholesale representative of the Minneapolis branch of Willys-Overland, Inc., at Fargo, N. D., has been transferred to the Minneapolis headquarters to become sales promotion manager. H. C. Albers, from the Minneapolis Flint branch, will succeed him in Fargo.

LA SALLE, Ill.—The Putnam-Hibbens Motor Car Company has been organized here by S. C. Hibbens, L. S. Putnam and Dayton Keith. Capital stock has been fixed at $15,000. A garage and sales agency have been opened at 944 First street. The company will distribute the Chevrolet car.

OAKLAND, Cal.—The Lawrence-Rand Company has been appointed Lincoln dealers for the eastern side of San Francisco Bay, according to announcement by the Lincoln Division of the Ford Motor Company. The new firm is composed of H. M. Lawrence, Ford dealer in Oakland for several years, and C. D. Rand of San Francisco, who has handled several high grade cars there.

MILWAUKEE.—Stader Auto Sales Co. has been formed here by O. Stader, formerly an auto dealer at Oconomowoc, Wis., D. W. Weart and A. A. Goulin. The new organization will deal in Rickenbacker cars, according to announcement by the Chidester-Frint, Inc., distributors for Rickenbacker in Wisconsin.

SPRINGFIELD, Ill.—The United Tire & Radio Stores Company, 77 West Washington street, Chicago, has been granted articles of incorporation by the secretary of state. The capital stock has been fixed at 400 shares of no par value. The company will distribute motor vehicle accessories and radio outfits.

CHICAGO.—A. J. Banta has been made assistant general manager of the General Motors Truck Company, Pontiac, Mich. He was formerly Locomobile branch manager in Chicago, was with Maxwell at the Chalmers factory, and then Chicago manager for Maxwell-Chalmers. He recently resigned as sales manager for Rickenbacker.

MOLINE.—The Dean Motor company announces that it will devote its entire time and energy to the sale and service of the Velie automobiles exclusively in its territory here.

SPOKANE, Wash.—Introduction of the Diana straight eight in Spokane was undertaken last week by the Rice Motor company, a concern distributing the Moon car. New quarters were taken on automobile row and a special opening display, including the living Diana, was put on for the first day.

NEW ORLEANS.—The Donnell-Williams Motor Co., dealers in Willys-Knight and Overland cars, opened in Greenville, Miss., recently. O. O. Donnell of Leland, Miss., is president, and W. J. Williams, formerly of Pine Bluff, Ark., is vice-president.

CHICAGO.—The Chevrolet Motor Co., distributors for Chicago, has moved from Automobile Row and is now established in offices in the Wrigley Building, 410 North Michigan avenue.

FREEPORT, Ill.—Charles O. Cromwell, with offices at 2230 First National Bank Building, Detroit, has been appointed Detroit representative, covering auxiliary heads made by the Hoefer Mfg. Co. of this city.

CHICAGO.—J. P. Marks is the newly established Chicago wholesale manager for Durant Motors. He was formerly head of the Durant Chicago branch, where he has been succeeded by J. S. Mitchell.

COLUMBUS, O.—The U-Drive-It-Co., now located at 102 East Spring street, Columbus, has started the erection of a modern garage and storage building at 20 E. State street, in which will be housed the concern after about Sept. 15, when the building will probably be completed. The structure is 70x100 feet and will be two stories high. Foundations are designed to carry two additional stories.

SPRINGFIELD, Mass.—R. S. Davey has assumed the position of advertising manager of the American Bosch Magneto Corporation, replacing G. W. Sherin, recently resigned, officials of the company have announced.

SPOKANE.—Bearing & Rim Supply Company, Spokane, and Wire Wheel & Service Company, Portland, Ore., Budd wheel distributors in western Washington and Portland, respectively, announce that they have expanded their businesses to take on four new rim lines, those being Firestone, Hayes, Kelsey and Jackson.

DES MOINES, Ia.—Studebaker dealers and factory officials met in the Hotel Fort Des Moines last week and discussed the new models and the company's recently inaugurated "one-profit" manufacturing program. Factory representatives present included C. A. Vance, F. E. Kennedy, E. J. Dieckoff, L. O. Nicodemus and G. L. William of Lord & Thomas. L. B. Van Hoesen, manager of the Sheriff Motor Company, local agents, handled preliminary arrangements for the session.

CHICAGO.—B. W. Ruark, for the last three years field secretary of the Automotive Equipment Association, has been made assistant to Commissioner Webster at the association headquarters here and in the future will devote the most of his time to the work of administering the affairs of the association.

LANSING.—D. S. Eddins, general sales manager, Olds Motor Works, announces the appointment of Harold S. Wier as assistant general sales manager of the company. In April, 1919, Mr. Wier joined the sales staff of the Chevrolet Motor Company, serving first in the capacity of factory representative and advancing rapidly to the position of branch manager. Mr. Wier succeeds Leon G. Dodge, who has been placed in charge of the new Oldsmobile wholesale branch in New York City.

ST. LOUIS.—Earnest J. Krause, president of the Earnest J. Krause Motor Car Co., has announced the election of Ralph W. Page to the vice-presidency of the company. The company handles the Moon and the Rolls-Royce cars.

ELGIN, Ill.—Emil Jenny and his sons Emil and George, have closed a deal for the sale of the Jenny Motor Company to R. S. Lord and William Graf. The new owners have changed the name to the L. & C. Chevrolet Company. Lord has been employed by the Jennys as manager for a number of years, while Graf was shop foreman.

PEORIA, Ill.—The Cass Motor Company, of which Cass J. Heintzman is principal owner, has been appointed distributor for the Flint car in Peoria and neighboring counties. Fifteen associate dealers have been named for Peoria and adjoining counties to handle the same line.

DETROIT, Mich.—The Puritan Autoparts Co., which for more than 20 years has been located at the corner of Lafayette and Tenth streets, has moved from that location to new headquarters at 2520-2530 Grand River avenue.

DES MOINES.—P. L. Holt of Oklahoma City has succeeded F. S. Reinhardt as assistant manager of the Ford Motor Co.'s local branch.

BURLINGTON, Ia.—Paul Augsburger, manager of the A. & E. Motor Co., Chevrolet agent in this territory, has leased the building formerly occupied by the Barton Motor Co., and will move immediately.

ROCKFORD, Ill.—Fritz Nelson, manager of the Velie garage, announces plans for a new sales and service plant at a cost of $30,000. The present Velie garage will become a repair department and storage unit for the new building, which will be completed in the fall.

BOSTON.—The Kelly-Springfield Truck Co. has just moved from 594 Commonwealth avenue to new quarters at 750 Commonwealth avenue.

CINCINNATI.—A. G. Wood of the Wood Motor Co. has announced that William P. Duffy has joined his sales force, selling Moon Six and Diana Eight cars.

LANSING, Mich.—Lorenz Bros., Buick representatives in Lansing, have opened a branch sales and service station at St. Johns which will be in charge of Fred A. Culley. All of the lighter repair work will be done at St. Johns with the heavier repair work being done at the Lorenz plant in Lansing.

BOSTON.—J. S. Harrington, Inc., Springfield distributor for Hudson and Essex, has just placed a sub-agency in that city with Henry's Inc.

CHICAGO.—George F. Bates has stepped from assistant Chicago branch manager of the Diamond T Motor Car Company, builders of trucks, to corporation sales representative of the organization, working out of the general offices and factory at 4517 West Twenty-sixth street.

ATLANTA.—Sam J. Keith, a salesman in the automobile accessory department of the Keith-Simmons Co. of Nashville, Tenn., calling on the city trade there for some time, recently took on a larger territory, the company has announced, and is now also calling on the dealer trade in the adjacent Nashville territory of central Tennessee.

GREAT BARRINGTON, Mass.—More than 1,000 persons attended the opening of John T. Harper's new garage, one of the best equipped in this part of the state. Among them was W. C. Sills, president of the Sills Chevrolet Co. of Boston. General Motors Acceptance Corp. and the Goodyear Tire & Rubber Co. sent representatives. Electrical and floral displays made effective settings for the various models of Chevrolet and Oldsmobiles.

CHICAGO.—The Ray F. Mudd Motor Company, Lincoln and Ford dealer, has completed and opened its new sales and service rooms at 133-141 Madison street, Oak Park, which will become the new headquarters of the company. C. P. Townsend has been appointed manager.

ATLANTA.—Harry Sommers, Inc., distributors of the Packard and the Chrysler line in the Atlanta territory, announce the recent appointment of Tom Hardeman as retail sales manager of the Chrysler department. Joel Davis is in charge of the wholesale department.

WHEATON, Ill.—The Wheaton Auto Sales, Inc., has obtained a site for a Ford agency show room and service station. Duke Durfree will be manager for the company, which is conducting agencies in Naperville and Plainfield, also.

MILWAUKEE.—The Johnson Motor Car Co. of Fond du Lac, Wis., has moved from its former location to new quarters in the garage building at South Limits formerly operated by Fred W. Albright. The company is Studebaker dealer for Fond du Lac. It plans a new building at the Albright location, part of which will be devoted to a gasoline and service station.

CHICAGO.—Harry P. Branstetter of Chicago, state distributor for Kissel, headed a delegation of fifteen dealers of Illinois to the factory at Hartford, Wis., recently. Officials of the Kissel company met the dealers at the train in Milwaukee and the remainder of the distance was covered by automobile.

DETROIT.—Woodin & Barnes Co. of Flint, Michigan, Cadillac and GMC truck dealers, have been appointed Oakland dealers for their territory.

With the Associations

Washington Plans Show

WASHINGTON, Aug. 22.—Announcement that plans for the 1926 automobile show which will open here at the Washington Auditorium on January 30, 1926, are complete was made here this week by Rudolph Jose, chairman of the show committee, at regular monthly meeting of the Washington Automotive Trade Association.

E. F. Hallock, manager of the manufacturers' division of the Vacuum Oil Company of New York City, addressed the automotive men at the meeting on "Oil." Mr. Hallock illustrated his talk with lantern slides, showing statistics on the value of oil as a means of lubrication. He said it was important to use the right grade and the right grade at the right time of the year to get best results.

Atlanta Investigates Opinion

ATLANTA, Ga., Aug. 22.—To determine what the automobile owning public, the dealers and others identified with the industry think of the proposed motor title and registration law now before the Georgia legislature, the Atlanta Automobile Association during the early part of August sent a questionnaire to thousands of owners and dealers throughout the state, and reports that replies indicate owners and dealers both are overwhelmingly in favor of the law.

Briefly, this bill provides for the issuance of a certificate of ownership, this certificate to be transferred when the car is resold, similar to a law now in affect in several other states. It is being sponsored by the Atlanta Automobile Association.

Relative to the sales tax bill, it is proposed now to tax wholesalers and manufacturers one mill; retailers two and one-half mills, with the first $500 gross sales exempted. This bill, if passed, would affect every branch of the automotive business, and it is therefore being vigorously opposed by dealers and distributors through the Atlanta Automobile Association, who contend it would place too heavy a burden on them.

An effort to reduce the capital stock tax from $1,000 to $400 maximum also is being made, another measure which would affect nearly all branches of the automotive industry, particularly outside accessory and parts firms doing business in Georgia. Several such companies have discontinued carrying stocks in Georgia because of the cost occasioned by the present capital stock tax.

Golf Features Outing

WASHINGTON, Aug. 22.—Golf matches and a program of athletic events featured the annual outing of the Washington Automotive Trade Association held at the Beaver Dam Golf Club. The entertainment followed a beef steak dinner.

Membership Growing Steadily

KANSAS CITY, Aug. 22.—The membership of the Kansas City Automotive Trades Association has doubled during 1925, in spite of the fact that all members in arrears for their dues have been dropped from the list. The "live" members are adding to their number by inviting guests to their meetings—there were thirty-nine in attendance at the last meeting—and co-operating with the paid secretary of the association in soliciting new members. The last man on the job secured three new applications, and a new man goes with the secretary each day.

The jobbers have practically all joined the association, and are assisting in making the members into better merchants by giving them all the assistance in their power. George Lockeridge, of the Kansas City Auto Supply company spoke at the last meeting on "Service Problems of the Service Man and the Jobber," and there was a lively discussion on how the jobber can help to meet the demands of the garage men in case of "hurry-up" calls.

The present membership of 100 is to be increased to 150 before the end of the year if present plans are realized.

While the work of the association is largely educational, yet the different committees, under the direction of President George W. Arnold, are working out some practical problems in the city.

"Back-lot garages," which are really public garages, and should be taxed as such, and the parking of cars on the streets without lights, and other matters which if rightly regulated would increase the business of the authorized garage man, are being investigated. The big problem of getting all members to study costs, and regulate their business on a cost plus basis, is in the program for the association, as outlined by President Arnold.

Tradesmen Hold Outing

DES MOINES, Ia., Aug. 22.—Two thousand automotive men of this city and their families attended the annual outing at Coney Island and the auto park contained 600 machines of the dealers and distributors. The motor trades bureau of the Chamber of Commerce, headed by C. G. VanVliet, secretary, arranged the event, which continued all afternoon and well into the evening. Automotive business places were closed at noon and the Scotch Highland band of the Ford Motor company and the Herring Motor company band entertained the crowds at an afternoon concert. A special edition of the Des Moines Register greeted the picnickers with full details of their outing. The dance music was furnished by the Manbeck Motor Sales company orchestra.

Exhibit With Merchants

ATLANTA, Aug. 15.—Several of the automotive jobbers in Atlanta handling accessories will take an active part this year in the annual Fall Buyers' Week, to be held under the direction of the Atlanta Merchants & Manufacturers' Association, Monday, August 17 to Saturday, August 22. Accessory distributors cooperating with other jobbers will keep a majority of their salesmen in the house during the week to handle visiting trade, these including the King Hardware Co., the Beck & Gregg Hardware Co., and the Crumley-Sharpe Hardware Co.

The association has been recently conducting a campaign among southern dealers urging them to buy more often and in small quantities as the best means of securing rapid turnover and increased profits, but at the same time to buy in large enough quantity to avoid the hand-to-mouth policy. Officials of the campaign state that it has accomplished very good results, for it has included a series of printed booklets distributed to all dealers in the district, giving the experiences of successful dealers who have practiced these policies as taken out of their own experiences.

An invitation has been extended to all southern dealers to visit the Atlanta markets during the progress of Buyer's Week.

Court Decision Cited

ST. LOUIS, Aug. 22.—When the Supreme Court of the United States in a recent decision defined good will as "The disposition of a pleased customer to return to the place where he has been well treated," Robert E. Lee, manager of the St. Louis Automobile Dealers' Association, lost no time in sending a card to all members of the association, quoting the decision of the court and admonishing the members that the automobile trade should study this kind of law.

A. A. A. Names Californians

SAN FRANCISCO, Aug. 22.—P. J. Walker of Oakland, Cal., a director of the California State Automobile Association, has been named vice-president of the American Automobile Association. Percy E. Towne of San Francisco, also a director in the state organization, has been elected to the board of directors of the A. A. A. Both men are past presidents of the California State Automobile Association.

Sunday Closing Probed

CHICAGO, Aug. 22.—The Chicago Automobile Trade Association has sent a questionnaire to all its members seeking an opinion on the question of closing evenings and Sundays.

Coming Motor Events

Automobile Shows

Dallas, Tex.—Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis.—Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal.—Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich.—Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla.—Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal.—Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La.—Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York—Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va.—Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt.—Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager

Chicago—Oct. 10-17
Seventh annual Used Automobile Show under auspices of Chicago Automobile Trade Association, at Coliseum.

Chicago—Nov. 5-7
Annual show in connection with convention of National Standard Parts Association, Coliseum.

Chicago—Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn.—Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston—Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago—Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City—Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Boston—Oct. 12-17
Annual radio show in Mechanics' Building. Shelton Fairbanks, manager.

Newark, N. J.—Jan. 15-22
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

New York—Sept. 18-19
Meeting of National Battery Manufacturers' Association at Commodore Hotel.

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Races

Altoona, Pa.	Sept. 7
Charlotte, N. C.	Nov. 11
Fresno, Cal.	Oct. 3
Los Angeles, Cal.	Nov. 26
Monza, Italy	Sept. 6
Italian Grand Prix Race.	
Syracuse, N. Y.	Sept. 19
Rockingham	Oct. 17
Baltimore	Oct. 24

Conventions

Buenos Aires, Argentine—Oct. 3-13
Pan-American Road Congress.

Cleveland—Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland—Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia.—Nov. 12-13
Automotive Merchants' Association Convention.

Montreal, Que.—Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia—September
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa.—Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis—Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Eaglesmere Park, Pa.—Sept. 14-17
General meeting of the Automotive Electric Association.

Wrightsville Beach, N. C.—Sept. 7-8
Annual meeting of the North Carolina Automotive Trades Association.

Montreal—Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Foreign Shows

Berlin, Germany—Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina—Oct. 3-13
Pan-American Road Congress.

London, England—Oct. 8-17
Olympia Passenger Car Show.

London, England—Oct. 29-Nov. 7
Annual Truck Show.

Indiana S. A. E. Committee Meets to Plan for Fall

INDIANAPOLIS, Aug. 22.—The meetings and papers committee of the Indiana Section, S. A. E., held its first meeting this week to plan its fall meetings and papers. Fredrick E. Moskovics, president of Stutz, has accepted the chairmanship of the committee and in the conference on the year's work were George T. Briggs, sales manager of Wheeler-Schebler Co., section chairman; Raymond F. Buckley, chief engineer of Robt. I. Hassler, Inc., secretary; Wm. Guy Wall and Fred Duesenberg, both of whom have served on the meeting and papers committee of the section; C. A. Trask, treasurer of the section, and O. C. Berry, former section chairman.

The schedule mapped out calls for a series of meetings beginning in October and a definite subject has already been assigned to all but two meetings of the year.

Final announcement of the fall schedule with meeting subjects will be made by the middle of September, by which time the noted speakers tagged by the committee will have time to accept the honors which he live "Hoosier" committee has thrust on them.

GERMAN DEAL DENIED

NEW YORK, Aug. 22.—Rumors in the financial district that an American automobile company is negotiating for control of the Aga Motor Works, Germany, the Stinnes property that has lately been in difficulties ,could not be confirmed. General Motors specificallp denied that their company was interested in the reported deal. It is known the Aga and other German companies have been offered to American firms, but apparently without result.

Moon Announces Refinements

(*Continued from Page* 15)

which conceals the gasoline tank and the rear frame horns, giving a much neater appearance to the rear of the car.

Mouldings have been entirely eliminated on all the roadster models of the Moon cars for 1926, which gives the car a distinctive European effect. This effect is achieved by offsetting the body panels at approximately the same location formerly occupied by a moulding. this offset eventually works itself over the cowl and hood and forms an arrow head, with its apex at the rear end of the radiator shell. The arrow, however, is not terminated abruptly at this point but spreads out into a ¾-in. moulding running down the front edge of the hood, thus giving a neat and distinctive appearance at this point.

The upper portion forming the offset panel is given a darker color of the two tone color combination, while a contrasting stripe is applied at the meeting point of the two colors.

The body of the Moon roadster for 1926 is roomier both in the front and in the rear compartments and numerous refinements such as an entirely removable top have been incorporated. In general the other models of the Moon cars for 1926 are being changed to conform in thought with the roadster models.

America Invites World to Second Transport Congress

Sales, Advertising and Service Methods Are to Be Principal Topics at Meeting

NEW YORK, Aug. 22.—Invitations are being mailed to all countries of the globe inviting automobile men everywhere to attend the second World Motor Transport Congress which will be held in New York January 11-13, 1926, during the National Automobile Show.

Assurances of participation have already been received from 50 countries speaking 16 different languages.

The National Automobile Chamber of Commerce is the host on this occasion which is a continuation of the first congress held at Detroit in May, 1924.

The economics and utility of motor transport were he chief topics at the first conference. This time emphasis is to be placed on sales, advertising, and service methods.

During the first five months of this year there were 228,537 American cars and trucks shipped to 101 countries and colonies of the globe, a record far exceeding any previous mark in the export business. It is felt that most parts of the world have passed the preliminary stages in motor transportation and are ready to study up-to-date selling methods.

The congress is to be conducted on the basis of exchange of experiences. The American manufacturers hope to learn a great deal from visitors from abroad and in return they will provide complete exhibits of the way in which motor transportation is merchandised in this country.

The meeting is to be an open one to dealers, manufacturers, engineers and others in foreign countries who are interested in the American automobile industry. Special invitations are being sent to delegates who attended in 1924.

Nash Motors Co. Expects Record Business in August

KENOSHA, Wis., Aug. 22. — Nash Motors in July did three times the business of the same month a year ago. Added to this, it is pointed out by the company officials that increased production because of the heavy demand will make August, in point of both production and sales, the greatest month the company has ever experienced.

"In spite of a definite schedule for greatly increased production in August at both the Kenosha and Milwaukee plants," said E. H. McCarty, general sales manager, "orders already on hand are greatly in excess of the August production schedule. In fact, at this time these orders are 30 per cent greater than production possibilities and this figure will be increased each day as additional orders for August delivery are received by the factory."

SQUEEKS and RATTLES

TOO EFFECTIVE



Jones, who makes a point of padlocking his new car by the front wheel to a lamp-post, realizes the justice of the maker's claim that the spare wheel with which it is fitted "can be fixed by anyone in two minutes."

—Punch.

Cars—metics

"Was your wife injured or the car damaged in the collision?"

"Oh, nothing to speak of—just a little paint chipped off."

—Motor West.

Leap for Life

"These aeroplanes are getting more dangerous than ever."

"Someone killed?"

"No, but I see a chap got married in one yesterday."

—Bulletin, Sydney.

A girl can be gay in a little coupe:
In a taxicab she can be jolly,
But the girl worth while
Is the girl who can smile
When you take her home on a trolley.

—Yale Record.

Wheel-barrows?

"So you come from America, the place where they make all the cars?"

"Yes. But I would have you know that we make other things besides cars in America."

"I know. I've ridden in them."

—Manchester Evening News.

Judging by the divorce records the girls nowadays are being married with demountable wedding rings.

—Judge.

Ed (in motor car)—This controls the brake. It is put on quickly in case of emergency.

Co-ed—Oh, I see. Something like a kimono?

—U. S. Pointer.

A dentist recently gave a wireless talk. I understand that he commenced by making the usual assurance that it wouldn't hurt a bit.

—Passing Show.

THEN CAME THE AVALANCHE



Sympathetic Onlooker—If it's your cap you're looking for, it's hanging on the radiator.

—The Tatler.

STINNES IS HARD HIT

BERLIN, Aug. 12.—(By Mail)—Edmund Stinnes, oldest son of the late Hugo Stinnes, has found it impossible to meet the payroll of the Aga Motor Works, in Berlin requiring 100,000 marks. The plant employs 2,000 persons and is reported to be on the verge of a shutdown. Stinnes is said to have asked the Prussian government for 3,000,000 marks credit. The tie-up of money is the result of a controversy between Stinnes and the Berlin banks. The Aga plant builds a small type of automobile which has a good market in Germany. Production averaged 500 cars a month.

Hacking Sees Great Market In British Isles for U. S. Cars

TOLEDO, Aug. 22.—That the coming market for commercial cars in the British Isles furnishes a greater opportunity for American manufacturers than the passenger car market was the opinion expressed here by Col. Alfred Hacking, secretary of the Motor Manufacturers' & Traders' society of London, at a luncheon tendered him at the Toledo Club last Thursday by John N. Willys, president of the Willys-Overland Co.

Sir William Letts, managing director of Willys-Overland-Crossley, Ltd., and other Overland officials were present at the luncheon.

Hackling declared that tariff restrictions and the specifications demanded by the British public differing as they do so much from American types were against the development of trade in those lines but left almost an open field for the commercial car.

He visited the Willys-Overland plant while here. Marvelous roads of the midwestern states and labor-saving machinery in automobile plants were two of the things Colonel Hacking was most impressed with on his trip.

NEW AUTOMOBILE LACQUER

NEW YORK, August 22.—The Zeller Lacquer Mfg. Co. has announced that it is now producing a lacquer for automobile finishing. This lacquer is sold under the trade name of "Auto Zellac."

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	5-p	Touring	1,395
.....	5-p	Brougham	1,595
.....	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
		"8-88"	
.....	4-p	Sport Roadster	1,975
.....	5-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	7-p	Sedan	2,550
.....	.....	Wanderer	2,400
BUICK		**"Standard"**	
.....	2-p	Roadster	$1,125
.....	5-p	Touring	1,150
.....	2-p	Coupe	1,195
.....	4-p	Coupe	1,275
.....	5-p	4d. Sedan	1,495
.....	5-p	2d. Sedan	1,195
		"Master" (120 in. W. B.)	
.....	2-p	Roadster	1,250
.....	5-p	Touring	1,295
.....	5-p	Sedan	1,495
.....	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
.....	3-p	Sp. Roadster	1,495
.....	5-p	Sp. Touring	1,525
.....	4-p	Country Club	1,765
.....	4-p	Coupe	1,795
.....	5-p	Brougham Sedan	1,925
.....	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line (132 in. W. B.)	
.....	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
.....	7-p	Sedan	3,295
.....	5-p	Brougham	2,995
.....	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built (132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
.....	7-p	Touring	3,250
.....	.....	Phaeton	3,250
4400	5-p	Coupe	4,000
4490	5-p	Sedan	4,150
4590	7-p	Suburban	4,285
4655	7-p	Imperial	4,485
CASE		**J. I. C.**	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3223	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3428	5-p	Sedan 4 d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	675
2110	5-p	Coach	695
2220	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2390	5-p	Touring	$895
2440	2-p	Club Coupe	995
2590	5-p	Coach	1,045
2680	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$6,650
4500	4-p	Sp. Touring	6,150
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,895
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Brougham	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2828	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DORRIS		**"6-80"**	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
.....	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		**A-22**	
.....	2-p	Sp. Roadster	900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	795
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	5-p	Cabriolet	4,400
GARDNER			
		"6"	
2975	5-p	Touring	1,395
2925	.....	Sport Roadster	1,595
3100	4-p	Cabriolet	1,845
3250	5-p	Sedan	1,595
3320	5-p	Sport Sedan	1,895
3300	.....	DeLuxe Sedan	1,895
		"8"	
3175	5-p	Touring	1,995
3100	.....	Sport Roadster	1,995
3300	4-p	Cabriolet	2,245
3550	5-p	Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ		**D-1**	
3360	5-p	Sedan	$1,695
HUDSON		**"Super Six"**	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,195
3425	4-p	Brougham 4 d.	1,495
3675	7-p	Sedan	1,695
HUPMOBILE "R"			
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		**"23-25"**	
.....	4-p	DeLuxe Road.	$1,500
.....	5-p	DeLuxe Touring	1,320
.....	5-p	Coach 2d.	1,245
.....	5-p	DeL. Coach 2d.	1,400
.....	5-p	DeLuxe Sedan	1,680
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,275
3340	5-p	Touring	2,275
3450	3-p	Friendly "9"	2,575
3625	5-p	Brougham	2,575
3520	4-p	Victoria	2,475
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
3800	7-p	Suburban Sedan	3,375
KISSEL		**"55"**	
3130	2-p	Speedster	$1,895
.....	2-p	Sp'dster De Luxe	2,185
.....	4-p	Speedster	1,995
.....	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
.....	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
.....	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
.....	7-p	Touring	1,785
.....	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
.....	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,685
.....	5-p	Brougham 2 d	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
.....	5-p	Victoria De Luxe	2,685
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster De L.	2,585
.....	2-p	Speedster De L.	2,585
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Tourster De L.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Luxe	2,885
.....	5-p	Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,195
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,985
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	5-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	$4,000
.....	.....	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,800

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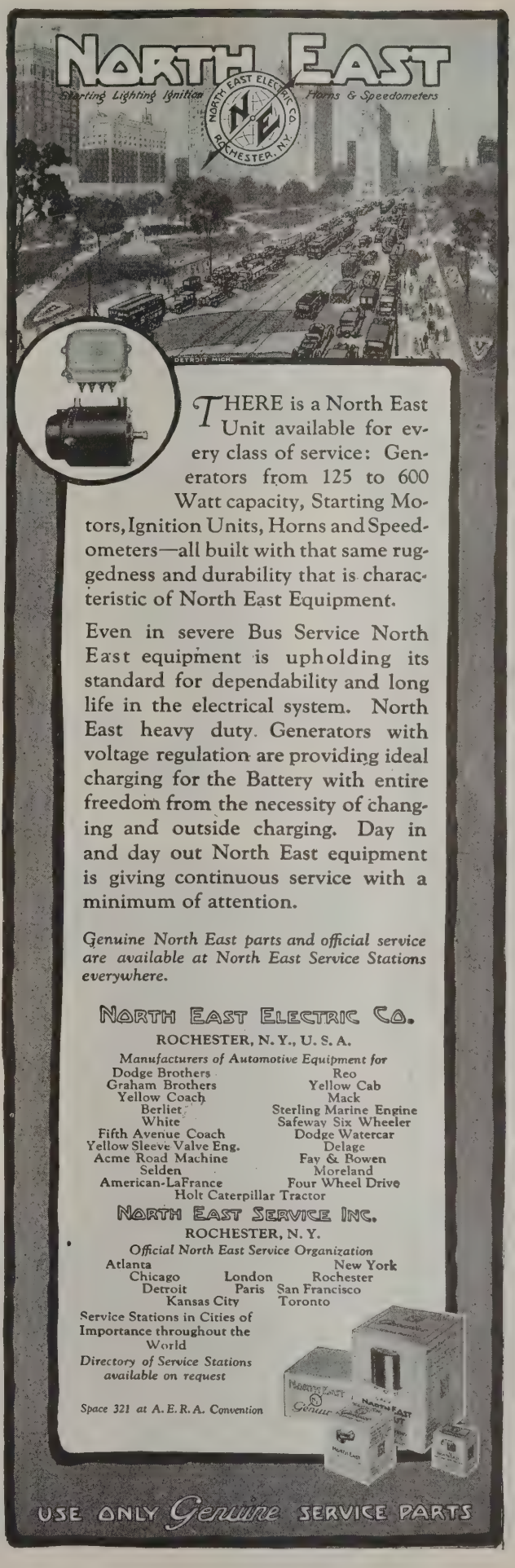
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MOTOR AGE

Vol. XLVIII | Chicago, September 3, 1925 | No. 10

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

PRODUCTION starts downward swing with sales continuing well ahead of same time last year. Used car market shows little change. Page 32.

Moon announces reductions in prices of Series A Models. Page 32.

Accessory business shows big increase in southeast. Page 32.

Reo announces price reductions on passenger cars and speed wagons. Prices range from $50 to $150 lower. Page 43.

Chrysler denies there has been any essential change in its insurance plan. Company awaits outcome of various state suits before taking case before highest courts. Page 43.

R. H. Mulch of Toronto, vice-president and general manager of Durant Motors of Canada, is made vice-president and general manager of Flint Motor Company. Page 43.

Merger of Yellow Cab and General Motors to form Yellow Truck & Coach Manufacturing Co., effective Sept. 2. Page 34.

Details for convention and show of National Standard Parts Association in Chicago Nov. 5 are completed. Page 34.

"Miniature" car sensation is predicted by Detroit manufacturers. Page 33.

Sales in northern California show gain over a year ago while dealers increase forces to care for still greater volume expected late in the fall. Page 36.

Unusually heavy tire production is called for in Akron by schedules of various tire manufacturing companies. Page 36.

Dealers of the southeast see great promise for fall business as the result of the recent price reductions and new models. Page 35.

New car sales are beyond expectations in St. Louis. Used automobile stocks are low. Page 38.

Business holding up well in territory served by Salt Lake City. New models aid demand but cause some confusion in used car market. Page 38.

Wisconsin rural districts boost sales of new automobiles in August and still better business is expected in fall as result of excellent crops. Page. 39.

Replacement parts and used car business is best in Florida in August. Page 39.

Seaman Body plant working overtime to keep up with increasing Nash orders. Plant to be enlarged within short time. Page 39.

August sales in Chicago are about on par with June. Every firm sees record business for 1925. New models and price reductions stimulate business. Page 37.

Los Angeles plans radio congress before annual radio exposition September 5 in Ambassador Auditorium. Page 37.

Columbus dealers report August business shows great improvement. Page 33.

In Next Week's Issue—Lower Prices Mean More Two-Car Families



Night view of Franklin Motor Car Co. of St. Louis. A "slicked up" place like this always attracts attention

A Spic and Span Establishment from Top to Bottom Will Serve Notice on the Public That Automotive Merchandise and Service Will Be Sold This Winter

By SAM SHELTON

A "SLICKED UP" store is one thing the automotive merchant can depend on to help make his business better this winter and fall. Nothing attracts trade in any line of merchandising quite so much as cleanliness, orderliness, freshness and a general appearance of careful selection and arrangement of merchandise.

This has been an unusually busy summer in the automotive trade. More cars have been sold than ever before. The volume of maintenance work has been great, and of course the demand for supplies of all kinds has kept pace with the increased use of motor vehicles. As a result thousands of automotive establishments throughout the country have been rushed with work and sales from morning to night.

Under such conditions it was not always possible to keep the store or shop in the orderly appearance that the proprietor might have desired. Customers come first. Merchandise must be sold when it is wanted and repair work can be 100 per cent satisfactory only if delivered when promised. With the growth of business that developed this summer many establishments found their space and equipment were not adequate for the business they were called on to do. And yet it was imperative that they make the best of the situation and go on serving the car owning public with as little delay and interruption as possible.

It is natural that in this press of business, sales rooms may have been allowed to become untidy, stocks disarranged and depleted, windows not as transparent as they should be, walls dimmed, shops somewhat disorderly and inefficient, and the general surroundings unattractive. In a business such as this where the demands of the customers reach so pronounced a peak in the summer months it is almost impossible to so organize the establishment with help and equipment as to keep things in spic and span shape at all times.

It is no discredit to the automotive establishment that right now it shows the signs of a busy summer. The high pressure activity of a few months must necessarily leave its signs. Business has been good. Day by day it has required the undivided attention of all available help.

The Winter Slump in Business

But the time is near when there will be a natural tendency for the volume of automotive business to decline. It should not fall off seriously. The establishments of good standing can go right on playing the cash register through the winter, but business won't come as easily as in the summer. Progressive automotive merchants have done much to take the winter slump out of their business, but still there is a seasonal decline that is inevitably associated with a restricted use of motor vehicles in cold weather.

The problem of the automotive merchant is how to go on doing business as nearly as possible on the same level as in the summer. The ideal condition would be a year around business with no great seasonal fluctuations downward.

One way to promote business this fall and winter is to "slick up" now. We doubt if there is an automotive store in the country that would not be better for the application

of a good "slick up" program between now and the first cold days. Although the place may be run with the greatest of care, the daily routine needs checking up. The same methodical program day after day becomes monotonous and permits one to overlook many little things that the visitor catches at a glance.

The "slicked up" store will be a real sales incentive. It will attract attention at a time when public interest is likely to be waning. It will hold the interest of men and women because it is different. It will invite customers in and it will encourage both sales and service business.

More Outside Competition

As cold weather approaches the automotive business will have more active competition from other businesses. The appeal to the public to spend its money on other merchandise will be stronger and more likely to succeed than in the summer.

Other forms of recreation will compete with the automobile and unless the motor car dealer constantly keeps his product before the people there is danger that they will spend some of the money for idle amusements that could easily have been held for motoring.

The holidays will soon be here and with them all manner of alluring merchandise will be offered to well financed buyers. It is expedient that the automotive trade should not permit itself to be effaced from public consideration at this time, but should continue to receive the patronage it deserves on account of the utility, convenience and satisfaction that can be derived from the many forms of automotive merchandise.

A "slicked up" store will help to keep public attention fixed on automotive products and service. A store that is overhauled, inside and out, made scrupulously clean, and redecorated, draws the notice of every person who passes near it. Such a process of "slicking up" is a sign of progressiveness. It indicates a successful institution in which the public has confidence. It says as plainly as words that the proprietor expects his business to go right on and has no intention of drawing into his shell until spring comes again.

To "slick up" now is equivalent to serving notice to the public that the automobile business is a business for the winter as well as the summer. And the public receiving this notice will react by going ahead and buying automotive products. To neglect the store now and let cobwebs and dust obscure the windows, trash and rubbish accumulate, walls and ceiling remain dingy and dark, and shop stand in disorder, is the same as saying to the public that we are through doing business for this year; that the only merchandise on hand is left over stuff; that we are making no effort to get business. And nothing more than that sort of attitude is needed to steer the consuming public clear away from the automotive store and into any one of dozens of other establishments that are beating drums and blowing horns to attract attention to their spotless floors and shiny shelves.

The woman is an important buyer in the automotive markets of today. Her influence is increasing constantly. She is assuming more and more responsibility for the care of the family car. She buys supplies and equipment and frequently she attends to having repairs and adjustments made. The average woman dislikes any signs of disorder or lack of cleanliness. She is much impressed by the appearance of a store and she can't be convinced that it is necessary for an automotive store or shop to be grimy and dirty. You may be sure that the women drivers in your community are watching and appraising your establishment largely on its appearance.

The "slick up" job should be thoroughly done. A clean shave and a fresh collar won't help much if your shoes are run down at the heels and in need of shining. Let the "slick up" process extend from roof to basement and from front sidewalk to back alley. It might be well to systematize the job and go at it somewhat in this order:

First, give the sales room a thorough overhauling.

Second, do the same to the shop.

Third, put the stock of merchandise in spic and span condition compatible with the freshened appearance of the sales room.

Fourth, look after the exterior and front of the building, the approaches, grounds and general setting to make sure they give the right sort of impression from the outside. Many more people see the outside of your building than will ever see the inside.

Here is a definite program of constructive work that it will pay to start on right now. If carried out thoroughly it will prove a remarkable stimulant to the personnel of the establishment and will increase efficiency from top to bottom. Its effect on keeping up the volume of sales will many times pay for its comparatively moderate cost.

Other articles to follow in subsequent issues of MOTOR AGE will give definite suggestions and details for carrying out this "slick up" program.

THIS STORE INVITES CUSTOMERS



A clean, attractive looking automotive store such as this one at Alhambra, Cal., will help sell automotive merchandise this winter.

Some Simple Tests *for* ENGINETIMING

The Red Head Explains Electrical Pitfalls Encountered in Mechanical Overhaul and How to Avoid Them

By A. H. PACKER

BILL FIXIT STORY No. 10

PREVIOUS installments in this series by A. H. Packer were published March 19, April 2, April 16, May 7, May 21, June 18, July 9, July 30 and August 13, 1925.

SYNOPSIS: Bill Fixit's electrical trouble shooting men start on a trip in a Speedway car. They stop at various places along the way and at the Welsh mines are requested by Sandy, the foreman, to help out in fixing up a gasoline pumping engine. While there the money they had is stolen from the car, so they are forced to seek employment in Coal City with Jake Penders, the local electrician.

While at Jake's place a customer buys a tire, paying for it with a bill that Red afterwards recognizes as one stolen from them. Red goes after a job of wiring trouble that Jake had previously fallen down on, fixes it and then tells how it was done. At other times he explains electro-magnets, ignition principles, condenser construction and testing and a systematic method of shooting ignition trouble on the car.

THR-R-R-R-BAM, Thr-r-r-bam, Thr-r-r-bam! The normal purr of a smooth running engine was broken by a crashing muffler noise at each second revolution. The Red Head looked up from the magneto on which he was working and went forward to see what Jake and Valvy were doing. It was the finish of a top overhaul job on a six cylinder engine, where all possible work had been done on the engine without taking it from the frame.

Valves had been ground, main bearings taken up and new pistons and rings fitted. Jake had superintended the work using Valvy as helper and electrician. Now it looked as if a real trouble shooter might be needed, so Red came forward to see what help he could give without at the same time giving offense.

"How 'bout the wiring?", Red wanted to know. But both Valvy and Jake declared it was exactly the same as when the car came in, so it must be all right. Red saw it was no time for argument, decided to let them sweat a little longer and went back to his magneto job.

From the front of the shop came voices in consultation.

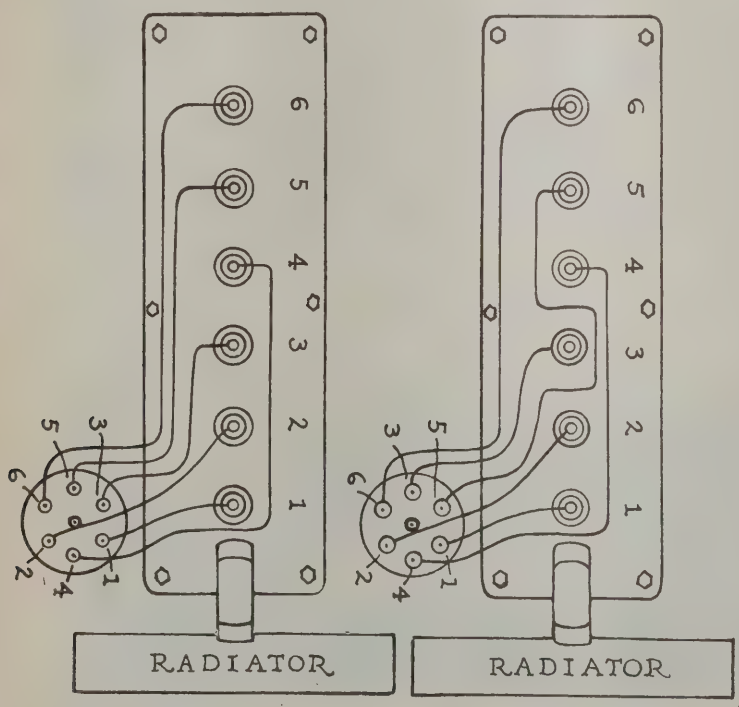


Fig. 1
Jake and Valvy swore that the spark plug wires were connected this way when the car came in

Fig. 2
The way the spark plug wires should have been connected

New plugs were tried, then some high test gas, but the same uneven running persisted. Finally Jake gave up. "All right perfesser, come show a couple o' dumbells what's wrong, will you?", Jake called back to Red, who gladly dropped his work to lend a hand.

"Let's look at the valves," said Red.

"Oh, I know they're alright," said Jake. "I checked those myself."

"I don't mean tappet clearance," said Red. "I want to see the order in which they operate so I can tell the cylinder firing order.

"That's a new one on me," said Jake. "I thought you had to get it from some place it was stamped on the cylinder block."

"That's all right if it's there, but on this old crate they didn't have enough foresight to do that to help out a poor grease hound."

"Well, how can you tell from the valves?" Jake wanted to know.

"They work in the same order in which the cylinders fire. You could hardly fire a gun before it was loaded and the same thing applies to the cylinders. You depend on the valves to take care of loading the cylinders with fuel, so the order in which they fill up and compress the gas is also the firing order.

"That sounds easy," said Valvy, "but wait till you try to watch those valves, even with the engine turning slowly, and see what chance you have to keep track of them."

Inlet and Exhaust Valves

"You try to watch them all at once," said Red. "The thing to do is to first look at the inlet and exhaust manifolds and figure which valves are inlet and which exhaust. Then watch only one set. That gives only four to keep track of on a four cylinder engine, or six on this six cylinder job.

"The order is probably 1, 5, 3, 6, 2, 4, or 1, 4, 2, 6, 3, 5, but it will do no harm for you fellows to see how the order is found without making any guesses. You are both too good at the guessing end of the business already. I'll turn the engine and you fellows watch the inlet valves, paying no attention to the others."

Red turned the crank slowly until both Valvy and Jake saw the No. 1 inlet valve move up. They both agreed on No. 4 as being next but for the third valve, Jake said it was No. 2 and Valvy said No. 3, so Red turned the crank to get No. 1 again and they started over, taking it still slower so as to make no mistake.

Finally when the job had been checked two or three

times, all agreed that 1, 4, 2, 6, 3, 5, was the correct firing order, so the next thing to do was to check the spark plug wires. Red looked carefully at the layout the way Jake and Valvy had it (Fig. 1) and remarked, "Looks to me as if two wires are swapped. Tracing around from No. 1 we are all right until we get to the last two high tension terminals on the distributor cap. Instead of 1, 4, 2, 6, 3, 5, (Fig. 2) you have it 1, 4, 2, 6, 5, 3.

"That means you are firing the No. 3 cylinder 120 degrees too late while the No. 5 cylinder gets its spark 120 degrees too early. Where the spark is late it may not fire the gas at all and may send the raw fuel out into the exhaust pipe and muffler to be fired there when flame comes in from one of the other cylinders. If it does fire at times it will do so just an instant before the exhaust valve opens and there will be no appreciable power developed in that cylinder.

When Compression Is Low

"In the cylinder where the spark occurs 120 degrees early, the piston is just starting up on compression. If the gas fires at all it will give a weak kick in the wrong direction, not enough to stop the engine, but enough to give jerky operation, or it may not fire at all for gas not compressed is not very combustible."

"You seem to be right about it," said Jake. "But what gets me is that I could swear those wires were that way when the car was brought in."

"Perhaps that was most of the trouble," said Red. "You may have overhauled the engine to overcome trouble that was really due to the wires being on wrong. If you are wise you will keep it dark. The job you did is a good one and will make the car O. K. for a good many thousand miles, but the owner would raise a fuss if he knew what had caused him to have the work done at this time."

"That method of watching the valves would be a mean one in the case of a Vee eight engine," suggested Valvy.

"Yes," said Red, "It would be a little harder with an engine of that kind, but there are other ways of finding the firing order. For example, you can open the compression cocks and stuff little paper wads in them. Then turn the engine over by hand and see the order in which they are blown out by the compression. That also gives the firing order.

"Then you can check by removing spark plugs and holding your thumb over the spark plug openings, one at a time to verify the order obtained with the paper wads. The compression stroke will make it possible to hold the air with the thumb, then release it on first one cylinder and then another."

"And are there any other ways that the ignition system is likely to get your goat when you overhaul the engine?" the Valve Grinding Fiend wanted to know.

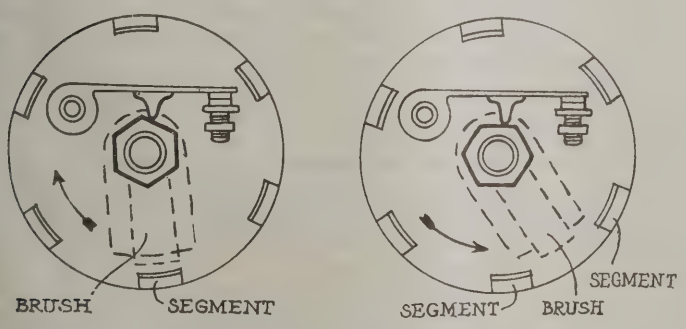


Fig. 4

Left: Distributor brush is in line with a segment when the interrupter points open. Right: With wrong rotation or wrong arm the brush is in between segments and trouble is sure to result

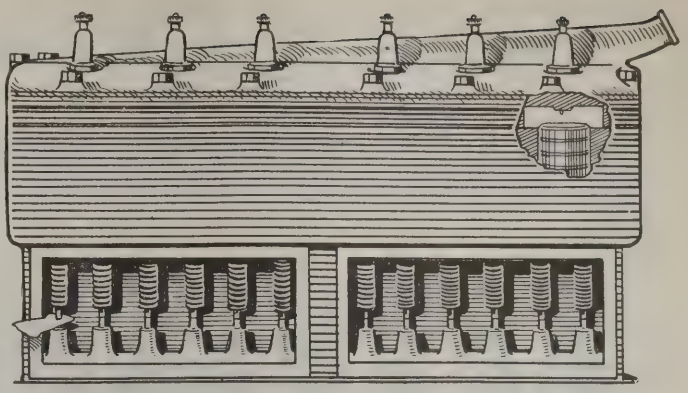


Fig. 3

Using the closing of the No. 6 exhaust valve to give the approximate firing point for the No. 1 cylinder

Other Goat Getters

"Yes, one or two others," said Red. The timing is likely to bother the man who does not watch it, or who does not know how to check the timing just before the job is ready to run. Here again the valves can in most cases be used advantageously, because the ignition contacts should just open to produce a spark when the piston is at the top of the compression stroke, and on most engines the exhaust valve closes and the inlet opens at about top dead center."

"How does that help?" said Jake. "It would sure be wrong to have the spark just when the intake valve opens. You would fire right back into the intake manifold and carbureter."

"You didn't let me go far enough," said Red. "The position of the flywheel and crank is the same, but the ignition point and the point where the exhaust valve closes and the inlet opens are one revolution from each other. On a one cylinder engine you could find this point and then turn the crank one revolution, but on the four or six cylinder job it is still easier, for the exhaust valve on the last cylinder is just closing when the firing point is reached on the front cylinder (Fig. 3).

"To get it more accurately you can of course check with the piston position or by marks on the flywheel. Usually removing a plug makes it possible to see or feel the piston while taking up the floor boards and removing an inspection cover on the flywheel housing makes the mark available for this purpose."

"Looks like you've got to check the electrical system, even when you do mechanical work," sighed Valvy. "It's sure gettin' to be a hard life."

"That all depends," said Red. "If you know your stuff, it just gives you the edge on the other fellow and if not you work on the same basis, putterin' around with this and that and wasting a lot of time instead of checking systematically and knowing exactly what you are doing."

"And are there any other things to check after working on the engine?" Jake wanted to know. "I've done a lot of mechanical work but never had a systematic way of checking things up when the job would not start or run right."

"The best of us get stuck at times," Red admitted, "and yet there are just a few essentials that absolutely guarantee the engine running.

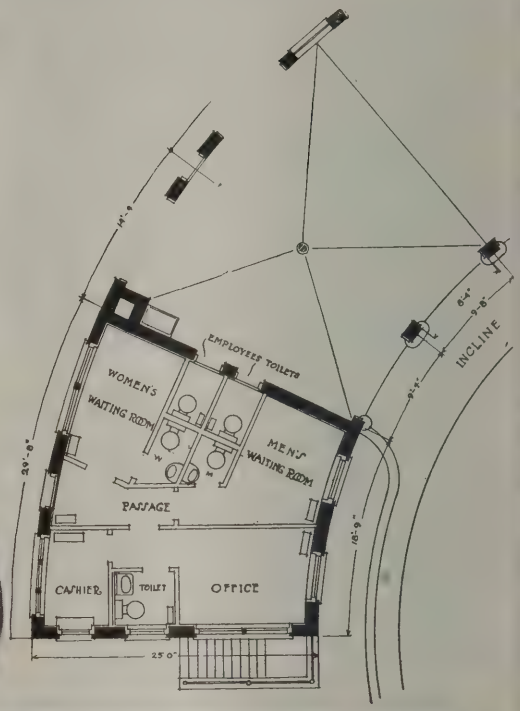
"Suppose for example that we have an explosive gasoline mixture in the cylinder, that we have it compressed, that a spark capable of igniting it is available, that the

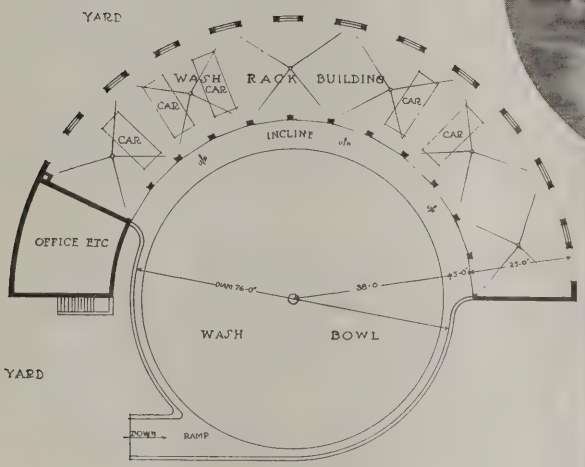
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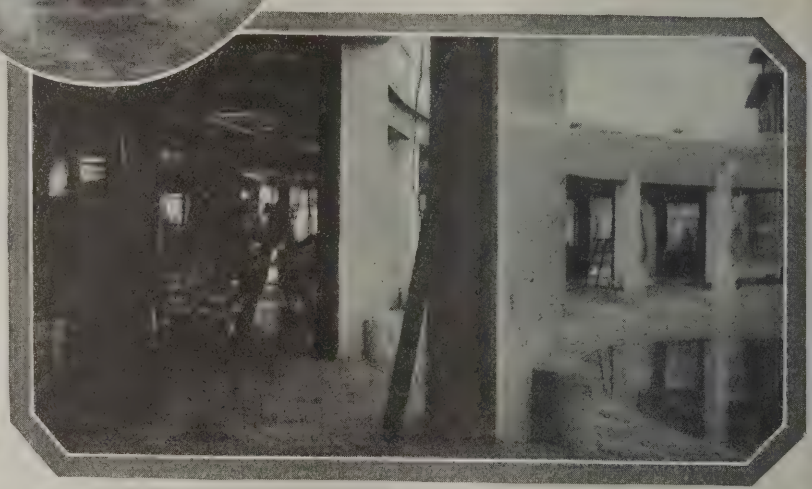
Washing Cars in a "Wash Bowl"











At the top is shown the wash bowl; the two diagrams indicate the layout of the plant and in the center a car making the round while below are shown the drying and polishing stalls

A CAR washing plant with a "pull" or in other words, one that furnishes its own publicity, is located in Chicago on Michigan Avenue at 42nd Street.

Here in plain view of the thousands of motorists passing hourly the promoters have erected a completely equipped and modern building . The layout resembles a railway round house in form but instead of the turntable that occupies the center of the roundhouse circle, there is a huge bowl 78 ft. in diameter filled with water to a depth of 12 to 15 inches.

When a car is to be washed it is driven down a short ramp into the water and around the bowl from 5 to 12 times according to whether it is fairly clean or very dirty; the driving being done half in one direction and half in another so that the wheels will throw the water both ways on the under surfaces and running gear.

The operation rinses all the loose dirt and mud off of the running gear but it does more than that, for the car makes so much fuss splashing around and throwing water in every direction that it advertises the business very effectively. On a busy day there sometimes will be more than a hundred people stopping to watch the fun and there is always a group of 15 to 50 onlookers.

After the soaking and rinsing are complete the car is driven into one of the stalls of the roundhouse where it is attacked by attendants with hose, soap and sponges and who finish the job by hand in the usual way.

This plant is unusual in that it cost $40,000 and is for that reason very complete. There are waiting rooms for both men and women and an office below.

Water is piped around through the semi-circle of stalls through a 3 in. main directly overhead and in the center. The heating coil is also overhead and continuous but placed towards the outer side of the circle.

The 12 wash stands enclosed in the roundhouse are provided with 6 stationary wash tubs with wringers attached, so that the men of each two stands are provided with means of keeping their chamois and sponges clean. Hot water from a 750 gal. Weil McLain tank heater is always available in any quantity.

Vacuum cleaning equipment consists of an Arco-Wand truck outfit of high power and efficiency.

Are You Going to Stay in Business?

If That Is Your Idea You Had Better Give Real Attention to the Collection of Outstanding Accounts. That Is Where a Large Part of the Automotive Merchant's Profits Are Often Found

FIVE of our supposedly good accounts have gone into bankruptcy since our last issue. We have listed them, called on them personally and asked them plainly, what was the matter? Every man said, "We couldn't or didn't collect outstanding accounts." Say, that's ringing pretty close home to every Garage Man and Repair Shop Proprietor.

Are you going out of business or are you going to get out and collect your bills receivable? What are you waiting for? Do you think October will be easier to get a settlement than August? Do you think they will pay better if you wait until the repair gets antique? Perhaps you are waiting until he sells or trades in the repaired car.

Say, just figure out your chances of collecting after he has passed the car along. Then again, don't you want this customer's business? He isn't going to patronize you if he owes you money. Don't ask him for it and drive him away from your shop and let it go at that. Stick right to it until you get it, for asking him has done more harm than if you had torn his page from your book of reasons for bankruptcy.

You are too busy? Think it over. You have $2,000 worth of accounts you wish were cash and you are too busy to call once every third day or at least once a week on every one of them. One forenoon a week for four weeks put religiously or profanely at coaxing money out of that list will get $1,200.00 of the $2,000.00. That's $300 per forenoon for your time.

What job have you got for tomorrow forenoon that will net you $300? When he gives you a stand-off of a future date be there at the date and hour set. If he was kidding you as to future promise show him you were serious and it will cure him of setting meaningless future dates.

You say, "I will send a boy or the office girl." Remember you tried that before in a few cases. How did you come out? It's better than not sending at all but try sending the boss once. It looks as if you meant business then. Leave the boy and the office girl in the shop and you go out this time and keep everlastingly after it until you get returns. No matter how hard you work tomorrow forenoon collecting you will work four times as hard to get it if you wait four weeks from tomorrow morning and then go. Also, how about his business for the next four weeks during which period he does not patronize you because he owes you money. You have been promising yourself you would get after these collections as soon as the farmers' crops commenced to cash. All right. Can you think of any week better than this one for the farmer to cash in on his summer crops?

Think it over. You are going out of business if you don't collect your outstanding accounts.

A Good Tip from Whip's Tips

Good sound advice for the automotive merchant who wants to remain in business is contained in the accompanying article taken from Aug. 15 issue of Whip's Tips, an interesting and instructive house organ published by Whipple's, automotive wholesalers, at Binghampton, N. Y.

Ford Changes Include Lower Chassis and Longer Bodies

Runabout and Touring Car Finished in Black, but Closed Models Have Bright Colors; Brake Dimensions Increased and Larger Fenders Fitted; Fuel Tank Now in Cowl; No Changes in Price

BODY changes and chassis refinements more pronounced than any made since the adoption of the Model T chassis in 1908 were announced this week by the Ford Motor Co. With the announcement came the statement that there would be no change in present prices.

Outstanding features of the improvements in both open and enclosed types are lower and longer, all-steel bodies on a chassis which has been reduced 1½ in. in height; complete new design in most body types; a change from black to green and maroon in the closed cars; larger, lower fenders; newly designed seats and larger and more powerful brakes.

The composite wood framework and steel panel construction is retained in the Fordor body.

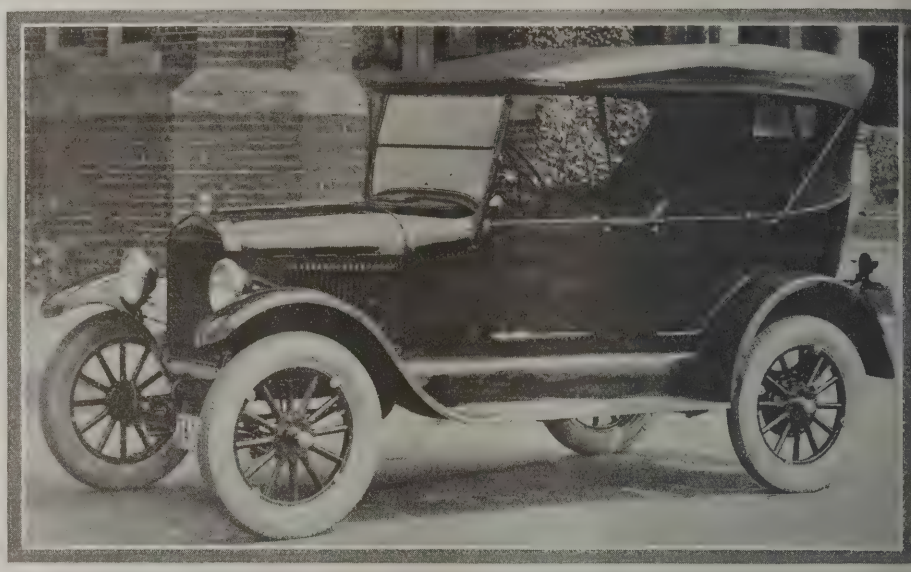
The increased length of the improved models is still further accentuated by the new body lines in combination with a higher radiator and a redesigned cowl. The radiator is ⅝ in. higher. Wide crown fenders are hung close to the wheels.

While the runabout and touring car remain in black, the closed bodies are finished in colors and have nickeled radiators. The coupe and Tudor bodies are in deep channel green while the Fordor is finished in Windsor maroon. Greater comfort is provided for driver and passengers in both open and closed cars by larger compartments, more deeply cushioned seats and greater leg room. In all models except the Fordor, the gasoline tank is under the cowl and is filled through a filler hidden from sight by a cover similar in appearance to a cowl ventilator. One-piece windshields and narrower pillars in the Tudor and coupe give greater visibility and ventilation.

Driving comfort has been increased by lower seats, improved back rests and lower steering wheel. Brake and clutch pedals are wider and more conveniently spaced. The open models now have a door at the left of the driver, and side curtains, held secure by rods, open with the doors. Cord tires are standard equipment on all models.

At the main offices of the company it was stated that production of the new line is under way in all assembly plants throughout the country and improved cars are being sent to dealers for showing.

The reduction of 1½ in. in the chassis height has been effected without materially decreasing the road clearance by lowering the crown of the springs one inch and by raising the front wheel spindles ½ in. on the spindle bodies.



The new Ford touring car, with 4 doors and body which is 4 1/2 in. lower from top to road and 3 1/2 in. longer. Note modern streamline effect and dummy cowl ventilator which serves as opening into fuel tank

The coil box has been removed from the dash and now is mounted on the left-hand side of the engine. The fan has been raised and the adjustment for belt tension improved. The fan bracket is now an integral part of the cylinder head outlet and is provided with an eccentric adjustment.

One of the most important improvements is in the brakes. The transmission brake band has been increased from 1⅛ to 1¾ in. in width. All transmission bands now have removable ears to facilitate replacement and hardened steel shoes have been placed over the clutch casing keys to prevent wear.

Brake drums at the rear axle have been increased to 11 in. in diameter from 8 in., and the width has been increased from 1$\frac{5}{32}$ to 1½ in. The brake shoes now are covered with an asbestos composition material eliminating the old method in which braking was effected by direct contact of cast iron shoes.

Pedals Have Flanges

The brake and clutch pedals in addition to having wider surfaces and being spaced farther apart, have been provided with flanges at the side to prevent slippage of the driver's foot.

In all models except the Fordor, the steering wheel has been dropped three inches for greater ease of driving as the seats have been moved back and lowered. The steering wheel on all models is 1[illegible] in. in diameter and the steering gear reduction is 5 to 1.

The new gas tank location under the cowl, which is used in all models except the Fordor, feeds gasoline to the carbureter at an abrupt angle and insures fuel supply even on the steepest grades. A large trough and overflow pipe has been provided at the filler to carry any spillage directly to the ground. This change places the sediment bulb on the tank under the hood in a readily accessible position. Adequate separation of the fuel tank from the engine is provided by the dash.

The new crown fenders, in addition to being wider and larger, extend further down front and rear to afford better protection against splashing. The running boards on all models are wider and nearer to the ground.

Standard accessory equipment on all closed cars includes windshield wiper, rear view mirror, windshield visor and dash light. The dome light is continued in the Fordor and windshield wipers are supplied on the open models.

On the Tudor and coupe, the windshield is a one-piece design opening forward. A passageway at the base of the shield directs ventilation downward into the front compartment when the windshield is slightly opened. The open mod-

els have a double ventilating type of windshield, both halves opening, and the Fordor shield has been redesigned to conform with the new cowl. The lower half of the windshield on this model is stationary and there is no cowl ventilator as before.

The radiator is ⅝ in. higher and the hood is larger with more louvres. The closed model windows are plate glass and lower flush with the moldings, conveniently located lifters being provided for the purpose. Doors on all models open forward with the exception of the rear doors on the Fordor.

A new design of arm type tire carrier is provided which accommodates either the new Ford wire wheels or the demountable rim. The headlights have polished nickel rims, are set higher and farther apart, and are attached to pressed fender supports. On all body types, the tail light and license plate bracket are now located on the left rear fender.

Tudor upholstery is gray fabric with a fine green stripe to harmonize with the deep channel green exterior finish. Head linings are gray as is the silk back curtain and the carpet is greenish gray. The height of this body from top to road has been reduced four inches and its length has been increased 3½ in. The seats are 2½ in. lower from top of seat to floor and this with the 1½ in. drop in the frame brings them 4 in. nearer the ground. To provide more leg room, the distance from the back of the front seats to the front of the rear seat has been increased two inches.

In the coupe, which has the same upholstery as the Tudor, the rear deck has been made the full width of the body and extends well back over the rear spring with fenders bolted to the body, with resultant increase in the storage space available at this point. The shelf at the back of the seat is five inches deeper and the doors also are broader. The overall height of this body has been reduced 4½ in. and it is 3½ in. longer. The reduction in seat height is the same as in the Tudor.

In the Fordor model, the upholstery fabric is gray with a fine red stripe to match with the new maroon exterior finish. Headlinings and silk window curtains are gray and the carpet also is gray with a suggestion of red. The height of this model is 1½ in. less, due to the chassis changes, but otherwise there are no other dimensional alterations.

The rear deck of the roadster has been redesigned along the same lines as the coupe. This model now has two doors, both of which are wider. The seat has been redesigned to give more comfort and a reduction of 2½ in. in its height from the floor has been made. This model is 4½ in. lower from top to road, 7¾ in. longer and its seat is 3 in. wider.

The touring model also has a door at the driver's left and all four doors are wider. Seat contours have been improved and their tops are 2½ in. nearer the floor. Three inches has been added to the width of the front seat and five to the rear. A reduction of 4½ in. has been made in the overall height of this model and 3½ in. has been added to its length. The distance between the back panel of the front seat and the front of the rear seat has been increased 3½ in.

Body Refinements Made in Velie Royal Sedan



Velie Royal Sedan, the Body of Which Now Has a Full Stream-Line Effect. The Price is $1,825 f. o. b. Moline, Ill.

Velie Motors Corp., Moline, Ill., has made certain changes in the appearance of the Royal Sedan. This body now has a full stream-line effect, heightened by a double molding about the body which meets a single molding extending from the full nickeled radiator shell across the hood and cowl. A curved steel visor is built integral with the roof.

The car is finished in Duco, two color options being afforded: duotone gray and duotone blue, each with a hairline molding stripe of imitation gold. Upholstery is of Chase velmo with head-lining and trimming of matched broadcloth. The rear seat accommodates three. Arm rests, carpet-covered nickel mounted foot-rail, leather covered, chain robe hanger, dome light operated from toggle switch in right door pillar and combination compact and smoking case located on back of front seat are provided. Hardware is of Butler satin finish with ring type, pull-to handles on all doors. Door handles are rotary, self-locking type with outside locking handle on right front door. Four-turn window regulators are provided on doors with Clement single-lift regulators on rear quarter windows.

The instrument board is of black walnut in natural finish, matching garnish rails. Speedometer, oil gauge, gasoline gauge, ammeter and clock are enclosed under a glass in a single panel of satin silver finish.

All lights are controlled from a "finger" type lever located on steering post along with gasoline and spark levers. The steering wheel is 18 in. in diameter with aluminum spider.

Simple Tests for Engine Timing

(*Continued from page* 13)

spark occurs at the right time. Something is bound to happen. And if the other cylinders all have those essentials, we have an engine that runs. Taking the items one at a time we can have gas by priming each cylinder, even if the action of the carbureter is unknown.

"The compression can be checked with the crank. The spark is good if it will jump $\frac{3}{16}$ in. in air and has some red color or flame to it when seen in a dark place. The matter of timing we have just gone into. To get this spark to the gas requires good plugs, of course, and plugs are easily checked on any ignition system by spreading the points apart and testing them in the open air. If mica is put between the points they can be tested that way to see if they leak or whether the spark is forced to jump from the center electrode to the shell.

"There is one other thing on the ignition distributer that would keep you guessing a long time. On this car someone had changed the wires before the car was brought in, so you figured they must be O. K. Suppose that a distributer arm had been replaced and the wrong kind put on so that when the points opened the arm was between segments (right sketch Fig. 4) instead of being in line with a segment (Left sketch Fig. 4). It's a thing you might not notice, but it causes peculiar results.

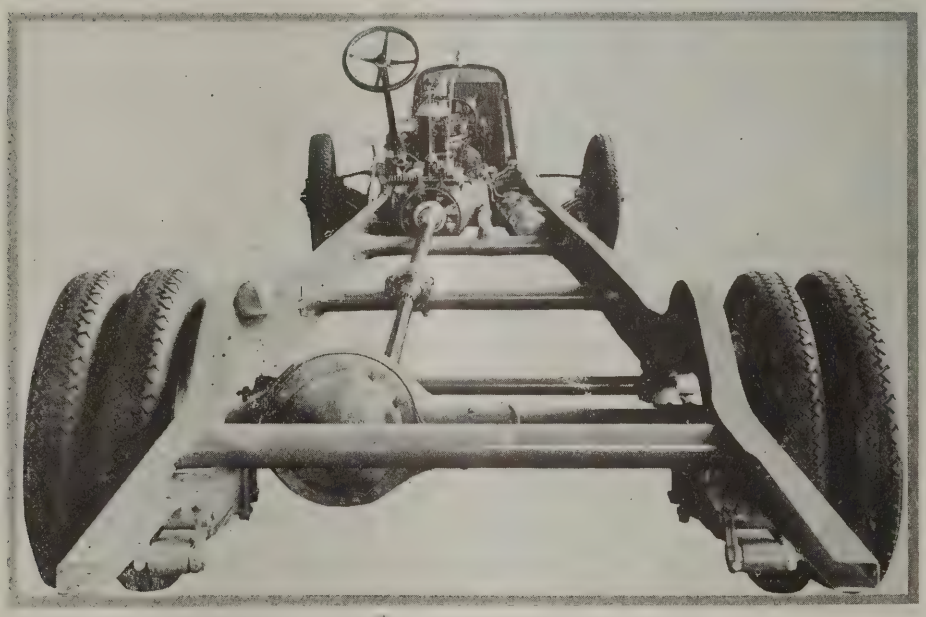
"A rough check indicates the ignition system is O. K. but every time you try to run the engine it pops back in the carbureter and behaves in a most eccentric fashion because the spark always jumps to the wrong plug wire, jumping in the cylinder where there is no compression.

"If you ever have indications like that just pick up the distributer cap, see where the segments are and when the points are ready to separate; see if the high tension distributer brush is in line with one of these segments which connects to a spark plug."

New Type Y Yellow Parlor Coach Seats 25-29 Passengers



Type Y Parlor Coach Built by the Yellow Coach Mfg. Co. It Is Designed Especially for Interurban Work



Rear View of the Chassis Used on the Type Y Yellow Parlor Coach. This Shows the Offset Engine and Drive Shaft

A new motor coach built specially for interurban operation is announced by the Yellow Coach Manufacturing Co., Chicago. This is designated as the Type Y 25-29 Passenger Parlor Coach.

As the name implies, the Type Y Parlor Coach is designed to provide comfortable, luxurious transportation. The body framework is second-growth ash. Posts are ash capped with mahogany. Seats are de luxe type wicker chairs with arm rests and divided backs, accommodating two passengers each. Cushions, backs and arm rests are genuine brown Spanish leather.

Generous space between seats and ample aisle room are provided. A signal buzzer is conveniently located at each seat. Interior illumination is provided by ten 21 c.p. opal glass dome lights.

An unusual feature of this coach is the off-centering of driving units to the left of the chassis. This provides seating space for the driver at the extreme left of the body, placing controls within easy reach and providing extra entrance space.

This coach is optionally equipped with four-wheel air brakes. The air compressor is built into the engine as an integral part of that unit. It is driven by a drop-forged connecting rod directly from the engine crankshaft, without belts, chains, gears or couplings. Lubrication is by splash directly off the engine timing chain. Air is drawn into the compressor through the same cleaner that is used for the carburetor intake.

The air control valve is a unit mounted on the rear engine support arm in such a way that the operating button projects throught the floorboard. Pressure is applied directly to the operating valve wit no intermediate pedals, levers or rod This unit serves the functions of th operating valve and of air tank pressur regulator.

The air brake mechanism on each the four wheels is identical. Shoes, cy inders, pistons and other parts are in terchangeable. The brake shoe is a one piece machined casting of the floatin self-centering type. No adjustment necessary during the entire life of th brake lining, since the stroke of th operating pistons is sufficient to assur effective braking until the lining is wor out.

Additional braking facilities are pro vided by an emergency hand-operate brake, which is built into the rear whe air brake mechanism as an integral pa thereof. This consists of two cam-ope ated internal expanding shoes placed b side the air brake band, and operatin against the rear wheel brake drum.

LOADS AND INFLATION PRESSURE FOR BALLOONS

The Tire & Rim Association of Ame ica has approved definite recommend tions for the load and inflation pressur of balloon tires. The recommendation given in the accompanying table, do n represent the unanimous opinion of th members of the association, but are co sidered to be as nearly ideal as possib at present. Weights are based on ave age passenger loads.

Inflation pressures lb. per sq. in.	Loads per tire size			
	4.40	4.75	4.95	5.
22	500	580	.....	7
24	550	635	.....	7
26	600	690	725	8
28	650	745	780	8
30	700	*800	835	9
32	*750	855	890	*1,0
34	800	910	945	1,0
36	850	.....	*1,000	1,1
38	.....	.....	1,055	.....
40	.....	.....	1,100	.....
42	.....	.....	.....	.....

Pressures	Loads per tire size				
	5.77	6.00	6.20	6.75	7.3
22	.....	850	900	.....	1,1
24	.....	925	980	1,100	1,2
26	880	1,000	1,060	1,200	1,3
28	950	1,075	1,140	1,300	1,4
30	1,020	1,150	1,220	1,400	1,5
32	1,090	1,225	*1,300	1,500	*1,7
34	1,160	*1,300	1,380	1,600	1,8
36	1,230	1,375	1,460	*1,700	1,9
38	*1,300	1,450	.....	1,800	.....
40	1,370	.....	.....	1,900	.....
42	1,440	.....	.....	1,900	.....

*Figures starred denote maximum desi able loads.

New Bulb Has Two Bright Filaments

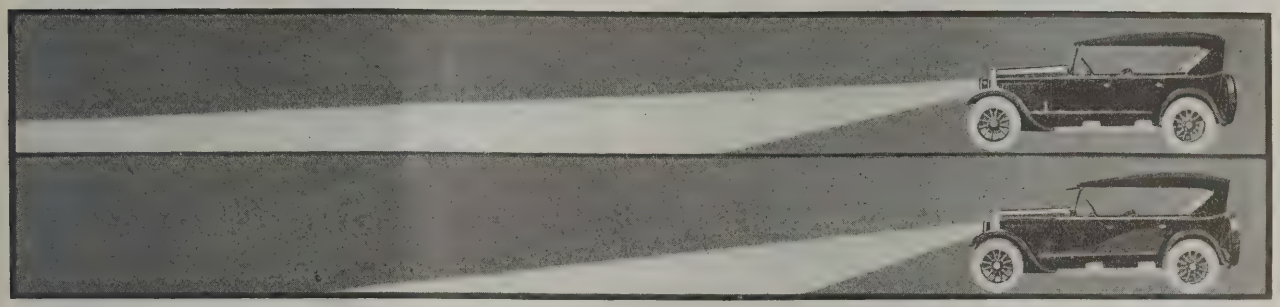


Fig. 2.—Above, normal driving light obtained from lower filament, below depressed beam obtained with upper filament

A NEW contribution to the development of automobile head lighting is seen in the two filament bulb designated as Mazda No. 1110 which has been developed by the National Lamp Works of the General Electric Company. The difficulties of night driving have been about as serious with the dimming system as with the use of bright lights and devices designed to overcome these difficulties have up to the present been only partially successful.

A number of cars have used devices which either mechanically or electrically tilted the reflector or a portion of the reflector so as to depress the bright beam of light when the car approached another car. This method has proven quite successful, but has necessitated some mechanical and electrical complication. The double filament bulb shown in Fig. 1 is designed to accomplish electrically what has previously been done with more complicated construction and the results obtained by this method are indicated in Fig. 2, where the upper view shows the beam of light as used for ordinary driving while the lower view shows the deflected beam used when passing another vehicle.

The principle on which the double filament light operates is illustrated in Fig. 3. At (a) the light source or filament is located at the focus and the rays are reflected in a narrow beam which produces a round spot of light when projected on a vertical surface. If the filament is below the focus as at (b) the pattern made by the beam on a vertical screen is extended upward into an oval while the reverse is true if the filament is above the focus, and as shown at (c) the oval extends downward. Theoretically two filaments located as shown at (a) and (b) or as at (c) and (b) would make available two beams of light, one reflected downward at a greater angle than the other. In practice, however, it is found that the combination of (b) and (c) gives best results. For practical purposes however, the light must not only be controlled in a vertical direction, but must also be spread to the sides of the road to give adequate illumination of ditch or curb and also to reveal pedestrians who might be walking at the side of the road. With vertically fluted lenses or reflectors the patterns (a), (b) and (c) shown in Fig. 3 are spread sideways as indicated in Fig. 4.

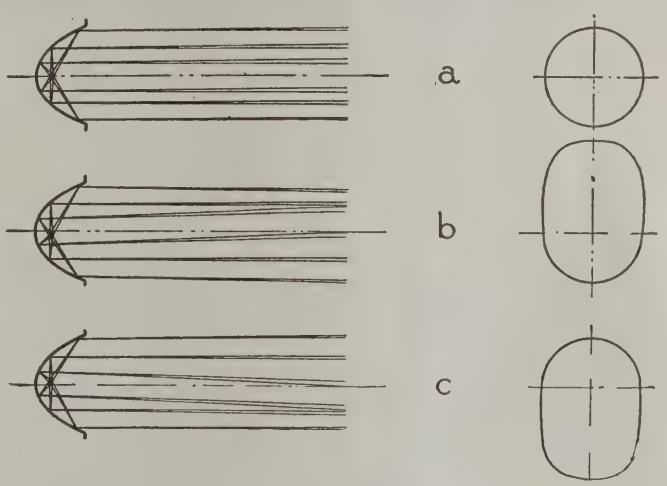


Fig. 3.—Distribution of light with filament at focus is shown at (a); with filament below focus at (b) and above focus at (c)

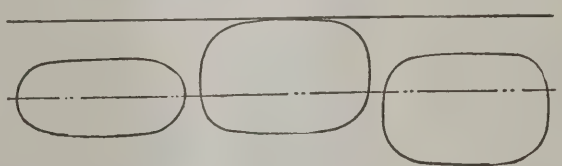


Fig. 4.—With vertically fluted lens or reflector to distribute light to the sides of the road, the left figure shows the light distribution with filament at the focus, the center figure with the filament below the focus and the sketch at the right with the filament above the focus



Fig. 1.—New type double filament head-lamp bulb

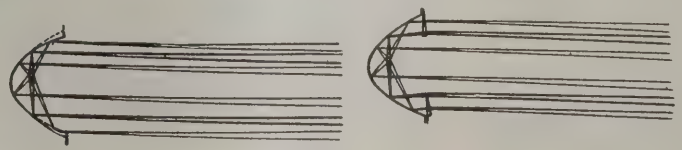


Fig. 5.—Light beam bent downward by using Modified Parabolic Reflector or by use of prisms incorporated in the lens

In the practical application of a bulb of this character it has been found either that a vertical adjustment of some sort would be required or else a special reflector or similar device to correct for inaccuracies in locating the bulb with respect to the reflector focus. Fig. 5 shows the application of two devices which take care of slight inaccuracies in locating the bulb. At the left a lamp is indicated having a specially shaped reflector, while at the right the same result is obtained by means of prisms incorporated in the lamp. With these devices it is said that good results are obtained even though the socket is offset enough to bring one of the filaments on the axis of the reflector. Consequently slight variations in bulb and socket assemblies are not injurious and no vertical adjustment feature is required.

Many Automotive Dealers Selling Radio



Pittman Motor Co. of Durango, Colo., finds profits from radio in winter time a great help. Here one of the company's representatives is shown demonstrating a set in the Cliff Dweller ruin in Mesa Verde National Park

Forty-five Per Cent of Those Responding to MOTOR AGE *Inquiry Are Handling Sets, Supplies or Batteries—Interesting Comment Given*

A VERY large proportion of automotive merchants are interested in radio as a possible source of more sales volume and additional profit. A considerable number already have had experience with radio merchandise and others are contemplating taking up the business.

The widespread interest in radio is revealed in communications to MOTOR AGE from all sections of the country. MOTOR AGE subscribers from coast to coast have responded to the Editor's inquiries as to their experience with, or opinion of, radio. Direct responses at hand as this is written reveal some interesting facts about the automotive merchant's attitude toward the sale and servicing of radio merchandise.

These responses come from all sections of the United States and represent a typical cross section of the MOTOR AGE list of subscribers. Among them are letters from car dealers, garage men, service station proprietors and accessory dealers—in fact, from representatives of the whole field of the retail automotive trade.

The first important fact is that 45 per cent of the dealers responding are now engaged in selling some form of radio merchandise in connection with some form of automotive merchandise. The other 55 per cent are not handling any form of radio goods. Slightly more than half of those selling radio are handling complete sets. The remainder handle only parts, tubes or radio batteries, in addition to their automotive lines.

Another important fact is that 42 per cent of the dealers responding are giving service on radio products. This is only slightly less than the percentage selling radio and indicates that practically all dealers who sell radio give service on sets, installations or batteries.

Fifteen dealers who are not selling radio wrote that they are contemplating taking it on, but a much larger number indicated that they are not now considering it.

With most of these dealers radio is a comparatively new business and for that reason very few gave any information as to their profits from it. Of the number who gave information as to profits, 61 per cent stated they have found the business profitable and 39 per cent said it had not been profitable. In most cases this information was based on only one season's experience.

An analysis of the opinions and experiences of various dealers shows that under present conditions very few rules can be laid down for the guidance of automotive merchants with reference to radio. On certain points there is a tendency towards consensus of opinion. For instance, dealers who have tried radio selling and been dissatisfied with it are almost unanimous in stating that the trouble lies with what might be called a wildcat method of distribution on the part of manufacturers and wholesalers.

One after another of the dealers who have written to MOTOR AGE mentioned the ease with which any Tom, Dick or Harry in their community could buy a radio set at wholesale price, or less, either as the nominal agent of a new line or through a friend who had the agency.

A car dealer in North Dakota wrote:

"There is no protection for radio dealers in small towns. Any one can get sets at wholesale from 50 different places."

From Wisconsin a car dealer gave this comment:

"There are too many dealers in radio and accessories. They are not sold for any set price, but for whatever they will bring. There are at least 15 different machines sold in this city by people who should not be in this business. *They merely sell them for the novelty of it and not to make money.*"

One more example of the indictments voiced against the manufacturers and jobbers of radio by the dealer on account of methods of distribution. This letter is from a garage man in Kentucky:

"I do not think that radio can be handled successfully in a garage and until they make it a strictly dealers' proposition for standard makes there will be no object for any one to stock such merchandise. In our town there are six or more different parties handling radio sets and *even two or three farmers that wanted a set took the agency to get a set at wholesale price.* Our town has a population of 350 and one or two dealers would be plenty to handle radio merchandise, and at a fair margin could make a little money."

On the other hand some garage men and even car dealers have spoken very highly of the business as a profitable adjunct to their automotive lines.

Take this letter from a car dealer and general automotive merchant in Colorado:

"We believe that radio sales are filling the long felt want of the garage business for something to fill out with during the dull winter months. Last year was our first attempt to sell radio, and we were pleasantly surprised with the result. Sets together with tubes and batteries netted us over $3,500 during the part of the winter when we were snowed in and there were no car sales and no repair business. We are planning on doing a large volume of business in radio this winter, expecting to at least double last year's sales, and we know we can do it. Our plans are laid and the first work is already being done. As we said before, we believe that radio is that which the automobile industry needed in order to make its investment profitable all the year round."

A Missouri garage man writes:

"I think radio makes a very nice side line with us in the garage and accessory business. Our battery and electrical man takes care of it, which keeps him busy all the time. And it puts us in touch with people that we would not get otherwise, which gives us a larger field to work."



Radio like the automobile has a fascination for all races. Cliff dwelling Indians experimenting with a set sold by Pittman Motor Co.

What 168 Automotive Merchants Say About Radio

	No.	Per cent
Selling some form of radio merchandise	77	45
Not selling radio in any form	91	55
Number Selling:		
Sets	40	....
Parts	28	....
Tubes	47	....
Batteries	73	....
Giving service on radio	71	42
Not giving service	85	50
Number Servicing:		
Sets	31	....
Batteries	69	....
Installations	39	....

The foregoing figures are tabulated from information sent to Motor Age by 168 automotive dealers. Of those designating whether or not the radio business had been profitable for them 61 per cent said it had been profitable.

Here is the opinion of a car dealer in North Dakota:

"Radio sales will mean a profit showing business every month of the year for the garages in the Middle West where the car sales, accessory sales, etc., cease about January 1. The garage is the proper place for the radio business in the small town where no exclusive radio shops operate, and we are going into it very strong this year."

"The way I look at radio is this," writes an Ohio garage proprietor. "As long as you have facilities for battery work and understand radio enough to build one, you might just as well cash in on what you can by selling, installing and servicing a good make of radio receiving set. It goes along with the garage nicely."

The battery and electrical division of the automotive establishment, mentioned by this dealer, has really been the starting point from which automotive merchants have entered the radio business. Radio A batteries are of the same type and require the same servicing as automobile batteries. A number of dealers have written that their electrical specialists or battery departments take care of their radio business. Of the automotive merchants selling radio those handling and servicing radio batteries lead in number. Of those who do not sell radio sets or parts quite a number are selling and servicing batteries and selling radio tubes.

A bird's eye view of the automotive retail trade would show quite a large number of establishments selling radio merchandise along with cars, accessories and repair work. It would show some making a lot of money out of it and others finding it unprofitable. With some radio would be found in a separate department, pushed as a year round business; with others it would share space with the automotive products and would practically disappear from the store in the summer months.

It is a question for the individual merchant to decide. His local conditions and his own desires must govern him to a great extent. Many dealers have demonstrated that they can make money from radio and that their automotive business does not suffer as a consequence. Others prefer to concentrate at all times on the automotive business. Hence it is hard to formulate any set of rules about radio. Whether or not radio belongs in the automobile store depends on the decision of the individual proprietor. It belongs in many of them because it is already there as an established and profitable part of their business.

MOTOR AGE'S PICTURE PAGES



THE DONS ARE WITH US. A Shell Company service station in San Francisco in Spanish setting and with attendants appropriately garbed. This display opened an unique Shell series.



"WHEN FROST IS ON THE PUMPKIN." Corn shocks, pumpkins and other effectives were used by the Studebaker Retail Branch in Cleveland to put over this Autumn suggestion in the company's sales room.



BOY, PAGE MR. SOUSA. Clown band at big Nash owners picnic given by Jack Neal Nash Motor Company, of San Antoni

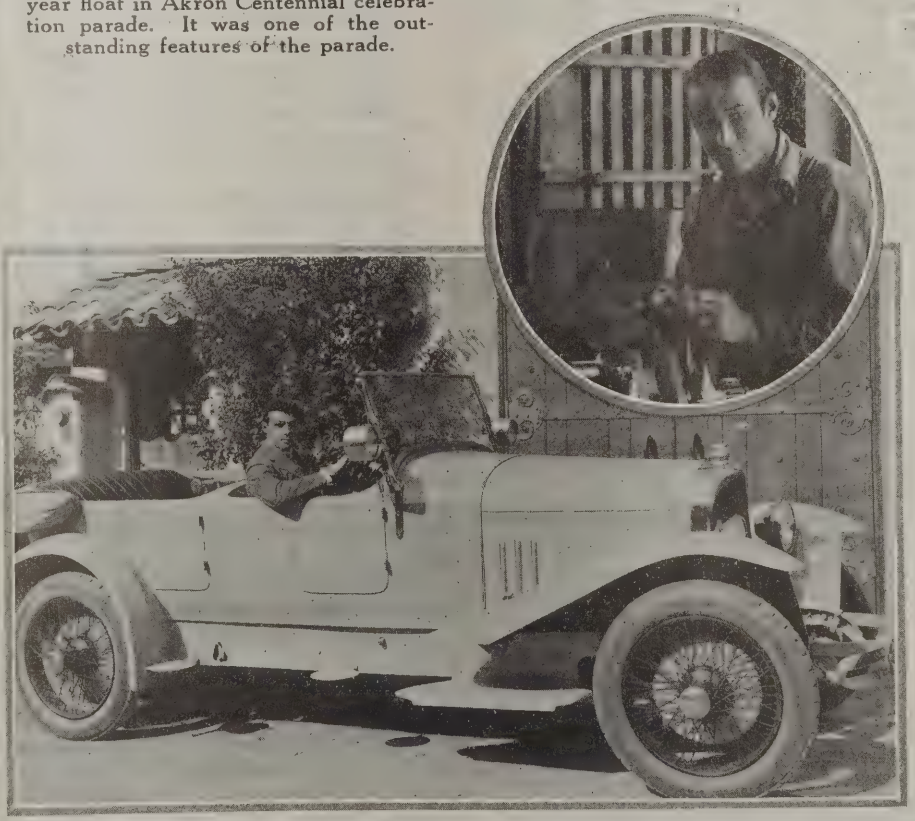
OF AUTOMOTIVE INTEREST



HERE'S THAT SUMMER COTTAGE. And maybe the airship is intended to offer a commutation suggestion. Goodyear float in Akron Centennial celebration parade. It was one of the outstanding features of the parade.



MOTOR VEHICLE CALLS ON SACRED TEMPLE. The Temple of the Tooth at Kandy, Ceylon, which is said to house the original tooth of Buddha. The automobile is a Cleveland Six.



ON HIS WAY TO "LOCATION." None other than Rudolph Valentino driving his Voisin sport type touring car. He also has a big Isotta-Franchini limousine which a chauffeur usually pilots.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING - ELECTRICAL - FLAT RATES
SHOP - LEGAL - PAINT & TRIM - ACCOUNTING

Hints on Valves and Bearings

Q. Why is it that in some motors there is an overlap in the valve action? R. H. Prom, 2201 Del Paso boulevard, Sacramento, Cal.

One reason sometimes given for having the inlet valve start to open before the exhaust valve has closed is to permit scavenging the cylinder. This means that there is a slight tendency for incoming fuel to flow through the cylinder and go out the exhaust ports, thus cleaning out the cylinder. Another reason would be to increase the time available for both discharging the old fuel and taking in new fuel.

Q. Has valve timing anything to do with oil pumping?

Not if the engine is in good condition. Where cylinder walls, pistons and piston rings are in need of renewing we have heard of a poor mechanic so changing the valve timing as to make the engine very inefficient, cut down the suction on the intake stroke and thereby reduce oil pumping to some extent. Needless to say this is a practice that is to be severely condemned.

Q. In taking up the main bearings what bearing should you start with? Give proper method of procedure for taking up set of main bearings on a four-bearing crankshaft.

In taking up main bearings there is danger of taking up one more than another and thus throwing the crankshaft out of line. Of course, if each one is taken up so that the friction is the same when attempting to turn the engine over by hand it is evident that the bearings are properly fitted. Assume, however, that the upper portion of one bearing has worn more than the upper portion of another. It would be necessary to bend the crankshaft upward in order to make that bearing tight and it is obvious that this would put a strain in the crank which would quickly loosen that bearing again.

On crankshafts which have splash lubrication it would be desirable to take up each bearing the same amount and it would make no difference as to the order in which this was done. As each one is fitted, however, it is desirable to turn the engine over by hand to make sure that it has been tightened enough and yet not too much. Then this bearing should be loosened and another one tightened and checked in the same way. Where pressure lubrication is used it is necessary to leave a diamentral clearance of .002 inches. This means that you cannot tighten the bearings in the regular way, for it would allow no room for the oil to work out. Instead it is necessary to fit the bearings tightly and then put in shims on each side having a thickness of .002 inches. A better method is to measure the diameter of the crankshaft bearings by means of micrometers and make up a mandrel which is .002 inches larger in diameter and fit this tightly to the bearing. This method is particularly applicable to fitting connecting rod bearings. If it is found that one bearing has to be taken up a great deal so that the crankshaft will be pulled out of line it means that new bearings should be used and preferably line reamed, before the crankshaft is again installed.

Q. In taking up connecting rod bearings, is it considered advisable to remove shims if these can be only removed from one side of the rod, in order to fit the bearing properly.

Theoretically this is wrong but actually if the shim is only .001 inches or .002 inches thick we doubt if any trouble would result.

Q. What causes pitting and rusting of valve stems? Some cars seem to have more trouble with pitting than others.

Pitting in some cases may be due to insufficient oil getting on the valve stem. In other cases the mixture may be too lean so that the exhaust valve stem will tend to oxidize as a result of the exhaust gases. In other cases the lubricating oil may contain acid or may produce acid as a result of its contact with the exhaust gases.

MOTOR AGE'S READERS' CLEARING HOUSE INDEX

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Low Priced Cars with Pressure Lubrication

Q. Is there any car selling under $900 using bronze mirror finished main bearings, hollow crankshaft oiling system and removable valve guides and tappets, except the Star. Ralph S. Frank, Center Point, Iowa.

The Star car uses the hollow crankshaft oiling system and removable valve guides, but does not use bronze bearings on the crankshaft. Perhaps you have in mind the fact that Star cars are now provided with the bronze bearing at the front of the camshaft. We have not had opportunity to check up on the valve mechanism of the various cars to which you refer, but you can get this information easily if you care to drop a postal card to the makers of these cars.

From the MOTOR AGE Specification Table we find quite a number of cars selling under $900. Among these the Ford, Essex and Gray use splash lubrication.

A combination splash and pressure system is used on Dodge, and Chevrolet. Pressure to the crankshaft and connecting rod bearings is used on Auburn, Chrysler four, Cleveland and Oldsmobile. Pressure to the crankshaft, connecting rod and camshaft bearings, is used on Ajax and Durant.

TIMING SLEEVE VALVE ENGINES

Q.—Give information as to the sleeve timing of Moline Knight, this being the model which used a 12 volt battery. Also give the sleeve timing of a Willys Knight. —A. C. Glinke, Palmyra, Wis.

The timing of these two engines is practically the same and the exhaust port is closed when the piston has come up to top dead center or has barely started down, being not more than 1/64 inch down. A method of timing one of these engines was given in the Clearing House Section of MOTOR AGE under date of February 15, 1925.

Planning Your New Building

By TOM WILDER

The READERS' CLEARING HOUSE

This Garage May Grow With the Town

Q. I am going to build a garage in a town of 2,000 population and wish to know if you can furnish blue prints from which I can pattern building and fixtures. The garage which I wish plans for is to be situated one block from the center of town, on corner of block. My lot is 80 by 160 feet the side of which is on principal street. Will want gas and oil pumps situated on corner with showroom just to left of office which will be just back of filling station on corner.

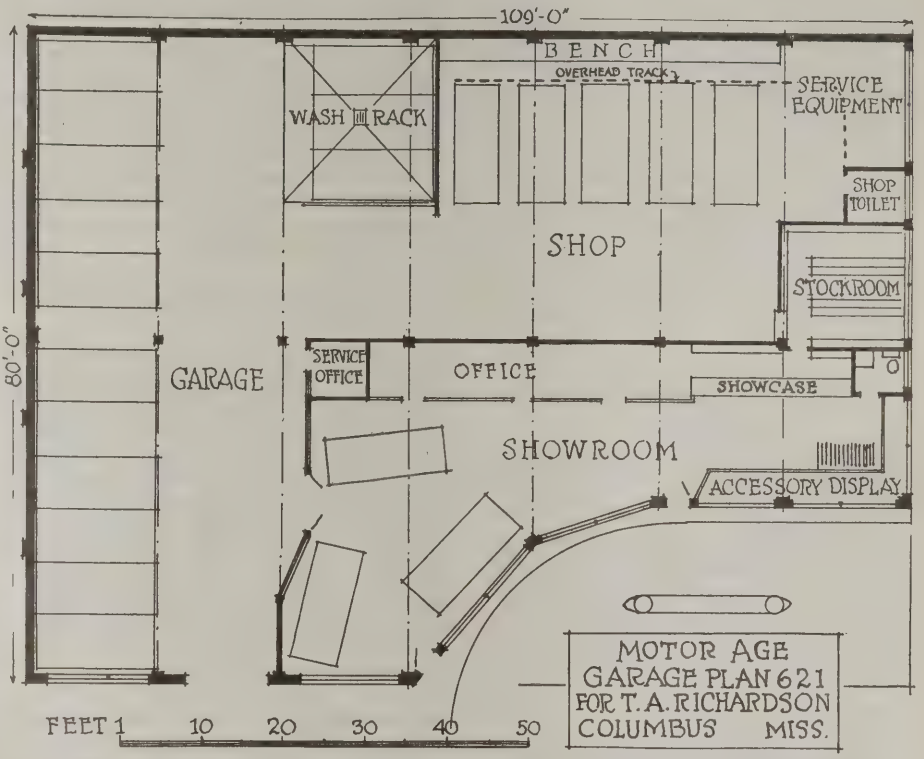
The garage is to take care of service as well as do a general repair business and will employ two mechanics and helpers. The building site is level with side street about four feet below level. Please suggest the size of building I will need to take care of the needs of a town of this size. T. A. Richardson, Columbus, Miss.

You apparently have an ideal location for a garage and sales room, but of course the filling station at the corner will interfere to a certain extent and make it hard to plan a good layout. We have used 109 feet as the length of your lot, reserving a 50-foot strip for some future addition. On account of the 4-foot drop in the side street, we believe it would be best to make your entrance on the main street and disregard the side street entirely. An entrance could be made of course where the stockroom now stands, using an incline that would be as long as the width of the stockroom, but if this is done, some other space will have to be sacrificed for stockroom purposes and this space, on account of its location is specially desirable. The shop is well located and we believe is about the right size to take care of your business, although we are making a guess at this, since the population of the town does not mean very much one way or the other. Some men in small towns will do practically all the business there is while others in large towns do not get much of any.

The wash rack is arranged, so that it can answer for storage space when it is not in use and this section as well as the shop should be well lighted by skylights. You will notice that the row of columns through the building is not exactly in the center, this being for two reasons, one to make the office and showroom a little wider and the other to allow one more car storage space.

If your building were eventually extended to cover the other 50 feet, we would suggest running the trusses the other way or parallel with the street and have shown piers in the wall for that purpose. This new section could be used for garage purposes, using the old part to extend the showroom and the shop.

The entrance would be in the new section and at that time it might be well to arrange an entrance on the side street as we have already suggested, as you would then have plenty of room to rearrange the stockroom.



This is Not an Ordinary Layout, But it Seems a Good One and If the Remaining 51 ft. of Frontage are Added Will be Quite Extensive

Profit by What These Customers Say

Here are a few remarks on parts service made by drivers of various kinds of motor cars to Mr. E. H. Spears, sales manager of the Lupton Automotive Equipment Division. Each one of them carries a lesson.

"That's the last time I climb two flights of stairs for a fan belt. I can drop into an accessory shop and get one that's just as good, with a lot less bother."

"After he found the number of the gasket he wanted in the book, the guy looked in about seven places before he found it, and then he had to holler to another bird out in the shop to find out how much it cost."

"If they'd move the factory here I'd get some service. They've got a lot of parts but they always have to send to Detroit for what I want."

"The next time I go in that parts room I'll wear my old clothes. There were six birds there waiting to get parts who certainly were plenty greasy. And the dump is so small we got pretty intimate while we waited. And, believe me, we waited."

But here's a different experience:

"I went in for a commutator arm. I looked over a darn good looking display he had there and I came out with a belt, a couple of door bumpers, a spark plug and a hub cap. I meant to get these time and again and I kept forgetting them. And just to make it good the bird sold me a trick radiator cap with wings and everything."

"The reason I go way over there is because he has some system. I go in, ask for what I want, get it and pay for it while this fellow next door is looking for it. And what's more, I always get it. That's the main reason."

"Most any car is all right these days. The thing that appeals to me is the fact that he sells good service on a flat rate and has a parts department that looks as though I could get parts when I need them."

MILWAUKEE ON AIR LINE

MILWAUKEE, Aug. 29.—Advices received in Milwaukee indicate that this city may be a stopping point on the air transportation which Henry Ford plans to establish between Detroit and his manufacturing units in various parts of the country. The service will be used to rush materials to assembly plants in cases where rail service is too slow.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Beware of the Nickel Plate Faker

In order to protect other garagemen and accessory stores, we would like to have this printed in MOTOR AGE. On July 13 a well dressed man called at our store selling Triple Plating acids for replating reflectors, handles, etc., claiming to represent a New York concern. He gave the name of J. P. Dillard. He sold us the acids, etc., which were supposed to replate all articles to be plated but without any success. We have done as we were told but with no results. A few days ago we wrote a letter to this company and our mail was returned to us as there is no such company known in New York. We paid $37.50 for the three bottles of acid.—Triangle Garage, Indiana Harbor, Ind.

Removing Studebaker Clutch

Q.—Supply information in regard to the chain adjustment on a 1921 Studebaker Special 6.—Ern DeMets, 36th Street Garage, Moline, Ill.

This car does not have front end timing chain so we assume that you refer to the starter chain. To tighten this you can loosen the stud on the starter plate at the front end of the engine and use a piece of steel as a shim to hold the starter farther from the engine. Then tighten the stud again.

Trouble with Transmission Bands

Q.—We have a 1924 Ford coupe that was purchased in October 1923 that is giving trouble with transmission bands. We have used genuine Ford bands and several other makes but are unable to get rid of the grabbing of the bands when the brake is applied or when you start up in low or use the reverse. When we start up the car moves forward a few feet and then grabs and jumps forward and the same thing happens when reversing except that it makes a very peculiar noise as if something was binding, but when I stop the car it slows down slowly until it is nearly stopped and then it grabs and backs up on the recoil, so you see it is very annoying. —Watertown Subscriber.

Due Probably to Backlash

The grabbing of the bands is due probably to backlash some place in the driving system from the universal joint backwards. We would suggest that the wheel nuts be examined to see that the wheels are tight on the taper end of the axle shafts and that the universal joint be examined and then if play still exists that the pinion itself be examined for backlash. It is also possible that the ball cap or rear transmission babbitt bearing is worn somewhat. Any shock transmitted to either rear wheel in a direction parallel to the axle housing would tend to spring the crankcase of the engine or oil pan.

We would suggest that this point be checked by attaching the rear axle to the springs and to the universal joint and then note how the ball cap lines up with the holes in end of the transmission crankcase stamping. If holes do not line up perfectly or if when the axle is out the rear bearing babbitt bushing mounted in the removable ball cap is worn it indicates that the crankcase is sprung and that it should be removed and straightened. When testing for alignment of the two cap screws and two bolts to go through the ball cap, it is advisable to turn the engine over while one man examines to see whether there is any tendency of the axle to move out of position at the ball end of the torque tube during the cranking.

CARTER CARBURETER ADJUSTMENTS

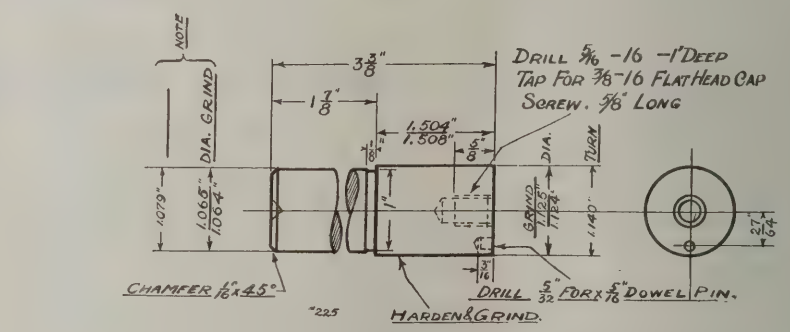
Q.—Supply information in regard to the internal construction and adjustment of the Carter carbureter.—Reginald Trevor, Blubber Bay, B. C., Canada.

We are showing an illustration of the Carter carbureter as used on Chevrolet. It is recommended that every 2,000 miles the filter screen in the strainer cap be removed and thoroughly cleaned. This screen is removed by unscrewing the screen cap screw. The idling adjustment is controlled by the idling adjustment screw. Turning the screw counter clockwise or to the left gives more fuel, running at low speed.

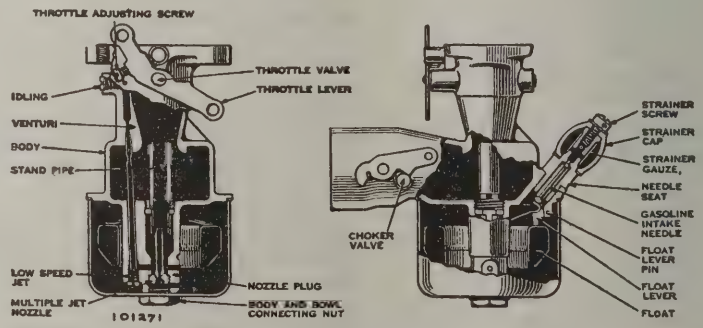
Data on a Tractor Part

Q.—Will you please ascertain for us whether or not Twin City Co., Minneapolis, Minnesota have ever made any change in design of part TW-23 stub shaft for idling gear for Twin City tractor. What we wish to know is if they have discontinued making hole in the part whereby same was locked into the block by means of a taper pin. If they have made such a change would like to know what the design is for the stub shaft they are now using and how same is fastened into the block.—Malam Garage, Waverly, Ill.

According to information supplied us direct by the manufacturer, the idler gear stub shaft which is used on the 12-20 tractor was locked with a taper pin through the crankcase as mentioned in your question. The latest design of this stub shaft, however, is such that the diameter of the pin has been increased making a tight pressed fit into the crankcase and therefore eliminating entirely the use of the taper pin. A print of the stub shaft is shown at Fig. 225.



Idler gear stub shaft on Twin City tractor



Sectional views of Carter carbureter

Clearing Up Electrical Troubles

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Too Many Grounds Make A Short

Q. If the breaker points are grounded can the coil be grounded too? I am told that if one is grounded the other cannot be grounded. George W. Whitcher, Jr., 366 Chile avenue, Rochester, N. Y.

In general this is correct that both the coil and interrupter cannot be grounded for on practically all cars today it is customary to use a grounded system where one terminal of the battery is connected to the frame of the car. For this reason it is customary to carry the current from the battery through the coil and then through the interrupter, one side of which is grounded. The frame of the car then serves as a return circuit to the grounded battery terminal.

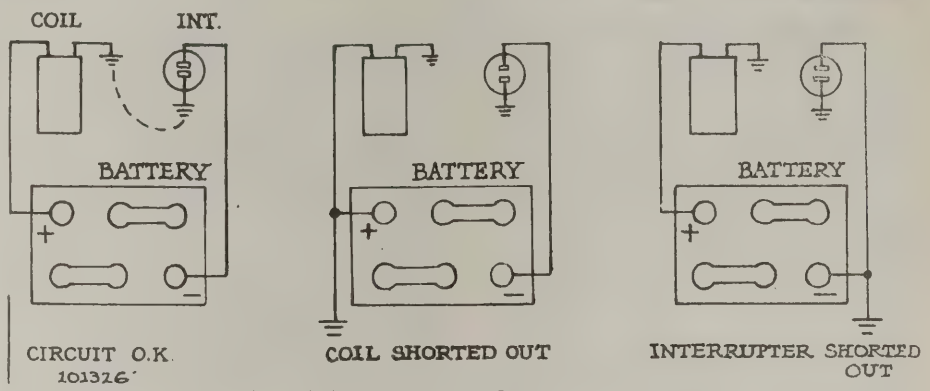
The case you mention however, is possible and we are showing an illustration which contains three sketches, the one at the left showing a circuit where operation would be possible with both coil and interrupter grounded. In this case, current would flow from positive battery through the coil to the grounded coil terminal. The frame of the car will then serve as a connection to the grounded interrupter terminal and when the points close the current would flow back to negative battery.

With these same connections, however, we get into trouble if we ground positive or negative terminal of the battery. The center sketch shows the positive terminal grounded and the current in this case would not have to flow through the coil for the coil is shorted out, both terminals being grounded. The flow would be from positive battery to ground and then through the interrupter and back to negative. As the interrupter has no appreciable resistance, the wiring and interrupter would burn out when the points close.

In the sketch at the right, with the negative battery terminal grounded, you would have current flowing through the coil to ground and then back to negative battery, so that current would flow continuously and would not be interrupted.

Q. In timing ignition in all makes of engines, should the spark be fully retarded before timing of same or should it be advanced to the running positive on steering wheel?

The general practice is to time with the lever in the retarded position for all engines are alike as far as the retard position is concerned. In some cases, however, instruction books refer to a mark on the flywheel where the spark should occur with the spark advance lever in a certain position. If the instructions in the book are followed and then the timing is checked in the retard position, it will be found that the spark on retard occurs when the piston has gone up to top dead center and then has barely started down again. Accordingly, if instructions are available, they may be followed and if not, it is safe to time the spark with the advance lever in the retard position, having the spark occur when the piston has barely started down on the firing stroke.

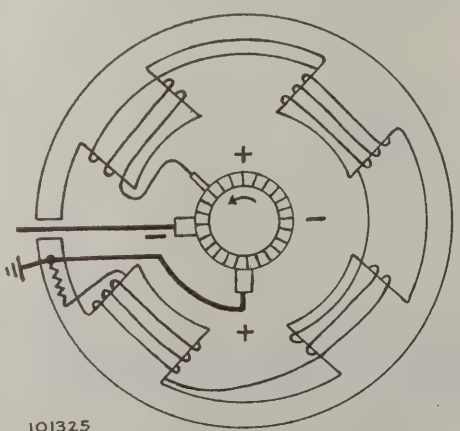


One of these circuits works and two do not

28 Amperes Minimum on This Third Brush Generator

Q. Please tell me why a generator on a Haynes, model 55 charges too much with the third brush set back as far as it will go. Everything seems to test o. k. but it will charge up to 28 amperes with the third brush set as far back as the adjustment permits. Supply wiring diagram of this generator. D. C. Slick, The East Granite City Garage, Granite City, Ill.

We are showing a diagram which gives the internal circuits of the generator in question. We would first recommend your checking the connections of the shunt field. You will notice in the sketch that the field is connected through a fuse to ground, while the other end of the field is connected to the third brush. If the grounded end of the field, for example, should be connected to the live brush instead, it would make the generator operate in the reverse direction as a motor.



Internal Generator circuits on Haynes 55

Then, some mechanic not experienced with third brush generators might figure that the field was reversed and merely change the field connections. This would leave the field connected from the live brush to the third brush and it could be made to motor in the proper direction and also generate when driven in the proper direction. However, instead of regulating, the current would increase rapidly at high speeds. This generator is supposed to turn left hand or counterclockwise as seen from the commutator end. The lower main brush is positive and the one at the left is negative.

In a four-pole generator, however, opposite points on the commutator have the same polarity. For this reason, the connections of the field are the same as if it should be connected from the third brush to the positive point at the top of the commutator. To reduce the charging rate the third brush should be moved to the right or toward the upper portion of the commutator as seen in the sketch. If we would exaggerate this adjustment and move the third brush all the way to the top of the commutator, we would have both ends of the shunt field, connected to positive, so that there would be no tendency for current to go through the field and the machine would not generate. For this reason you can see that with correct connections you can hardly avoid cutting down the charging current if the third brush is moved in the proper direction. As a precaution it might pay to test the brushes and brush holders for ground and check the position of the main brushes. This is done by lifting the third brush and connecting a battery to the main brushes. There should be practically no tendency for the armature to rotate in either direction. If the tendency is quite strong the brushes should be moved, if the construction permits. A slight tendency for the armature to rotate in the normal direction is usually considered permissable.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Parts and a Complete Engine Overhaul

RECENTLY a subscriber to MOTOR AGE stated it always is a losing proposition to give the price of parts with the labor on a flat rate on a job such as overhauling an engine. He says it is almost impossible to list all parts such as gaskets, hose, ignition wire, bearing shims, etc., with the result that the customer is given a quotation below what it should be.

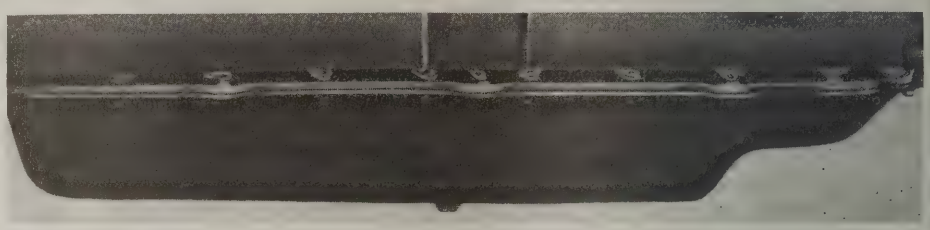
There is no doubt but what it is quite a job to put down in black and white all the things you are going to need when overhauling an engine, but we believe this is largely a matter of "knowing your stuff."

It often has been said that flat rate means considerable book-keeping, that is, you have to use pencil and paper to quite an extent, if there are to be profits. Two jobs are seldom alike and although the work order may call for substantially the same thing, such as "overhaul engine," perhaps one job necessitates a few operations or parts not called for in the other. That's where the pencil and paper come in.

If the various operations in flat rate schedules are correctly interpreted there is little reason why a shop should go wrong on an engine overhaul, once the customer has been sold as to just what he is going to get and the shop knows what it is going to do.

Almost always when an engine overhaul is specified, or an overhaul of any other unit, it is taken for granted the wearing parts in such units are to be replaced with new ones, or the old ones reconditioned. The flat rate schedules make this clear.

Engine overhauls include as a rule the reconditioning of the cylinder bores, new pistons and rings, new piston pins, grinding the crankshaft, fitting new bearings, new timing gears or chain, new camshaft bearings, new hose connections, gaskets, etc., for all of which a price can be set in addition to the labor. Sometimes certain parts need not be replaced with new ones and in such cases it is perfectly possible to deduct from the original quotation.



THINGS THAT HELP FLAT RATE

Here is a case where studs are used for attaching the crankcase pan to the case, quite a timesaver when removal and replacement of the pan is necessary. Every mechanic knows what a job it sometimes is to attach a pan when bolts are used and no assistant is handy to help

The whole matter is largely one of having an understanding with the customer beforehand. The time to have this is when the unit has been torn down and the worn parts measured. This will tell if new parts are advisable or if the old ones can be reconditioned. Then, it is merely a case of listing such parts or operations and setting the price.

Very often where a flat rate is quoted on an engine overhaul it is taken for granted new parts will be installed throughout and any service man or mechanic on to his job can tell pretty nearly what parts are likely to be needed when an engine has done some 25,000 or 30,000 miles. To forget to charge for a gasket or hose connection is merely slack bookkeeping and not the fault of the flat rate system.

Flat Rates on Chevrolet, Dodge Brothers and Overland

To the Editor of Motor Age:

Philadelphia, Pa.

We are very much interested in your Flat Rate Forum and are wondering if you have yet published the rates on the Chevrolet, Dodge and Overland. If so, will you kindly send us copies.

If you have not as yet published the rates on these cars, will you kindly advise us about when they will be shown so that we may be on the lookout for them?—Dewees F. Kirchner.

The Flat Rate Forum has published some flat rate operations on the cars you mention and the dates of these are as follows:

February 26, 1925—Operations on Dodge Brothers fenders.

March 12, 1925—Operations on Overland connecting rods and pistons.

April 7, 1925—Operations on Chevrolet engine (overhaul).

May 21, 1925—Operations on Dodge Brothers front axle.

June 18, 1925—Operations on Chevrolet timing gears and oiling system.

July 23, 1925—Operations on Chevrolet bearings and connecting rods.

If you do not already know it we should like to call your attention to Motor Age's Flat Rate Manual published in the April 30, 1925 issue. This manual contains prices for some 277 operations on not only the cars you ask about, but practically all the present makes of American built automobiles. The manual is sold separately for 50 cents.

Readers are invited to make use of this page in the discussion of Flat Rate. The department is offered as an open forum.

MOTOR AGE'S FLAT RATE FORUM

No. 29

FLAT RATES FOR

DODGE BROTHERS TRANSMISSION OPERATIONS

Manufacturer's Official Designation		Time
3200	Remove and install transmission assembly—for overhaul (aluminum case)	9 hrs.
3201	Remove and install transmission assembly—for overhaul (steel case)	9 hrs.
3202	Remove and install one transmission assembly (steel case)	6 hrs.
3203	Tighten transmission assembly	1 hr.
3204	Install pressed steel motor and transmission support, on cars with 110 in. wheelbase before car No. 108644	11 hrs.
3205	Install pressed steel support on cars with 114 in. wheelbase after car No. 95489	8 hrs.
3206	Remove and install one transmission cover and control assembly for overhaul	3½ hrs.
3207	Remove and install one transmission cover and control assembly	1½ hrs.
3208	Remove and install one transmission case cover	3½ hrs.
3209	Remove and install one transmission hand hole cover—(upper)	¼ hr.
3210	Remove and install one transmission hand hole cover—(lower)	½ hr.
3211	Drain transmission, wash out and refill with lubricant	1½ hrs.
3212	Remove and install one gear shift lever	¼ hr.
3213	Remove and install one transmission low and reverse shift fork	3 hrs.
3214	Remove and install one transmission second speed shift fork	3 hrs.

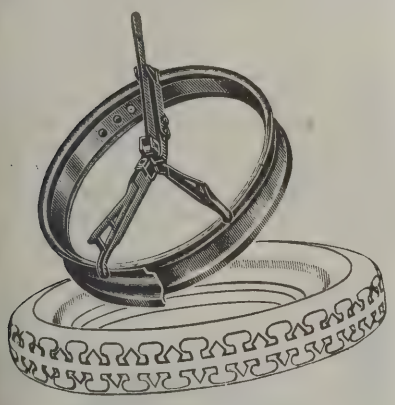
(To be continued in next week's issue of MOTOR AGE)

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Losee Best Ever Rim Tool

TIRES can be easily and quickly removed or replaced by use of the Losee Best Ever Rim Tool, according to the Losee Motor Products Company, Hebron, Ill., makers of this and other automotive appliances. The Losee rim tool operates easily, is self locking and folds. It is recommended for all balloon or standard tire rims. In operation its hooks catch the rim firmly while a lever does the work of expanding or contracting. The product is designed compactly so it can be carried conveniently in the car and it weights seven pounds. Price $5. Among this company's other products are its Triple Lever Clutch Control for Chevrolets priced at $3. the Losee Dash Control Cut-Out for Chevrolets, priced at $6.50, Losee Hot Spot for Chevrolets priced at $6, Losee New Improved Heater for Chevrolets priced at $10. Losee Muffler Silencer for Chevrolets priced at $1.50 and the Losee Standard Cut-Out for All Cars, priced from $3 to $5.50 for cut-out only and from $4.25 to $6.75 with dash control.

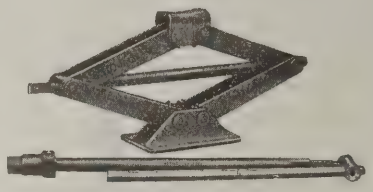




Losee Best Ever Rim Tool

Bumpers and Fender Guards

BRENNAN-TAYLOR Corporation, 24th street and M. C. R. R., Detroit, offers the trade an accessory called the Taylor De Luxe Bumper and also Fender Guards of harmonious design. These devices are recommended by the makers for their serviceability and capacity to add to the beauty of the car. The bumper is of steel tubing, light and resilient, and finished with baked enamel which is coated with lacquer and baked again. Its ends are silvery flares bending toward the car and made of a non-corrosive metal. Bumpers for Hudson, Nash, Studebaker, Buick, Packard etc., are priced $28.50 f. o. b. Detroit. Fender guards are priced at $28.50 per pair. Essex bumpers are priced at $22.



So-Lo Jack

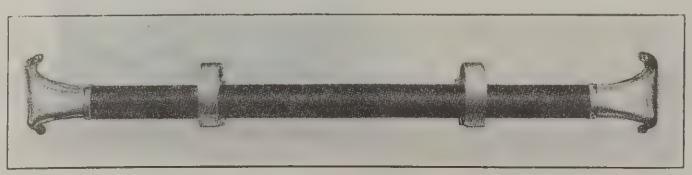
(Cut shown above)

A HANDY jack for the motorist which will lower to a fall of 3¾ in. and rise to a height of 15½ in. is found in a device being produced by the So-Lo Jack Company, Attleboro, Mass. This is the So-Lo Jack. Its big advantage is said to be in its low fall which makes it very practical especially when a flat balloon tire needs attention. At the same time the jack can be elevated to a height sufficient for an ordinary job on the road or in the garage. Ruggedly made and of exceptional lifting strength the jack is unusually light. The base is broad and long to retard sinking into soft ground. The jack packs compactly into the tool compartment of the car.

Keeping Tab on the Fat Pocketbook

Automotive merchants who count considerably on the farmer's patronage are watching this source of prospective business with interest. As crops are converted into cash the farmer will become a larger buyer. All competitive sellers know that well and all are on their toes to be first on the ground as soon as the crop money is about to be released.

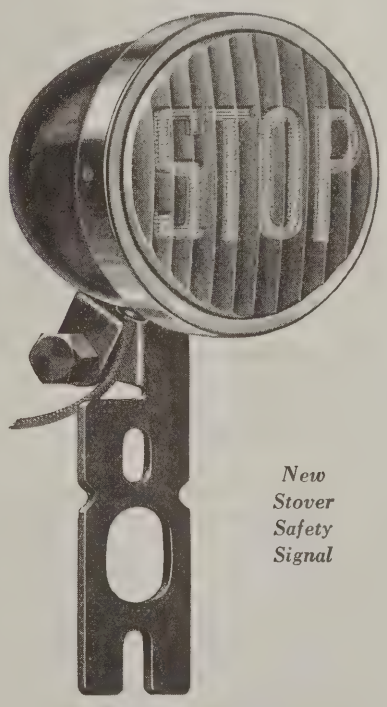
One wide-awake automotive dealer, not wanting to be left behind in this race, keeps close tab on the farm selling in his community. He gets leads from elevators, stock pens and railroad sources. He knows that when the farmer sells he will have money and the farmer is promptly sent a letter reminding him to supply his automotive needs. Getting after the prospective buyer when he is supplied with funds is all-important. Don't overlook the farmer when crops are moving.



Brennan-Taylor Bumper

New Stover Safety Signal

AMONG recent development in the stop signal field is appearance on the market of the new Stover Safety Signal, manufactured by the Stover Signal Engineering Company, of Racine, Wis. The new Stover design marks a number of improvements over the earlier signal. Its departures include a new fluted lens, bayonet joint method of attaching the lens rim and a universal bracket. The new fluted lens while giving an intense flare adds further attractiveness to the attachment. The bayonet joint method of attaching the lens rim to the lamp is pointed out by the makers as a decided improvement, there being no rattling or working loose by this plan. At the same time the lens is easily removed for cleaning or replacing the bulb. The standard "Stop" lens is furnished with this new Stover product. This is interchangeable with special lens bearing "Ford" and "Chevrolet" names. List price $2.



New Stover Safety Signal

Clifton's Ford Upholstery

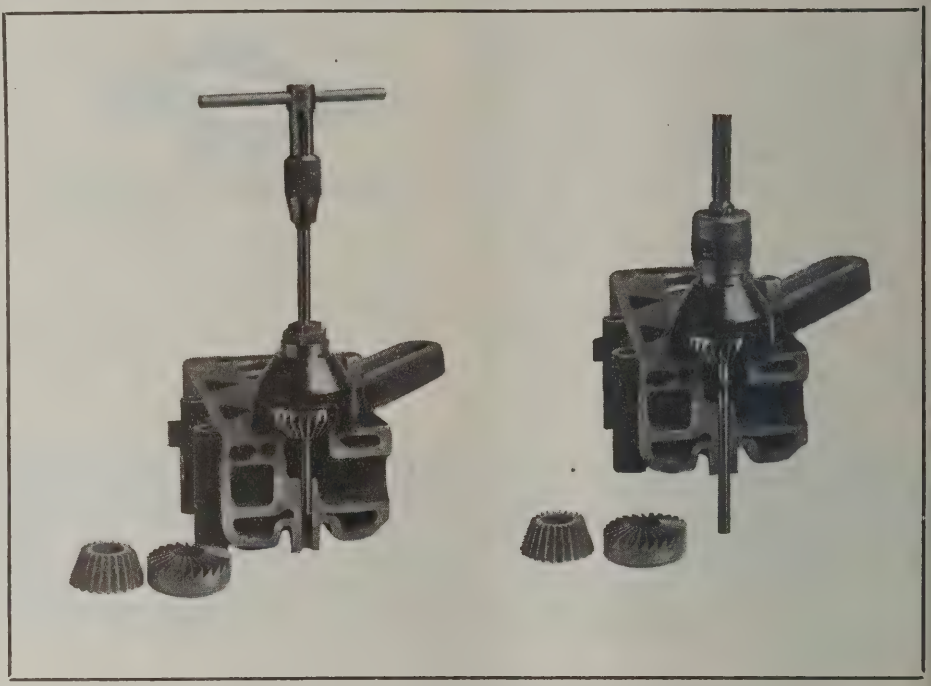
THIS product is put out by the Clifton Mfg. Co., Waco, Texas. It is intended to replace worn out and ragged upholstery for Ford cars, and is well padded and tufted with metal clinch buttons.

List price of frontback touring $5.50, weight 8¼ lbs., rearback touring $6.10, weight 7¾ lbs., roadster $5.50, 8¼ lbs.

GETTING MORE OUT of the SHOP

Valve Reseating and Guide Reaming Strateway Jig

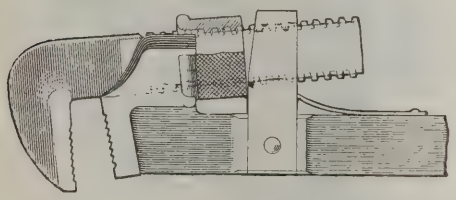
With the use of the Strateway Jig and the different cutters a good job of reconditioning the valve seats may be done and the valve seats will be concentric with the valve stem guides it is said. This result obained is due to the fact that the Jig remains bolted to the cylinder block during the entire operation and the reamer and the re-seating cutter is guided through the jig with a drag fit. If a true valve is placed in a seat made the Strateway way a perfect, gasoline tight joint is obtained which removes the necessity of grind with compound, is the claim. It is made by the Hill Enengineering Co., River Falls, Wis.



Left, Strateway jig for reseating valves; right, jig for reaming guides

Armstrong Stilson Pipe Wrench

Several features, said to appeal to mechanics are incorporated in the Armstrong Stilson all steel pipe wrench. For one thing it is frameless. That is, the nut housing has been entirely removed and the patented ball and socket nut affords increased flexibility and greater strength, especially under heavy side strain. The side pull strain is taken up by two solid forged steel lugs, reinforced by the recessed nut. The adjusting nut cannot fall out and since the handle does not act inside of a frame it is therefore not restricted in size, but so designed to be strongest at the greatest point of strain. There is no projecting part below the line of the handle. A novel spring action insures proper gripping position to the movable pawl and imparts just sufficient tension, it is stated, to prevent it getting out of adjustment. The wrench varies in length from 8 to 48 in. and the prices range from $2.25 to $20.00. The wrench is made by the Armstrong Bros. Tool Co., 317 N. Francisco Avenue, Chicago, Ill.



Cut-Away View of the Armstrong-Stilson Wrench, Showing How the Drop-Forged Supporting Lugs Fit into the Recessed Nut

Hobart One-Day Battery Charging Outfit

The most compact and lowest priced constant potential one day battery charging outfit on the market, it is claimed, is now being put out by Hobart Brothers, of Troy, Ohio. Rated at a capacity of 1 to 6 batteries, 50-60 ampere output, it makes a good installation for the small shop that never before featured battery work, or wants to make the maximum profits on a small battery business. More than 10,000 shops today are furnishing one-day charging service, so with the announcement of this smaller sized, lower priced outfit, one-day battery charging becomes available to many of the shops who before thought that it was too expensive.

The outfit is furnished complete with bus bars, battery bench, connecting cables for the charging of new batteries radio and sulphated batteries, and is priced at $25 cash and ten monthly payments of $17 each which the makers claim will be more than paid out of the increased earnings.

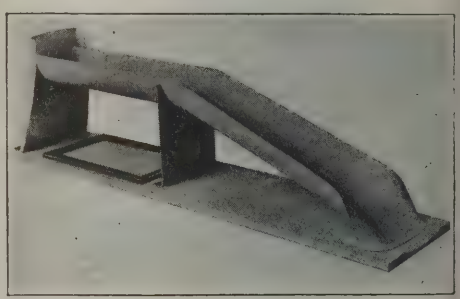


Hobart One-Day Battery Charging Outfit for small shop

Klein Kwick Lifts

(Cut shown below)

Klein Kwick Lifts as the name suggests are devices for elevating cars while they are being worked upon in the shop. They come in pairs and do away with jacks, wood blocks, etc. The mechanic can place tools, bolts and similar parts in special base pans. The lifts are made of pressed steel riveted and welded. A wood base is used for mounting them and this base prevents slipping when a car is being driven upon them. They weigh 40 lbs. each and can handle 6 in. balloon tires. The price is $17 per pair. They are made by The Klein Structural Steel Co., Bellevue, Ohio.



Add to Sales Staff

M. A. Weidmayer, formerly Black & Decker's branch manager at the Detroit office is now associated with The United States Electrical Tool Co., in charge of the Philadelphia office. C. H. Scaffe, formerly connected with the St. Louis office of Black & Decker, is now associated with The United States Electrical Tool Company as special representative operating from the general office at Cincinnati, Ohio.

EDITORIAL

How Can You Tell?

IN the Clearing House Section of this issue is a letter from a dealer who has been defrauded by a salesman selling him three bottles of acid for $37.50, said acid being capable theoretically of nickel plating various articles. The stuff is a fake and the salesman a faker.

The crook may or may not be apprehended, but the protection from such deceptive tactics lies not in this direction. The product for which such wonderful things were claimed was not a well known or advertised product. This should have made the buyer suspicious.

Legitimate concerns are anxious to get really reliable articles to sell. They distribute them through known channels and advertise in the best mediums. The protection of automotive dealers lies in awakening to this fact for the charlatan can not get a reputable publication to accept his copy, his only chance is the unscrupulous salesman.

Better and quicker methods of nickel plating may be developed from time to time. The same applies to battery charging and other technical processes. But when these developments come, they will be described in the automotive publications as well as being advertised.

Watch Your Collections

THE story of more than one business failure is written in the words "accounts uncollectable." How often at the post-mortem do we hear the words, "If we could only have collected outstanding accounts we would have been all right."

This is not an indictment of the method of doing business on credit. Credit is necessary to modern business, and wise credit is really an economy in our commercial structure. But far too often the credit system is abused and the abuse is not always the fault of the customers to whom credit is extended.

A necessary auxiliary to any credit system is an efficient collection system. There are two kinds of credit buyers. One is the person of full financial responsibility who prefers to settle all accounts by check once a month rather than be bothered with many small cash or check payments as purchases are made from time to time. The other is the person who is not able at the time to pay for what he wants but hopes that by the first of the month, or sometime, he will be able to pay.

A large department store clearly distinguishes between these two types of credit seekers in the neat signs displayed in various parts of the store and reading somewhat like this:

> "Persons who are able to pay for what they want and who make more money than they spend are invited to open charge accounts with this store."

In those few words is the lesson of this editorial. The good merchant probably will find it advisable to carry charge accounts, but he should use fine discrimination in determining those to whom credit shall be extended. Those who make more money than they spend are good credit risks provided the creditor enforces payment on the date due. Even those who are most able to pay are not likely to do so unless a statement is promptly and properly rendered, and in some cases it is necessary that urgent representations be made to enforce payment. Extension of credit beyond the due date only weakens the case of the collection department. The older a bill is the more reluctant the debtor is to pay it, no matter how well able to do so.

The fault of the merchant who carries charge accounts often lies in dilatory methods he uses in collection. Every time he hesitates to ask for prompt payment of accounts due he is endangering his business. The merchant should keep in mind that credit is extended with the intention that payment shall be made at a definite time in the future. There should be no hesitation in letting the debtor know when that time comes and in insisting upon prompt payment. In fact, when "uncollectable accounts" drive a business into bankruptcy it is more often due to the failure of the merchant to demand and insist upon prompt payment of bills rather than to poor judgment in the extension of credit.

Past due accounts on the books are of no value until turned into cash.

That Farmer Factor

AGAIN let us go back to the business outlook as seen by economists early in the summer. In their general observations was a popular line running something like this:

"We may look for a healthy last half year providing the farmer fares reasonably well."

Autumn is approaching and the hour finds the farmer in a good position. Recent rains over the corn belt have materially improved corn prospects. Grain prices promise to be good. Wheat price prospects look so good to farmers there is a tendency among them to hold their supplies for yet higher quotations.

In view of this holding tendency the release of much wheat money into general business channels may be somewhat delayed, but it will be turned loose sooner or later and in larger volume if the holders figure the situation correctly.

At any rate there is no reason now not to look forward confidently to a good last half year. The farmer, who was pointed to as the keystone of the situation, is "sitting pretty." And there are indications that he is beginning to spend the proceeds of this year's harvest. This year's prosperity is substantially made. The final hurdle has been cleared and we are going down the stretch.

Production Starts on Downward Swing

Sales Continue to Be Ahead Of Same Period Last Year

Output in Many Factories Still at Peak on Account of Orders Held Over From Summer

DETROIT, Sept. 1.—Despite the full capacity or nearly full capacity output of many of the automobile plants in the Greater Detroit area, the production trend during the latter parts of August was downward. This is in the face of recently announced increase production by at least one company in this district.

This trend, according to an executive of one of the larger companies, and one that has been having phenomenal sales, means simply that the sales have been harder to get. The increased production does not, in his opinion, reflect the same continued rate of sales that has been prevalent for the past three months but an attempt to catch up with the unfilled orders.

If figures of sales and of production along with the titling of new cars can be taken as a criterion, then the automotive industry is selling only slightly more cars than for the same time last year. Michigan, generally regarded as a good criterion of the surrounding territory, does not show any appreciable increase over the same period for 1924.

This statement will be disputed by manufacturers who are contending that their sales are better now than for some time. But their contention is not supported by figures which are the best criterion of conditions.

This much is certain: that while production of certain makes might have been increased and while more persons are driving automobiles at this time than last year, yet the fact that sales are not so numerous means that production will go downward from now until next spring. Some companies have yet to announce their new models and this may have some bearing on the subject—but as a whole the production curve will point down.

There has been little change in the used car market, a strong demand still being noted for cars that sell between $600 and $850. Dealers throughout the country reporting in to the factory say that the stock of used cars on hand are extremely small at this time.

Most of the truck companies, it would seem, are waiting to see the result of the General Motors Corporation and the Yellow Cab merger in their field. Once the new GMC trucks make their appearance the conditions in this field should return to normal. Ford trucks still monopolize the sales, over two-thirds of the total number of new trucks titled in Michigan during July being Fords.

Production for August will be lower than July. This is based on reports that the Ford Highland Park plant and the different Ford plants throughout the country have not been going at full speed, due to the new models about to be brought out. The increase or the decrease in August production can be attributed to this situation.

Moon Announces Changes In Series A Model Prices

ST. LOUIS, Aug. 29.—Moon Motor Car Company has announced price changes effective September 1 which call for reduction on all Moon Series A models exceept the Roadster, of from $50 to $200. The price of the roadster remains the same, $1395 as does the price of the chassis, $995.

The new prices are:

Model	New Price	Old Price	Reduction
Touring	$1195	$1295	$100
Coach de Luxe	1395	1495	100
Roadster (New Design)	1395	1395	.....
4-Door St'd Sedan	1545	1595	50
Cabriolet Roadster	1595	1695	100
De Luxe Brougham	1495	1695	200
De Luxe Sedan	1695	1785	90

Wills Sainte Claire Adds Five New "Vogue" Models

MARYSVILLE, Mich., Aug. 29.—Wills Sainte Claire, Inc., has announced the additon of a series of De Luxe models to its W-6, six cylinder line. The new "Vogue" models are similar in body design to the De Luxe models on the eight cylinder chassis. Prices range from $2,735 for the roadster to $3,600 for the Limousine.

Equipment furnished as standard includes a full set of five disk wheels, snubbers, automatic windshield wiper, rear vision mirror, dash gasoline gage, cigar lighter, clock, cowl ventilator and ignition spare tire and gearset locks on all models. In addition the closed models are supplied with a sun visor, vanity and smoking sets and door locks. A trunk rack is also furnished on the five passenger sedan.

Following are the prices of the new models:

Four Passenger Roadster	$2735
Five Passenger 4-Door Brougham	3400
Five Passenger 4-Door Sedan	3400
Seven Passenger Sedan	3500
Seven Passenger Limousine	3600

WILLYS DEALERS MEET

SAN ANTONIO, Tex., Aug. 29.—Some forty Willys-Overland dealers in Southwest Texas attended a sales meeting here this week. R. M. Reland of Toledo, was the chief speaker for the occasion. Plans for intensified selling campaigns and for closer co-operation among dealers in different towns were laid at the conference.

Accessory Business Shows Big Increase in Southwest

More Money and New Lines Cause Greater Automobile Sales Volume as Well

DALLAS, Tex., Aug. 29.—The accessory, parts and equipment business in the Southwest during August was 40 per cent better than for the same month last year and 20 per cent better than for the preceding month, according to four of the largest houses handling those lines.

The business in all Texas, with exception of some 35 counties stricken by drouths, and in Oklahoma, Louisiana, Arkansas, Arizona and New Mexico has been more than the dealers anticipated and the prospects for bumper trade during the fall and winter are excellent, the big houses reported.

The revival of the trade seemed to include all lines jobbers reported. Retailers were inclined to carry heavier stocks and in many cases were wiring in orders. The jobbers were strengthening sales forces with a view of doing the heaviest business in their history.

Fairly good grain crops at high prices, good cotton crops at better figures than last year, fair vegetable, fruit, berry, tomato and melon crops at stiff prices, coupled with the fact that some money has been left over from last year, are reasons assigned for increased trade at this season.

Manufacturing agents reported business brisk and the outlook fine.

Car distributors have noticed an increase in business during August when compared to last month and one year ago. More money, new lines, lower prices and intensified selling methods are given as reasons for increased trade. The fact that distributors are placing more cars means the retailers are disposing of them faster in all sections of the territory.

MILLS TEACHES MANAGEMENT

DETROIT, Aug. 31.—J. E. Mills, service manager of the Detroit branch of the Packard Motor Car Co., is conducting a new course in the Michigan State Automobile School at Detroit, which emphasizes the business side of automotive service shop or garage management. This course is intended to help make good business men out of students and dealers who at the same time are fitting themselves technically for this work. The course given by Mr. Mills includes the following subjects: location of a garage, layout of building and shop, equipment, budget, shop management, simple bookkeeping, banking and financing, meeting and handling customers, general business methods, advertising, new car sales and used car sales.

"Miniature" Car Sensation Predicted by Continental

Detroit Manufacturers Expected to Introduce Small Automobile Shortly After New Year

DETROIT, Aug. 29.—Motor cars on the foreign model, with wheelbases shorter than the Ford and capable of giving more than 40 miles a gallon of gasoline, will be introduced to America by Detroit manufacturers soon after the New Year, it is predicted by Continental Motors Corp. This report coincides with well-substantiated rumors to the effect that American manufacturers are nearly ready to announce models for sale abroad that will compete directly with the light European makes.

The Continental company has imported a standard "Austin" model, made in England, and contemplates designing engines which will go into smaller cars for this country. The Austin has been found best re-designing for use here, it is pointed out. Such cars it is declared, will find their use here chiefly for city or interurban driving over smooth paved roads. They will be two and four passenger jobs.

These new cars, says the Continental announcement, will be exact miniatures of the standard American makes, as the English body lines will be changed to conform to American models. As yet there is no intimation as to the price range.

Mack Introduces Shorter Bus for Southern States

NEW YORK, Aug. 29.—Variation in laws regulating buses in the Southern States has necessitated the production of a new bus, which, although similar in other respects to the standard Mack parlor car, is narrower by six inches, says a statement just issued by the Bus Department of Mack Trucks, Inc.

The stumbling block to a nationally standard bus body is a restriction in certain of the states to an outside width of not more than 84 inches. Four of the 12 Southern States do not have any size restricting laws; Virginia and West Virginia allow a width of 96 inches; the District of Columbia, South Carolina and Marylnad put the limit at 90 inches; North Carolina's law limits width to 86 inches and those of Florida and Louisana width to 84 inches. The outside cap of the underslung gas tank must be not more than 42 inches from center of chassis.

In order to conform to these laws of the last two mentioned states, the Mack parlor car buses destined for this territory have been cut down from 90 to 84 inches. This reduction brought about the loss of one entire row of seats, reducing the passenger capacity to 21 instead of 25 persons, otherwise the parlor car remains unchanged. The E. J. Thompson Co., of Pittsburgh, is building the bodies on these buses, known as "Dixie Specials."

Ford's Paper Will Take Ads

WASHINGTON, Aug. 29. — A change in the policy of Henry Ford's publication, the Dearborn Independent, was announced here this week at the Washington branch of the Ford Motor Company. Advertising will be accepted beginning with the October 3, 1925, issue of the magazine.

The Dearborn Independent has not carried a line of paid advertising since it has been the property of Mr. Ford and the change in policy reflects a growing feeling on the part of the public to expect as a buying guide a certain amount of advertising in magazines of its choice.

The Dearborn Independent, then a small country weekly newspaper, was acquired by Mr. Ford in 1918. All paid advertising was dropped and the paper changed to a sixteen-page magazine. In May of this year, with the installation of new presses, the magazine was increased to 32 pages of standard size. The Dearborn Independent, since becoming a Ford property, has become one of the most widely discussed publications in the world. It is distributed to over 600,000 paid subscribers.

AC CHANGES DESIGNATION

FLINT, Mich., Aug. 29.—Along with the announcement of an improved design and assembly method, the AC Spark Plug Company of Flint, makes it known that henceforth AC plugs will have a single letter for the identification of each type, so that the car owner will have only a single letter to remember and look for upon the box. The new designations run through the alphabet from A to W, each letter identifying a plug which may be standard equipment on a number of cars.

SALES MANAGERS NAMED

CINCINNATI, Aug. 29.—Three appointments of division sales managers of the United States Motor Truck Company, have been announced by E. T. Herbig, general sales manager. L. A. Poundstone, formerly with the Service Motor Truck and Autocar Companies, has been named eastern division sales manager for western New York, western Pennsylvania and a part of West Virginia. Bert E. Handel, formerly with the Gary Company, has been appointed division sales manager for Illinois and Indiana. Mr. Herbig also announced the appointment of C. H. Gierhart, formerly with the Gramm-Bernstein Company, as division sales manager for a part of West Virginia, southern Ohio and eastern Kentucky territories.

Columbus August Business Shows Great Improvement

Sales Better Than June or July, Believed a Result of Excellent Industrial Condition

COLUMBUS, O., Aug. 29.—A decided improvement has taken place in the automobile industry in Columbus during the past month. Sales in August were ahead of July with most distributors and agencies and a majority believe that September will hold up well.

Sales in the month of August were slightly better than in June and July. This is accounted for to a certain extent because of the coming out of a number of new models. But on the whole the main reason is the better general industrial feeling. Farmers are now coming into the market better as they are harvesting good crops and are receiving good prices for their products. The best business is done in cars ranging from $800 to $2,200 although sales of higher priced cars are showing up fairly well.

The used car market is still slow but some headway was made during the past month in disposing of some of the surplus. Prices of used cars have been reduced and that has resulted in heavier sales.

The money situation is excellent as loans can be made easily. This applies to distributors who have accumulated some cars during the past month for fall distribution. Accessory dealers have shared in the better business and wholesalers especially report a larger volume in August than in either June or July.

Antonsen Takes Distribution Of Fisher Truck in Chicago

CHICAGO, Aug. 29.—The A. E. Antonsen Motor Sales, 1134 West Sixty-third Street, has installed a truck department for the exclusive handling of the Fisher Fast Freight. The company also is distributor of Case and Gardner passenger cars.

Raymond H. Frame, a member of the sales staff for the last three years who has made an exhaustive study of the new features of the Fisher truck, has been made sales manager for the truck department. Wilbert R. Tennant has been made assistant to President Antonsen.

Edwin H. Johnson, formerly with the service department of the Grand Auto Garage of Minneapolis, has accepted full charge of the service department.

WICE MADE SALES MANAGER

ST. LOUIS, Aug. 29.—Guy W. Oliver, president of the Oliver-Cadillac Co., new St. Louis Cadillac distributor has announced the appointment of Ray Wice as sales manager of the company. Wice has been in the automobile business for the past ten years having previously been with the Hudson distributor in Cleveland, Ohio and with the Hudson distributor in St. Louis. He has been selling Cadillacs here for the past five years.

Merger of Yellow Cab With General Motors Is Ratified

Operation of Two Concerns as Yellow Truck & Coach Mfg. Co. Effective Sept. 2

NEW YORK, Sept. 2.—Final ratification of the merger of the Yellow Cab Manufacturing Co. and the truck division of General Motors Corp. took place when Yellow Cab directors authorized issuance of 800,000 shares of common stock in exchange for 160,000 shares of General Motors Truck Corp. stock. Operation of the two concerns under the name of the Yellow Truck & Coach Manufacturing Co. became effective yesterday.

For the first half year Yellow Cab Manufacturing Co. reported net profit $1,206,716, equivalent after preferred dividends to $1.97 per share earned on 600,000 shares $10 par Class B stock, compared with $2.96 in the first half of 1924.

June quarter net profits were $589,657, equal after preferred dividends to 97 cents a share earned on Class B against $1.32 during the same quarter last year.

For the four months ended April 30 General Motors Truck Division reported net loss $415,100 after charges. Total net sales were $4,458,798, net operating profit $159,057, miscellaneous income $14,851, total income $173,908, depreciation $112,778, total deductions $476,230.

Strom Bearing Co. Bought By Marlin-Rockwell Corp.

CHICAGO, Aug. 31.—Reports that the Marlin-Rockwell Corp. had purchased the plant, property and good will of the Strom Ball Bearing Manufacturing Co. have been confirmed. The business of the latter company will be conducted exactly as heretofore, under the direction of the same personnel and department heads. There will be no change in policy, and the same lines of bearings under the Strom trade name will be continued.

At a special meeting of the Marlin-Rockwell Corp., stockholders approved an increase in the common stock from 222,850 to 300,000 shares. The New York Curb has ruled that rights might be dealt in on a "when issued" basis on and after August 20 and that they must be settled Sept. 8.

Directors of the company have offered common stockholders of record of August 28 the right to subscribe to new stock at $15 a share in the ratio of 15 per cent of their holdings. Subscriptions must be payable in full on or before Sept. 14.

SHOW MANAGERS MEET

ATLANTIC CITY, Aug. 29.—Members of the National Association of Automobile Show and Association Managers held their annual before-shows meeting at Atlantic City this month with President Robert E. Lee, of St. Louis, presiding. Both in point of attendance and in the practical, constructive nature of the program, the meeting was the most successful the show managers have ever held. John E. Raine, of the Baltimore dealers association, was elected a director at this meeting to fill a vacancy on the board. Herbert Buckman, of the Cleveland dealers association, is vice president of the association and A. V. Comings, editor of Automobile Trade Journal, is secretary.

U. S. Denies Rent to Employe's Wife

WASHINGTON, Aug. 29.—A Government employe using a Government-owned automobile, cannot put it in the garage at home, which is in his wife's name, and expect the Government to pay rent to his wife for the use of the garage.

Ray C. Bish, an assistant marketing specialist of the Department of Agriculture tried it in Cleveland, but he couldn't get away with the plan, owing to the vigilance of the General Accounting Office.

A voucher for $7 to be paid to Mary Frances Bish for rent of the garage in question was caught up by the forces of Controller General McCarl.

"This office has consistently held," said a decision refusing payment, "that reimbursement from public funds for the hiring of automobiles and renting of garages from members of their families or from other employes is not authorized."

NEW RADIO STUDIO

CHICAGO, Aug. 29.—The Stewart-Warner Speedometer Corp. is building in Chicago its own radio broadcasting studio, one of the most modern and up-to-date in the country. Furnishings of the new plant include grand piano, a pipe-organ, harp and full assortment of orchestral instruments. The corporation plans to radiocast from this studio a twelve-hour program each week, from a 226-meter wave length. The call letters are to be WBBM. The station is rated in Class B, with 1,500 watt capacity.

CADILLAC SALES HIGH

DETROIT, Aug. 29.—Sales of the new Cadillac during the first week since its introduction are 40 per cent higher than during the first week after the introduction of V-63 models in 1923, and were considerably larger than any preceding week in the history of the company. Orders for future delivery obtained during the week were 36 per cent higher than any previous week. Ample justification for the effort and capital involved in creating the new Cadillac line is seen in these figures by Lawrence P. Fisher, president and general manager of the company.

Details Arranged for Parts Association Show at Chicago

Convention Will Open Nov. 5 and Exhibit Will Be in Conjunction at Hotel Sherman

DETROIT, Mich., Aug. 31.—Detailed arrangements for the convention and exhibition to be conducted by the National Standard Parts Association at the Hotel Sherman in Chicago next November were completed at a recent meeting of the show committee at N. S. P. A. headquarters here.

The convention will be held Nov. 5, 6 and 7 in the Louis XIV room of the Sherman and registration will open Wednesday, Nov. 4 at 5 p. m. There will be an open session Thursday afternoon, the first business session Friday morning, a divisional meeting Friday afternoon and a second business session Saturday morning.

Speakers of national reputation will talk to the delegates who attend the banquet which will be held in the same room on Saturday, Nov. 7 at 7 p. m. Attendance at the first session will be open to delegates, alternates and guests. The remaining sessions will be open to delegates and alternates only.

The exhibition of products will be held in the new exhibition hall of the Hotel Sherman on Nov. 5, 6, 7 and 8. Manufacturer members of the association, nonmember manufacturers by special invitation and trade publications will be eligible to exhibit. The exhibition will be open from 9 a. m. to 10 p. m. Thursday and Friday, from 9 to 6 p. m. Saturday and from 12 noon until 5 p. m. Sunday. Floor diagrams, contracts and application blanks were mailed out Aug. 24 and 25. Floor space is more than 8,000 square feet and the facilities splendid for an exposition of this type.

Marquette Buys Business Of Wood-Imes Mfg. Co.

ST. PAUL, Minn., Sept. 1.—The Marquette Manufacturing Company has purchased for cash the business, assets, patents, trade marks and good will of the Wood-Imes Manufacturing Company, manufacturers of a complete line of garage equipment.

None of the Wood-Imes organization will be connected with the Marquette company in any way. The Wood-Imes line will be made a part of the Marquette line, sold by Marquette salesmen. The purchase does not change or affect the officers and management of the Marquette company.

Both plants will continue to operate, the Marquette line to be made at the St. Paul plant and the garage equipment to be manufactured at the Minneapolis plant. The executive offices will be in St. Paul and all correspondence relating to either line will be handled through the Marquette Manufacturing company of St. Paul.

Dealers of Southeast See Promise in Price Cuts

Brisk Business Expected After Sept. 1 in Most of Farm Territory

CHARLOTTE, N. C., Aug. 29.—The wave of price reductions which swept over the automobile manufacturing industry early in August has served to arouse the dealers in the Southeast to a new enthusiasm at a time when conditions were tending to cause some discouragement. This is indicated by observations made by a correspondent of MOTOR AGE in the course of a tour including numerous important cities and small towns of North Carolina, South Carolina and Georgia.

Of the three states mentioned, conditions in North Carolina are generally much more favorable, so far as the automotive trade is concerned. Sections of South Carolina and Georgia are facing the probability of severe losses by the farmers, as a result of an almost unprecedented drought, and this unfavorable condition in which the agricultural industry of those sections has been placed is expected to influence sharp curtailment in the buying of automobiles this fall.

In some cities in those hard hit areas, bankers and business men generally are rather gloomy in their predictions relative to the business activity of the fall and winter months.

Good Business Expected

The Coastal Plain of South Carolina and Georgia, in a general way, reasonably can expect brisk business after the middle of September. The tobacco and cotton crops of those regions escaped the drought and large yields are anticipated. Excellent prices are being obtained for the tobacco crops of those states, and harvesting now is well advanced. In North Georgia and Piedmont South Carolina, many of the farmers are facing distressing conditions after two months or more of unbroken drought.

North Carolina's only important source of business disturbance is the textile industry, which employs many thousands of operatives and for which no sign of early relief from the long-standing unfavorable economic condition is seen. The Piedmont section of South Carolina, an important cotton milling section, likewise is affected unfavorably. Elsewhere than in the Piedmont section of this state, conditions as a whole are generally favorable. The peach crop was of unprecedented proportions. The tremendous annual tobacco yield of this state will closely approach the record this year, and prices at the opening of the selling season are regarded as satisfactory and approximately the same as last year, with a definite tendency to increase. All industry, other than the very important textile industry, in this state appears to be on a sound financial basis.

In the face of these mixed conditions, however, the sale of new automobiles continues generally at a pace regarded as brisk for the season. While prospects faced by the automobile distributors and dealers are not good in some sections, for reasons explained above, the sales-managers appear to be giving much less time to pessimistic comment and are preparing for intensive sales efforts to be undertaken early in September. The realization is general throughout these three states that "this is a fall for hard work." Over in Florida, however, the orgy of dealing in real estate is continuing and gaining in volume, with evidences of unprecedented prosperity everywhere, and in Alabama the outlook is relatively encouraging, as this state slowly makes advances back toward the position it occupied when the boll weevil almost disrupted its agricultural industry several years ago.

Service Big Aid

Never before in the history of the Southeast has the importance of automobile service been so frequently emphasized as it has in the course of this summer. An unprecedented number of automobile tourists has traveled through these states, over roads which represented almost all degrees of goodness and badness.

Service department managers of numerous automobile dealers frequently expressed the opinion that the rapidly increasing interest in touring will have the effect of exerting a tremendous influence favorable to the lines of motor cars which are well represented by dealer service stations on the more important routes.

General Motors to Buy British Austin Company

NEW YORK, Sept. 1.—Directors of Austin Motors, Ltd., British automobile manufacturers, have accepted, subject to the approval of their stockholders, a proposition for the sale of a controlling interest in that corporation to the General Motors Corp., Alfred P. Sloan, Jr., president of the latter, has announced.

Memphis Olds Branch Is Host to Southern Dealers

MEMPHIS, Aug. 29.—Dealers covering the Memphis section under the Memphis branch of the Olds Motor Works were guests of the branch recently and put in a day replete with interest, business and pleasure. The new line of Oldsmobile cars was seen and price features explained. The evening was topped with a banquet at Hotel Claridge.

H. H. Hoffman of the sales department of the factory in Lansing made a talk praising the Memphis branch and its manager, George L. Evans. Mr. Evans acted as toast master.

Responses were made by Charles Graham, Meridian, Mass., S. M. Pratt and J. T. Henry, El Dorado, Ark., W. C. Brackett, Jackson, Miss. and Captain Maloney, of Little Rock, all dealers.

C. C. Dietrich, assistant manager of the Memphis branch of the General Motors Corporation, explained the system followed by his company and called attention to the esteem in which the Olds organization is held. He alluded to the reduction in financing rate. J. G. Jamison, formerly factory representative of Memphis but now of Nashville, also spoke.

Dealers present in addition to the speakers included: A. S. Green, West Point, Miss.; F. G. McCrary, Parkin, Ark.; Mr. Tucker, Warren, Ark.; C. M. Turner, J. V. Carr and M. E. Turner, Jonesboro, Ark; Mr. Herrin and W. D. Ritchie, Shreveport, La.; Marvin Woods and Mr. Collins, Martin, La.; Ray Strawn, Doyle Bell, Pine Bluff, Ark.; Mr. Moore, Arkadelphia, Ark.; B. F. Gray and Judge Brogdon, of Blytheville, Ark.; Joe Coleman, Hope, Ark.; G. H. Threvathan, Gleason, Tenn.

GLOBE BUYS 2 CONCERNS

HAMILTON, Ont., Aug. 29.—Globe Manufacturing Company has taken over two bankrupt concerns, the Beaver Truck Company of this city, and the Monarch Tractor Co., Brantford, Ont. The combined inventory of the plants approximates half a million dollars. Work in both plants will be continued, but on different lines. In the Beaver plant a new truck, known as the Globe truck model 43 will be assembled. All parts will be purchased and no manufacturing will be done. In the Brantford plant, where tractors have been made, automobile radiators will be manufactured. The company has Canadian rights for two types of radiators, one of them now being used in one of the largest automobile plants in the United States.

DURANT OUTPUT STEADY

LANSING, Mich., Aug. 29.—Production schedule at the Durant Motor Plant is giving no indication of a slow-down during the next few weeks, officials said today. Passenger cars are being sent out at a daily production rate of 225 to 250 and the company reports that this schedule has been maintained almost since it was established last spring. Orders continue to come in as fast as the cars are shipped, denoting consumption demand above the average for this time of the year.

Northern California Sales Show Gain Over Year Ago

Dealers Increase Forces to Care for Greater Volume Coming Late in August

SAN FRANCISCO, Aug. 29.—Sales of passenger cars through central and northern California for August, 1925, showed an increase of approximately 24 per cent over those of the same month last year, while truck sales showed some increase, the exact percentage of which had not been determined at the end of the month.

Reductions in prices of new cars were largely responsible for the increased sales, the greater part of the increase being after August 15. These price reductions greatly lowered sales resistance by inducing the prospect to buy a new car rather than a used or rebuilt one. First payments on a number of new cars, particularly those selling below $1,500, have been reduced materially, and the California banks are showing a more friendly attitude toward automobile paper than they did a year ago. A fruit crop, short in some varieties, is bringing high prices into the state, and re-organization of two of the largest co-operative fruit-marketing agencies so as to obtain quicker cash returns for the farmer, also contributed in cutting down sales-resistance.

Dealers in general throughout central and northern California increased their sales forces in August and enlarged advertising space, particularly in the newspapers in towns of 2,000 inhabitants or less. Sales in these towns and in the country increased by a larger percentage over those of August, 1924, in the same territory, than did sales in the communities of larger size.

Truck sales were stimulated materially by the movement of fruit crops, and by extensive sales of small farms and orchards northward and eastward from San Francisco bay. Sales of trucks in the cities were about on a par with those of a month ago. As has been intimated above, sales of used cars slowed down considerably, due to reductions in the prices of new cars up to $1,500.

JAMES GOODALL DIES

PITTSBURGH, Aug. 29.—James Goodall of the Goodall-Walton Company of Waynesburg, Buick distributors in that territory, was killed in an automobile accident August 13. Mr. Goodall has been connected with the automobile industry for a number of years, having been with the Goodyear Tire & Rubber Company before becoming the Buick distributor at Waynesburg.

MEMPHIS HAS DIANA BRANCH

MEMPHIS, Aug. 29.—Official announcement is made of the establishment of the Diana Motor Company, a factory branch for Diana and Moon motor cars, to serve the Memphis territory. The company is located at 754-60 Union avenue with L. A. Phillips in charge. He comes from St. Louis, home city of the company which manufactures the two cars. The development of this car in surrounding territory as well as retail and service features in Memphis will be the aim of the new branch.

OAKLAND BRANCH MOVES

INDIANAPOLIS, Aug. 29.—The Oakland Motor Company, which has maintained a wholesale and retail branch here for more than a year with headquarters in the Steinhart Building, has announced an important change in the affairs of the branch. E. J. Barlow, branch manager, will establish branch wholesale headquarters in the Merchants Bank office building, and has announced the appointment of Miller & Robinson as direct Indianapolis dealers and distributor for nine adjacent counties. The Miller & Robinson Company will occupy the offices, service and show rooms where the Oakland has been located for several years. Four associate dealers of the city will work with the new distributing company in handing the retail affairs of the county.

CALIFORNIA TITLES LEAD

SAN FRANCISCO, Aug. 29.—California now leads the world in motor vehicle registration in proportion to population, according to Will H. Marsh, chief of the state division of motor vehicles. There is a machine for every 2.9 persons in California, Marsh reports. Total registration at the middle of August is 1,350,517, and will reach 1,500,000 before the end of the year. This is far in excess of the 1924 registration, and, with 4,000,000 inhabitants, or somewhat more, the per capita registration is not hard to find. California is now second in total registration, exceeded only by New York. If every Californian went for a ride on the same day, there would be room for three persons in every car, and, figuring the average passenger capacity at four, there still would be car-space to carry the total population of Nevada, Oregon, Idaho and Arizona—approximately 1,500,000 persons.

HATCH IS PROMOTED

SEATTLE, Aug. 29.—Mason O. Hatch, manager of the Spokane Branch of the Eldridge Buick Co., for several years, has been promoted to a sales executive position covering the entire Eldridge organization, with headquarters in the home office at Seattle. He has been succeeded as manager of the Spokane branch by M. O. Anderson, a long time employee of the company in Spokane.

MOON EXPANDS PLANT

STS. LOUIS, Aug. 29.—Moon Motor Car Co. has occupied the plant at Douglass street and Terminal Railroad tracks formerly used by the Broderick and Bascom Rope Company, to increase its shipping facilities. The new plant is occupied by the manufacturing and shipping divisions of the company. A shipping dock 400 ft. long enables the company to load 100 cars additional daily.

Schedules Call for Unusual Tire Production in Akron

If Output Is Up to Plans It Will Exceed That of Post-war Boom Six Years Ago

AKRON, O., Aug. 29.—Tire production tickets in effect at the Akron rubber plants call for greater daily production than was noted in the post war boom period six years ago. Goodyear Tire & Rubber Co. is turning out 36,000 tires and 46,000 inner tubes a day, besides more than a million rubber heels and soles, and large quantities of mechanical rubber goods. This compares with 35,000 tires and 42,000 tubes being manufactured a day three months ago, and 28,000 tires and 36,000 tubes a year ago.

Approximately 32,000 tires and 40,000 tubes are being manufactured at the Firestone Tire & Rubber Co. plant. Production is only slightly higher than it was three months ago, but it is about 30 per cent greater than last year. The Firestone Steel Products plant, where automobile rims are manufactured, is doing a larger business than ever before.

B. F. Goodrich Co. is maintaining a tire production of about 28,000 tires a day, and 35,000 inner tubes. Production a year ago was around 22,000 tires a day. Rubber boot and shoe operations are increasing rapidly, in preparation for winter business.

Miller Rubber Co. is manufacturing about 10,000 tires a day, General Tire & Rubber Co. better than 5,000, Mason Tire & Rubber Co. about 8,000, Seiberling Rubber Co. 4,000, India and Mohawk about 1,500 each.

Indications are that third quarter operations will almost equal, if not surpass, in some instances, the prosperous second quarter.

A survey of the situation among the larger companies reveals that their factories are operating at practically peak production, with three shifts of workers on a twenty-four hour basis. Vacations of employes were curtailed this summer, so there would be no interruption of factory schedules.

MACK TO BUILD IN SPRING

MILWAUKEE, Aug. 29.—Next spring will see construction work started on the new $150,000 sales and service building now being planned by the Mack-International Motor Truck Corporation organization for its Milwaukee branch. The new building will be located at North avenue and Newhall street. The Milwaukee branch construction activity reflects a general condition throughout the country according to Rodney Hallam, manager of the local branch, who pointed to the new Chicago branch and plans for a proposed million dollar branch at Los Angeles as further prooofs of Mack-International building activity. Business at the Milwaukee branch is 100 per cent greater than in August 1924 and prospects for further increases this fall are excellent.

August Sales in Chicago About on Par With June

New Models and Price Reductions Cause Stimulus—Every Firm Sees 1925 Record

CHICAGO, August 29.—August automobile sales in Chicago are about on a par with June. A few distributors report the volume slightly below June but these, for the most part, are the distributors of cars which are not sold under the yearly model system.

All distributors and dealers whose companies brought forth, or are now announcing the new 1926 models, are doing a much better business than in any other month this summer. One distributor of a popular-priced automobile declares that August will show a 240 per cent increase over June, which was the big month with the majority of dealers.

There is no doubt that the price reductions and the new models have greatly stimulated business. Every firm is optimistic and certain that 1925 will set a new volume record in the automotive industry. All report that their sales to the first of September have been much greater than during the entire year of 1924.

Used cars are selling very well in Chicago. The market is described as fair by only one distributor in the Chicago district. The others range from good to excellent.

Time payments are being well met, and many companies notice a tendency on the part of many buyers to pay cash, rather than spread their investment over a term of months.

New Organization Takes Over Gillette Rubber Co.

MILWAUKEE, Aug. 29.—Complete settlement of the affairs of the Gillette Rubber Co. of Eau Claire, Wis., and the taking over of the concern by a new organization has been announced. Officers of the new company are F. C. Hermann, president; W. R. Hutchins, vice president; R. B. Gillette, vice president; and I. B. Gilruth, secretary. The officers and S. G. Moon, William Kootz and John Rossi comprise the board of directors.

Negotiations for purchase of the old company began in April, 1924, but were not completed until August when the new company took over the plant from F. C. Hermann, who was appointed receiver at the time when the company became involved financially.

MOTO-METERS IN AUSTRALIA

NEW YORK, Aug. 29.—The Moto-Meter Company, Inc., of Long Island City, has granted a license to Nolan-Smith, Ltd., of Australia, to manufacture Moto-Meters in Australia under the patents owned by the American company. This development in the facilities for making and distributing this widely used automotive device is the result of the greatly increased sales of Moto-Meters in the Australian selling territory during the past few years.

Flat Rate Service Is Latest

ZANESVILLE, O., Aug. 29.—A new system of sales and service representation for automobile manufacturers has been inaugurated by the Automotive Brokerage Co. of America, with headquarters here, of which Edward B. Roemer is the head. Through this company it is proposed to establish direct representation in cities of 50,000 population and over for manfacturers and provide a continuity of sales and service representation regardless of changes in dealerships. Service on the cars represented will be given under a trademarked system known as Token Service. This will be operated on a flat rate basis. The Roemer & Co. Division of the Automotive Brokerage Co. has been organized at Zanesville to operate the first unit of the new system.

DORIAN WITH MUSIC MASTER

PHILADELPHIA, Aug. 29.—Frank Dorian, formerly in charge of the Pittsburgh office of the Music Master Corporation, manufacturers of radio and supplies, has been appointed assistant to President Walter L. Eckhardt. Mr. Dorian joined the corporation early in 1923, after spending more than 30 years in the talking machine industry. He came in contact with President Eckhardt while associated with the Columbia Phonograph Company.

LOW-PRICED AIRPLANE

DENVER, Aug. 29.—A light airplane priced at $2,475 on Denver field is being offered by the Alexander Aircraft Co. of Denver. This airplane is equipped with an OX-5 Curtiss engine. It is rated at 90 h. p. with a maximum speed of 90 m. p. h. and a landing speed of 31 m. p. h.

MACMARTIN LEAVES BOSCH

SPRINGFIELD, Mass., Aug. 29.—J. A. MacMartin has resigned from the post of secretary of the American Bosch Magneto Corp., and R. W. Washburn, formerly of Ernst & Ernst, certified public accountants, of Boston, with title of assistant secretary has been appointed to take over his duties. Reports of an extensive shakeup in the executive organization are denied by Morris Metcalf, treasurer.

MICHIGAN TITLES RAISE

DETROIT, Aug. 29.—The number of new cars titled in Michigan during the month of July totaled 20,046,873 more than for July of a year ago. Wayne county, with the largest number, titled 7,817 as compared to 5,889 for July 1924. The total up to August 1 was 122,124. Of the passenger cars titled, approximately 14,001 were cars listed at prices ranging from $1,000 downward; 2,821 at prices ranging from $1,000 to $1,500 and 3,184 at prices ranging from $1,500 upwards.

Los Angeles to Hold Radio Congress Just Before Show

Exposition to Be Held in Ambassador Auditorium Beginning Sept. 5

LOS ANGELES, Aug. 29.—Radio dealers from all parts of the Southwest have been invited to attend a special pre-view and general "radio congress" to be held in Los Angeles just prior to the opening September 5 of the Third Annual National Radio Exposition, which this year will be conducted under the auspices of The Radio Trades Associations of Southern California. The exposition will be held at the Ambassador Auditorium, situated on the Ambassador Hotel Grounds. The auditorium has a larger single floor area than any exposition building in Los Angeles.

Waldo T. Tupper, managing director of the show, declares that nearly 250 firms are expected to have exhibits at the exposition.

While the show is in progress meetings will be held every day in the Ambassador Hotel theater on various subjects associated with the development and the use of radio.

Carl A. Stone, president of Carl A. Stone Company, manufacturers' agents, Los Angeles, is chairman of the arrangement committee. Others who are in charge of the exposition include A. G. Farquharson, secretary of the Radio Trades Association of Southern California; J. W. Hartley, of the Braun Corporation, chairman of the finance committee; J. W. Boothe, general manager music and radio departments, Barker Bros., chairman of the publicity committee; Harry S. Mason, vice president and general manager of the Electric Equipment Corporation; C. H. Mansfield, manager radio department, Fitzgerald Music Company; Les Taufenback, general manager, Western Radio, Inc., of California; W. D. Scott, Pacific Coast sales manager, Herbert H. Frost, Inc.; Lombard J. Smith, of Lombard J. Smith Company; G. F. Hall, manager radio department, Platt Music Company.

NEW AUBURN DEALERS

AUBURN, Ind., Aug. 29.—New dealers who have recently been added to the Auburn organization follow:

Welday & Corns, Frankfort, Ind.; Senefeld Sales, Marion, Ind.; Warsaw Motor Sales, Warsaw, Ky.; O. D. Smart, Madison, Wis.; Searight, Winslow & Ewing, West Bridgewater, Pa.; Duco Frankfort Co., Frankfort, Ky.; Elmer G. Gunther, Perkinsville, N. Y.; Leigh F. Pestel, West Bloomfield, N. Y.; The Mellen-D'Ewart Co., Cleveland, O.; Glassmere-Auburn Co., Glassmere, Pa.; Smith Bros., Wilkinsburg, Pa.; State College Motor Co., State College, Pa.; Marshall-Sweitzer Motor Co., Dover, O.; Auburn Sales Co., Meriden, Conn.; John Bosch, Jr., Rockville Center, L. I., N. Y.; A. E. Bortner, Seattle, Wash.; S. Peterson, Sparks, Nev.; C. J. Schleentz & Son, Long Beach, N. J.; Brown Auto Co., Kansas City, Mo.; Fisher Motors, Watertown, N. Y.; Wilbur C. Stewart, Stone Garage, Greencastle, Ind.; Akins Motor Car Co., Covington, Ky.; Daniel J. Shea, Newport, Ky.

New Car Sales Are Beyond Expectations in St. Louis

Used Automobile Stocks Also Down —Delivery Is Principal Problem Before Dealers

ST. LOUIS, Aug. 29.—With virtually all of the new 1926 models announced by the various manufacturers, sales of automobiles have jumped ahead during the past month beyond the expectations of most dealers. All of the new models introduced were given enthusiastic receptions both as to the numbers of people who visited show rooms to see what the new cars looked like and by buyers. Many prospects had been waiting for the new cars and when they came out they were bought quickly.

Strange as it may seem, too, used car stocks have been kept down even through the rush of the sales of new cars. Dealers have been buying used cars right and they have been able to find ready sales for them.

The chief problem now seems to be getting enough cars to fill the orders which have been taken. Some dealers are not seeking orders aggressively just now for they have to spend all their time trying to pacify customers who have new ones coming.

Accessory sales have increased right along with the new car sales and even to a greater extent for the lower prices of automobiles have permitted a greater amount of money to be available for the purchase of accessories.

Dealers feel that the fall business will be good not only in the city but in the rural communities which are expected to come into the market strongly because of the good condition of crops.

FORD REACHES 12,000,000

DETROIT, Aug. 29.—Ford Motor No. 12,000,000 has been built. It was turned out recently at the River Rouge plant of the company and is now on display at the Detroit branch. No. 12,000,000 was built slightly more than a year after No. 10,000,000 was put on the road. Since the motor department was transferred from the Highland Park plant to River Rouge, upwards of 1,500,000 have been produced at the latter place.

QUEBEC REGISTRATIONS UP

QUEBEC, August 29.—There are 105,000 more vehicles in Quebec province, an increase of more than 30,000 over last year, notwithstanding the fact that the season has still to run several months. In the city of Montreal, statistics being compiled are expected to show that there are nearly 40,000 motor cars in operation, and in Quebec City, about 4,000. In both cases this is a substantial increase over last year.

OVERLAND DEALERS MEET

PHILADELPHIA, Aug. 29.—George D. McCutcheon, manager of the Philadelphia branch of the Willys-Overland Co., addressed a conference of 125 dealers at their annual meeting at the Hotel Pennsylvania. They came from eastern Pennsylvania, New Jersey, Delaware and Maryland. McCutcheon gave an optimistic talk, saying that the business outlook for the remaining months of the present year and the prospects for next year are bright. Others who spoke were John McDowell, Jr., N. F. Baxter, L. A. Lynch, A. B. Creeger and R. R. Lokey

BOSTON GASOLINE DOWN

BOSTON, August 22.—Gasoline has started to take a drop in Boston the last few days. The price had been around 25 and 26 cents in some places and 24 in others but now it has shown a drop to 20 cents where people have books and 22 on the average at many stations. There is talk that there is a price war on such as Springfield, Lawrence and other cities experienced and that it will drop to 18 cents or lower. Not all the companies have come down, however. Whether this was due to the recent statement issued by the Commission on Public Necessities that gasoline prices in Massachusetts were unjustifiable is problematical.

Pierce-Arrow Shipments Are At Highest Point in History

BUFFALO, Aug. 29.—Passenger car shipments from the Pierce-Arrow Motor Car Company's factory at Buffalo during June and July, 1925, in comparison with those made during the same months last year, represent the greatest increase in passenger car business in the history of the company, according to President Myron E. Forbes.

The increase in passenger car business for June, 1925, represented a gain of 622 per cent over June, 1924, while Pierce-Arrow business for July, 1924, showed a rise of 420 per cent over the same month of last year.

"One reason for the phenomenal increase in passenger car business is the new Series 80 Custom-Built Coach announced recently. Orders for the coach are taxing the capacity of our factory and it has proven one of the most popular models ever marketed by this company," said Mr. Forbes.

"Orders for trucks and busses produced by the Pierce-Arrow Motor Car Company continue strong. Our truck business is especially healthy and everything points to a splendid business throughout the remainder of the year. As an indication of the steady flow of Pierce-Arrow bus business, our bus orders to date exceed those for the entire period of 1924."

CANADA TIRES RAISE AGAIN

TORONTO, Aug. 29.—Advanced rubber prices are again to the fore, this making the fourth increase within the last two months on automobile tires and tubes. All sizes are affected this time and the increase approximates 15 per cent. Quantities of cut-rate tires and seconds in the market are acting as a resistant to further raises to higher levels. Many of the dealers have considerable stocks on hand, purchased at lower prices than are now being quoted.

Business Is Holding Up Well In Salt Lake City Territory

New Models Stimulate Demand But Cause Some Confusion in Used Car Market

SALT LAKE CITY, Aug. 29.—The automobile business in this section appears to be in a healthy condition at this time. Those agencies handling cars on which the prices have been decreased report that for a week or two business slowed up. They explained that this was because the public wanted to see whether or not the automobile market was seriously breaking, and whether all the manufacturers were intending to make a decrease.

On the other hand, the new models stimulated the demand for cars. On the whole business is holding up well. Those handling certain makes of small and medium priced cars are doing excellent business at this time.

In July 1,244 new passenger cars were sold in Utah, 489 of which were delivered in Salt Lake County, the big center of population in the state. For the same month 135 trucks were reported, 44 of which were sold in this county. Of the total number of passenger cars sold 623, or roughly half, consisted of machines put out by two popular-priced manufacturers, one of them selling 444 cars of this number.

The used car market is declared by several dealers to be "soft". One of them said that it is due to the policy of conducting special "clean-up" used car sales. He maintained that as no one is likely to be able to conduct his business without handling used cars it is better to treat them as one treats his new car business, and not attempt a clean-up at a sacrifice. The new models have, of course, thrown more used cars on the market.

The closed car is still gaining on the open car. One dealer said he thought 10 per cent of their total sales were in open cars.

FRENCH PRODUCTION UP

PARIS, Aug. 20.—(By Mail)—An increase of about 20 per cent in French automobile production this year, compared with 1924, may be expected if the average is maintained during the next five months. Although there are no official figures, last year's French production was estimated at 170,000,000 cars. April, May and June were particularly good months for both home and export business, while the output during July, although lower than that of June, has been equal to last year. There are very few firms not having increased production, those particularly having made progress being Renault, Donnet-Zedal, Peugeot, Mathis, Talbot, Delage and Hotchkiss. The greatest volume of business has been done in small cars of 10 horsepower (European rating) or 91

Milwaukee Sees Second Half Gain Over Business of First

Rural Districts Coming to Front as Result of Unusually Good Crops

MILWAUKEE, Aug. 29.—Confidence that car sales for the next four months of 1925 will bring the total for the second half of the year up to a point as high as 20 per cent in advance of sales for the first six months of the year is expressed by leading distributors of this city. First reactions to the exceptionally good crop conditions are reflected in a great forward stride in car sales in the rural districts.

At the same time the metropolitan areas are maintaining their lead over sales for the corresponding period last year, despite the fact that some of the lower priced cars are not doing their share in advancing this sales volume. Considerable comment has been caused in the local market by the failure of several of the lower priced cars to make good this season.

Right at this time, Ford sales are below those for the same period in 1924 although somewhat of a comeback has been registered in that July sales records for the state indicate a gain for this car over the June sales. When it is considered however, that Ford sales for July were something more than 500 below those for July, 1924, the task of other cars to maintain a 2,000 lead for July over July of last year becomes apparent.

Hudson and Essex continue setting a dizzy pace for other car distributors to follow. General Motors products have overcome their temporary lassitude. Packard showed a very nice gain. Nash continues to set new records in the home state. Other nice sales were reported by Studebaker, Kissell, Dodge, Overland, Willys-Knight, and Ajax.

The credit and collection situation in Wisconsin is most excellent. A large majority of cars are being sold on time payments but these payments are being met promptly, distributors point out, holding that correspondence with dealers shows very little complaint concerning collections or credit.

GOODYEAR, LTD., UNTROUBLED

TORONTO, Aug. 29.—Goodyear Tire and Rubber Company of Canada, Ltd., is taking care of the higher cost of rubber through its costing system. This differs from the plan of the parent company at Akron, which has created a $3,000,000 special raw material reserve. Though rubber has been above $1 a pound for some time, Goodyear of Canada has been using rubber that costs just about half this, due to the foresight of the management in making heavy purchases. Goodyear will not use as costly as 55-cent rubber in its product this year. Of late there has been a decided drop in the price of rubber, but this is not to be taken as indicating that the speculation is over.

Toledo Sees King's Aged Daimler

TOLEDO, Aug. 29.—Hundreds of Toledoans have visited the salesrooms of Willys-Overland, Inc., here to view the 14-year-old Daimler Knight car which formerly belonged to King George V of England and which was recently brought to this country by Charles Knight, inventor of the sleeve-valve motor.

Visitors marvelled at the quiet running motor in the royal car, despite its age.

Willys - Overland dealers in other cities will probably get a chance to show the car.

Seaman Body Plant Working Overtime on Nash Orders

MILWAUKEE, Aug. 29.—The plant of the Seaman Body Corporation in Milwaukee is working overtime in order to keep up with expanding business, Harold H. Seaman, president, has announced. Work is being pushed on a large new building which has become necessary in order to meet the demands for automobile bodies for Nash and Ajax cars.

Approximately 4,000 men are now employed at the Seaman plant and an additional 500 or 1,000 men will be added to the payroll as soon as the new building is completed, which will be within the next month or two.

The Seaman plant is turning out 450 automobile bodies a day at the present time. This number will be increased to about 600 a day when new facilities have been completed, Mr. Seaman said. The Nash concern, he pointed out, is far behind in filling orders and the plant will have to be kept going at high speed for the remainder of the year to keep up with business being put on the books.

TEW IS ASSISTANT MANAGER

AKRON, O., Aug. 29.—J. D. Tew, superintendent of production at the B. F. Goodrich Co. plant here, has been promoted to the position of assistant works manager. Following the resignation of H. K. Raymond from the position of vice president and works manager, President B. G. Work took over the duties of works manager. Mr. Tew is now his assistant in this capacity. Mr. Tew has been connected with the company for 19 years, having served for many years in the capacity of factory manager. He is a graduate of Harvard University.

HARTFORD PLANS SHOW

HARTFORD, Conn., Aug. 29.—As usual there will be an automobile show at the annual state fair which opens Labor day at Charter Oak Park, Hartford. The exhibits will be housed in individual tents along one of the main thoroughfares. A big display of trucks, passenger cars and tractors is promised. Arrangements have been made for tractor demonstrations.

Used Car and Replacement Business Best in Florida

Industrial Condition Very Good and Excellent Sales Expected Throughout South

TAMPA, Fla., Aug. 29.—The most pronounced feature of the automobile world in the southern states during August was the almost feverish building activity of many dealers and distributors. This would seem to indicate that these men anticipate a record business this winter. Car selling establishments in several cities noted have become more pretentious and include a larger floor area. New Orleans, Jacksonville, Tampa and Miami, and other cities will have several new, imposing buildings when the fall buying begins in earnest.

Buyers have been somewhat hesitant, waiting for the new models to appear, and since many of the new lines have been displayed there has been a tendency noted on the part of buyers to hold back and wait to see how the new products are going to perform. Southern people usually vacation more in the summer than in the winter when they are kept at home especially in the tourist centers of Florida, and they seem to prefer to use the old car than to buy a new one to frolic about in. The used car business had moved along fairly well, and the majority of dealers are not overstocked with used cars.

Florida has had nearly as many visitors from outside during August as she usually has during the winter season. Real estate values are steadily increasing. There is much building in all lines. Industrial conditions seem satisfactory. Both common and skilled labor is well paid, especially in Florida. Truck and fruit crops have been unusually successful. Cotton reports point to a satisfactory yield.

Business in replacement parts and other automotive equipment has been unusually good during August, many people fitting out old cars for vacation trips. Tires moved with a rush on account of anticipated advances, many people also had to have them for vacation trips.

Credit conditions were reported in fair shape. Buyers of cars specified terms in the majority of cases.

WISCONSIN RADIO SHOW

MILWAUKEE, Aug. 29.—The third annual radio exposition will be held in Milwaukee November 11 to 16 this year, in conjunction with the first annual convention of radio dealers in Wisconsin, and plans already prepared indicate that the exposition will be the largest of those held to date. Nearly 100 booths in the main arena have been taken by manufacturers and wholesalers of radio equipment and the allied industries. Wisconsin radio dealers promoted Radio Week, August 23-29 in order to stimulate interest in radio during the summer slump, and incidentally to arouse interest in the forthcoming exposition and dealers meeting.

Along Automobile Row

MINNEAPOLIS.—B. P. Gentry has been promoted from the sales department to superintendent of service of the Gray Motor Co. The company sells Studebakers.

WINNIPEG.—Marking the events of Empire Motors, Ltd., as a new organization in the retail automotive business of this city, a public reception was held in the salesrooms when Overland and Willys-Knight owners were particularly welcomed.

DES MOINES.—In line with a new policy of the Ford Motor Co. the Herring Motor Company becomes exclusive Ford dealer in Des Moines. Aside from the Herring Motor Co. only the Jensen Motor Co. suburban dealer, will handle Fords. The change in policy resulted in the cancellation of the contract of the O'Dea Motor Co.

GARDNER, Mass.—Cass Garage, Inc., of Athol has opened a new building for Buick sales and service at 22-24 East Broadway.

INDIANAPOLIS.—The Charles E. Stutz Sales Company has been made Peerless distributor for Indiana. The organization is also a Hudson-Essex city dealer and will continue this line in a retail way.

DALLAS, Tex.—The Pringle-Postal Motor Company has taken over the Durant-Star lines in the Dallas district. Sales and service stations of the new company are located at 2419 Commerce Street.

CINCINNATI, O.—Robert Lanzing recently resigned as sales manager of the Nash Cincinnati Motors Company and is making plans to go to Florida to engage in the automobile business. His successor has not yet been announced.

PHILADELPHIA.—P. J. Fischer, formerly transportation engineer of the Yellow Cab Manufacturing Co., has been made president and general manager of the Yellow-Drive-It-Yourself System with main offices located at 4142 Chestnut Street, Philadelphia. Fischer has organized successful drive-it-yourself systems and cab companies in a number of leading cities.

FINDLAY, O.—The Hall Buick is the name of a new retail concern chartered with a $10,000 capital to do a retail auto and accessory business here.

CLINTON, Ia.—The B. & C. Chevrolet Co. has succeeded the Smith Motor Sales Co. here. F. W. Benedict of Waterloo, until rcently connected with Chevrolet Motor Co. as factory representative having acquired an interest in the firm. L. F. Creglow, former sales manager for the Smith Motor, will be general manager of the new firm, which will continue the Chevrolet agency and service.

WOODSTOCK, Ont.—Elliott Bros. have discontinued Ford sales and will devote their efforts solely to Dodge Brothers and McLaughlin Buick cars. They will continue servicing Ford cars with special Ford equipment.

CLEVELAND, O.—The Swan Carburetor Company announces the appointment of R. S. Beane as district manager for the Southeastern states. Mr. Beane will be located at 241½ Marietta Street, Atlanta, Ga.

DETROIT.—G. A. Richard, president of the Richard-Oakland Company, Oakland distributors for Detroit, has appointed the Coates Motor Sales, Inc., 5740 Grand River as an associate Oakland dealer.

CHICAGO.—D. E. Bull has been added to the staff of the Apperson Motor Car Company, as wholesale representative at the local branch.

MONTREAL.—Legare-Nash Motors are introducing to the public through the medium of newspaper copy the Ajax motor car manufactured by the Ajax Motors Company, Racine, Wis.

BURLINGTON, Ia.—The Barton Overland Company, C. H. Barton, Roscoe, Ia., president, has opened a salesroom and Overland and Willys-Knight agency at 317 North Sixth Street.

AUSTIN, Tex.—The Midtex Motor Co. has taken on the Chrysler and Maxwell lines for Austin.

YOUNGSTOWN, O.—The Henderson-Roller Cadillac Co. has been chartered with an authorized capital of $50,000 to deal in automobiles and accessories.

SPRINGFIELD, Mass.—T. W. Spracklin has taken over Hall's Garage, renamed it The Oaks Garage, and added a line of Hood tires and automobile accessories.

DETROIT.—The Jay R. Cooley Co. has been appointed Chrysler dealer for Northwestern Detroit, according to an announcement made by John F. Evans, general sales manager of the John H. Thompson Company, Chrysler distributors for Detroit.

MINNEAPOLIS.—The Twin City Motor Car Co., distributing Essex and Hudson cars, has opened a sales and service branch at 3025 Hennepin Avenue in charge of H. M. Ferguson. It is a 24 hour station and a test of the new method of sales.

DAVENPORT, Ia.—Harry Mann, well known automotive dealer in eastern Iowa, head of the Ford agency, Harry Mann, Inc., 325 East Second street, has disposed of his interests to E. W. Procknow, who has been associated with the Ford agencies here several years.

TOLEDO.—John Lansdale, for a number of years with the Paige-Ohio Co., has joined the sales staff of the Grand Motor Sales & Service Co., a Nash agency, in Toledo.

MILWAUKEE.—The Monroe Auto Co. of Monroe, Wis., attracted several hundred people of that city and vicinity to the formal opening of its new $30,000 home. The company deals in Willys-Knight, Overland and Packard cars and is said to be the largest Overland and Willys-Knight dealer in southwestern Wisconsin. Everett Keel is sole owner of the business.

CHICAGO.—Its sixth branch in metropolitan Chicago has been opened by the Hudson-Essex Motor Company of Illinois at 7141 Wentworth avenue. J. Karl Henderson, formerly connected with the sales department of the main branch, will manage the new sales and service store.

DES MOINES.—The Fairfield Motor Sales Co., Fairfield, Iowa, is the name of a concern recently organized to sell Chrysler. R. E. Green and R. J. Johnson are the proprietors.

MOLINE, Ill.—The Dean Motor company this month announced its concentration on the Velie Motors Corporation agency and Clarence Dean, vice-president, says the company expects to capitalize upon the spontaneous demand in the home factory area of the Velie car.

DETROIT.—Utter and Son, Overland, Willys-Knight and Oldsmobile dealers for East Lansing, Michigan, are building a new service building which is expected to be ready for occupancy September 15.

CHICAGO.—J. R. Roberts, of the Roberts Motor Sales, 6050 Cottage Grove avenue, dealers in Willys-Knights and Overlands, has purchased the Irving Motor Sales, 117 East Garfield boulevard. Both stores now are showing Willys-Knights and Overlands.

CHICAGO.—E. M. Lubeck has been appointed district manager, with headquarters here, for the Oakland Motor Car Company of Pontiac. Mr. Lubeck formerly was with the West Side Buick branch and resigned as general sales manager of the Apperson Motor Car Company to accept the new position.

ST. LOUIS.—R. L. Butler won first prize for medal score in the golf sales contest conducted by the factory branch of the Willys-Overland Company here recently. Car sales counted for the score.

MINNEAPOLIS.—The Morey Chevrolet Co., has opened a sales building at 65 West Broadway. Arthur Johnson is sales manager. C. J. Morey is vice president and in active charge.

LOS ANGELES.—The American Rubber and Tire Company of Akron recently entered the coast field with its products for the first time. A warehouse has been established in Los Angeles and dealers are now being appointed by Jack Ward, who is in local charge of sales.

DALLAS, Tex.—George Goodwin of the Goodwin Automotive company, has announced he has taken on the De Jon Electrical Equipment lines for the Dallas territory. His territory calls for Dallas and many of the surrounding counties.

MINNEAPOLIS.—Herman Auerbach, who has been an associate dealer in Rickenbacker cars in Minneapolis, has been given distribution of this car in the city and 32 counties. He will open a display room in the center of the motor district.

MILWAUKEE.—F. W. Janssen formerly of the automotive electrical department of the Acker Electric Co. of Sheboygan, Wis., has purchased the Firestone Sales and Service Co. in that city. Mr. Janssen has been in the auto and accessory business in Sheboygan since 1907, having formerly owned and managed the Janssen Motor Co.

MEMPHIS.—The sales and show rooms adjoining the building of the Burt-Overland Co. and formerly occupied by the Murphy-Rollin Co. have been taken over by the former. The arrangement will permit the merchandising of used cars by the Burt-Overland Co. under one roof along with the new car department.

CHICAGO.—Frank A. Henderson has been appointed general sales manager of Community Motors, Inc., distributors of Oakland automobiles. Mr. Henderson previously was general sales manager of the Goodyear Rubber Co. of Akron and also district manager of the Willys-Overland company at San Francisco.

COLUMBUS, O.—George Lingo, who has been actively engaged in the automobile business in Columbus for a half dozen years has been made general manager of the Columbus Flint Company factory branch which is located at 182 East Long Street.

DETROIT.—Don Prentiss has been named manager of the sales promotion department of the Olds Motor Works by D. S. Eddins, general sales manager. Mr. Prentiss succeeds T. J. O'Brien who is on a six months leave of absence.

CHICAGO.—Stanley Bowles has been appointed sales manager of the A-C Manufacturing Company, manufacturer of rear wheel brakes for Ford cars and trucks, it is announced by the company. Before joining the A-C concern, Mr. Bowles was sales manager of the Bilger Motor Co., one of the largest Ford sales agencies of St. Louis.

SIOUX CITY, Ia.—Lee J. Bell, 10 years an automobile salesman in this city, has organized the Bell Auto company, 2046 Fourth Street, in the building formerly occupied by the Ray H. Darling Company, and will operate a used car agency. Mr. Bell for the last two and a half years has been with the Nebraska Buick Company.

GALESBURG, Ill.—R. H. Morgan & Sons, established here nine years with R. M. Morgan, a local veteran of 19 years' experience, as its head has taken the Nash and Ajax agency for this territory.

MILWAUKEE.—B. W. Reagles, well known for many years in automotive circles in Milwaukee and Wisconsin has been appointed sales manager for the West Point Garage & Sales Co. of 219 Twenty-seventh Street, Milwaukee, Overland-Willys-Knight dealers.

WESTFIELD, Mass.—J. K. Minkus has been appointed Studebaker dealer here and will shortly open a new sales and service building. The business will be conducted under the name of Westfield Motor Sales.

AURORA, Ill.—Charles Leek has purchased the Otto Theiss interest in the Aurora Buick Company and will continue the business under that name. The salesroom is to be remodeled and enlarged.

With the Associations

Hoosiers Re-elect Steinhart

INDIANAPOLIS, Aug. 29. — E. W. Steinhart for many years prominent as an Indianapolis distributor has been re-elected president of the Hoosier State Auto Association at the annual election this week. Other officers re-elected were Martin H. Luecke, Ft. Wayne; first vice president and legal counselor, and C. W. Lantz of Bedford, third vice president. New officers are Dr. E. R. Baldridge, Terre Haute, second vice president, and James L. Gavin, Indianapolis, treasurer. M. E. Noblett was re-elected secretary-manager.

President Steinhart issued a statement calling attention to the fact that Indiana is falling behind in the construction of good paved roads, in spite of the fact that Indiana motorists pay a three cent gasoline tax, and fairly high motor vehicle license fees. The association feels that a mistake was made when real estate and property was freed from any obligation in the way of state road taxes, and when other funds that formerly went to the state highway financing were shunted into other uses.

The injustice of the cities which now receive part of the gasoline taxes using these funds to replace repair money instead of being added to public funds to hasten the day of good roads and streets was also hit by Mr. Steinhart.

Chicago Outing Held

CHICAGO, Aug. 29. — The Chicago Automobile Trade Association held its summer outing Thursday at Grand Beach, Mich. The trip was made by special train from Chicago and the day was spent at golf, horse shoe pitching, swimming and other sports. A banquet was held at the hotel in the evening. The night was spent at Grand Beach and the return to Chicago was made after breakfast Friday morning on the special train, reaching the city in time for the day's business. This is the second time the outing of the Chicago dealers has taken this form.

Tire Dealers Close Nights

ST. LOUIS, Aug. 29.—Members of the Associated Tire Dealers of St. Louis will begin closing their establishments, nights, Sundays and holidays on September 1. Placards were distributed to the members which are to be displayed in prominent places in their building announcing the plan.

Several tire firms which put the closing plan into operation before the association adopted it reported that their customers commended the idea.

At the same meeting, A. P. Woehrle, president of the association, appointed tire dealers in several localities to hold neighborhood meetings to enlist non-members for the association.

N. B. M. A. to Convene

NEW YORK, Aug. 29.—The National Battery Manufacturers Association will hold a convention here at the Roosevelt Hotel, September 18 and 19, during the week of the Radio Show at the Grand Central Palace and the Second Annual Radio World's Fair at the 258th Field Artillery Armory. Subjects on the program for discussion include, The Lead Situation; Misbranding; Cooperation with the Service Station; Standard Ratings for Batteries; Statistics; Credit Bureau; Latest Inventions and Improvements; Trade Customs.

Harkins Heads Coast Body

SAN FRANCISCO, Aug. 29.—L. W. Harkins, of Tacoma, Wash., was elected president of the Washington Automotive Trade Association at the recent annual convention at Everett, Wash., according to advices received by the San Francisco Automotive Trade Association. W. T. Burke, of Seattle, and Lee Olney, of Montesano, were chosen vice presidents, and E. E. Harkins, of Seattle, secretary-manager. The convention named the following executive board: A. S. Eldridge, Seattle; C. E. Armantrout, Everett; Howard Steere, Tacoma; M. O. Hatch, Tacoma; L. E. Titus, Olympia; Harry Winde, Everett; Guy Reigel, Spokane; Art Hoge, Seattle; M. Kulp, Spokane, and J. Nagelvoort, Seattle.

The convention adopted resolutions recommending the repeal of the excise tax on automobiles and accessories, and recommending the adoption of the motor code. The association also resolved that it be incorporated. Speakers included Hance Cleland, of Olympia, Wash.; Mrs. Harry J. Miller, delegate from Snohomish county, Wash., and Carl Palmen, of Los Angeles, Cal. The 1926 convention will be held in Spokane. Attendance at the Everett convention was better than 70 per cent of the membership.

Join Fight on Excises

CHARLOTTE, N. C., Aug. 29.—The movement, which bids fair to become nationwide, for repeal of the excise taxes imposed on the automotive manufacturing industry, won the support of the Charlotte Automotive Merchants' Association, when that body formally declared its favor for enactment of repeal legislation by the next Congress.

The members of the association were urged by J. P. Harris, president of the local association, to vigorously urge United States Senators Simmons and Overman, of this state, and the other members of the North Carolina delegation in Congress, to assist in the effort which will be made next December to relieve the automotive manufacturing industry and the motoring public of this taxation.

Texas Jobbers Meet

SAN ANTONIO, Tex., Aug. 29.—The last quarterly meeting of the Texas Automotive Jobbers Association for the year was held here last week with a full membership in attendance. New laws and proposed legislation were among the questions discussed at the conference. Credit sales and collection, returning goods and increasing membership were also discusesd. The next meeting of the association—the annual meeting—will be held in Houston in October. At that time officers will be elected and reports of the activities of the organization for the year heard. C. A. McCauley of Waco presided at the meeting here. He is president of the association.

Iowa N. A. D. A. to Meet

DES MOINES, Ia., Aug. 29.—The Iowa Automotive Merchants' Association has announced that the Iowa conference of the National Automobile Dealers' Association will be held at the Hotel Fort Des Moines on September 9. Every automobile dealer in the state is invited to be present. Advance indications point to a large attendance.

California Association Moves

SAN FRANCISCO, Aug. 29.—The California State Automobile Association branch at San Jose has moved into its new building at 1034 The Alameda in that city. A. G. Brooker is manager of the branch and the staff has been increased from three to ten persons.

Tax Revision to Be Studied

CHARLOTTE, N. C., Aug. 29.—Consideration of a policy looking to a reduction by the North Carolina government of taxes on automobile establishments and revision of the system on which automobile owners are taxed will constitute probably the most important discussion at the annual summer convention of the North Carolina Automotive Trade Association, at Wrightsville Beach, near Wilmington, September 7-8, according to officers and members here of this organization.

Harry Clendenin, of Greensboro, is president of the association.

Howard J. Wisehaupt of Philadelphia, will deliver an address on "Dealers' Ailments." Mr. Wisehaupt at present is conducting an automobile salesmen's school at Raleigh, N. C. Lee A. Folger, of Charlotte, former president and one of the most influential members of the association, will lead the round-table discussion of sales promotion.

This association has tentatively developed a comprehensive program relating to legislation, important planks of which declare for taxation of automobiles on a basis of weight, instead of horsepower, revision of that schedule of taxes, and for compulsory insurance of all automobiles.

Coming Motor Events

Automobile Shows

Dallas, Tex.—Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis.—Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal.—Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Grand Rapids, Mich.—Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.

Oklahoma City, Okla.—Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Sacramento, Cal.—Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.

Shreveport, La.—Oct. 24-Nov. 3
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York—Nov. 15-21
Twenty-first Annual Automobile Salon.

Wheeling W. Va.—Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.

White River Junction, Vt.—Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago—Oct. 10-17
Seventh annual Used Automobile Show under auspices of Chicago Automobile Trade Association, at Coliseum.

Chicago—Nov. 5-7
Annual show in connection with convention of National Standard Parts Association, Coliseum.

Chicago—Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn.—Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston—Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago—Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City—Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Boston—Oct. 12-17
Annual radio show in Mechanics' Building. Shelton Fairbanks, manager.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

New York—Sept. 18-19
Meeting of National Battery Manufacturers' Association at Commodore Hotel.

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Races

Altoona, Pa.—Sept. 7
Charlotte, N. C.—Nov. 11
Fresno, Cal.—Oct. 3
Los Angeles, Cal.—Nov. 26
Monza, Italy—Sept. 6
Italian Grand Prix Race.
Syracuse, N. Y.—Sept. 19
Rockingham—Oct. 17
Baltimore—Oct. 24

Conventions

Buenos Aires, Argentine—Oct. 8-13
Pan-American Road Congress.

Cleveland—Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland—Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia.—Nov. 12-13
Automotive Merchants' Association Convention.

Montreal, Que.—Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Philadelphia—September
S. A. E. Automotive Transportation meeting.

Pittsburgh, Pa.—Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis—Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Eaglesmere Park, Pa.—Sept. 14-17
General meeting of the Automotive Electric Association.

Wrightsville Beach, N. C.—Sept. 7-8
Annual meeting of the North Carolina Automotive Trades Association.

Montreal—Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Foreign Shows

Berlin, Germany—Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina—Oct. 8-13
Pan-American Road Congress.

London, England—Oct. 8-17
Olympia Passenger Car Show.

London, England—Oct. 29-Nov. 7
Annual Truck Show.

NEW HUPP DEALERS

DETROIT, Aug. 29.—New dealers added to the organization of the Hupp Motor Car Corporation follow:

Erswell Motor Co., Brunswick, Me.; Rhineland Garage, Rhineland, Mo.; Cooper & Gorman, Suffield, Conn.; Carl Peterson, Ltd., Sarnia, Ont.; Greenbrier Auto Sales Co., Marfrance, W. Va.; Fletcher-Geiger Motor Co., Ashland, Ky.; Virgil Butler, Paintsville, Ky.; Montello Garage, Brockton, Mass.; W. B. Bell, Arkadelphia, Ark.; H. A. Huey Motor Sales, Kenton, O.; C. A. Gorman, Wagner, S. D.; W. R. Gragier, Tyrone, Pa.; Florentine-Towle Motor Sales, Inc., Park Ridge, Ill.

O. C. Prince, Ocala, Fla.; Service Garage, Mount Dora, Fla.; Jones Swan Motor Co., West Palm Beach, Fla.; Fox Bros. Auto Accessory Co., Charleston, Miss.; L. F. Zinter, Kinsington, Minn.; Thomas A. Swift, Stouffville, Ont.; Blodgett & O'Donnell Motors, Syracuse, N. Y.; The Motor Mart, Yakima, Wash.; Johnson Motor Co., Okemah, Okla.; Delray Garage, Delray, Fla.; Trieb Motor Co., Roswell, N. M.; Lyons Auto Co., Grand Forks, N. D.; John F. Billhardt, Ridgewood, Brooklyn, N. Y.

Harry Smith, Inc., Passaic, N. J.; Del Motor Co., Winter Haven, Fla.; Collis & Dole, Inc., Newburyport, Mass.; Moore Shimpaugh Motor Co., Alton, Ill.; Geo. W. Daniels, Hornell, N. Y.; Gallup Cadillac Co., Gallup, N. M.; A. W. Garnett, Madison, W. Va.; C. P. Holley, Danbury, Conn.; Bert V. Allen, Prescott, Ariz.; H. L. Morgan, Newton, Ia.; Will R. Walpole, Philip, S. D.; Nash Irvington, Inc., Irvington, N. J.; Baker & Baker, Senatobia, Miss.

J. C. Cone, Porterville, Calif.; S. S. Meyer Motor Co., Stockton, Calif.; Philip Burkhart, Lyons Falls, N. Y.; H. M. Parke, Camden, N. Y.; Pomeroy Motor Co., Longview, Wash.; Potter County Garage Co., Coudersport, Pa.; LaMay Bros., Saybrook, Conn.; F. Riley & Son, Clawson, Mich.; Ralph Stotz, Brownstown, Ind.; Chapman Claxton Motor Co., Frankfort, Ind.; Johnson Bros. Garage, Monticello, Ind.; Fouch Bros., Tipton, Ind.; McDonals & Hunt, White Springs, Fla.; Fish-Plymate Motor Co., Arkansas City, Kans.

C. E. Henneberger, Atwood, Kans.; Ernest Denny, Golden City, Mo.; Lawrence Hoover, Norton, Kans.; C. A. Bliss & R. M. Harvey, Osborne, Kans.; W. B. Thorpe, Texarkana, Tex.; Lorenz Auto Corp., Bowman, N. D.; A. E. Arney, International Falls, Minn.; Maxwell L. Brown, Red Bank, N. J.; Kensington Auto Sales Co., Kensington, Phila.; Collier & Brown Motor Co., Brownsville, Pa.; S. J. Robinson & Sons, Charlottesville, Va.

Hansen Auto Co., Mackay, Idaho; J. A. Houghtelin, Twin Falls, Idaho; Riverside Garage, Archibald, Pa.; Kindt's Garage, Danville, Pa.; Paul Ely, Lock Haven, Pa.; Herman H. Follmer, Milton, Pa.; Noel's Service Station, Minersville, Pa.; Capitano-Nash Motor Co., Pittston, Pa.; Eagle Garage, Pottsville, Pa.; State College Motor Co., State College, Pa.; Geo. W. Brewer, Tamaqua, Pa.; John Hurney, Throop, Pa.; United Motor Car Co., Williamsport, Pa.

CANADA GAS RECEIPTS

QUEBEC, August 29.—The gasoline tax instituted by the Provincial Government in 1925 will give the Province of Quebec this year a revenue of approximately $750,000. Last year the province collected about $520,000.

McKINNON INDUSTRIES SOLD

ST. CATHERINES, Ont., Aug. 29.—One of the largest strictly cash transactions which has taken place in industrial circles in Canada during recent years was completed recently when Gideon Grant, of the firm of Johnston, Grant, Dods and Grant, Toronto, acting for himself and N. R. Sinclair of New York, acquired all of the assets of McKinnon Industries, Ltd., St. Catharines, Ont., and the McKinnon Dash Company, Buffalo, N. Y. The cash consideration is understood to be in the neighborhood of $2,000,000. Mr. Grant stated positively that the sale does not involve any change whatever in the company's management. Under a voting trust arrangement, B. W. Burtsell will continue in full charge of the company's management.

GETS STUTZ CUP

PHILADELPHIA, Aug. 29.—The S. R. Blocksom Motor Co., Philadelphia, has been awarded the Stutz President's Cup for having the best record of sales development for June, which was the largest for any one month in the company's history. The cup is being displayed at the showrooms.

Chrysler Denies Essential Change in Insurance Plan

Company Awaits Decisions in Various States Before Carrying Case to Highest Courts

NEW YORK, Aug. 29.—There has been no essential changes or modification of the Chrysler insurance and finance plan, despite the impression prevalent among insurance men, it is stated by Chrysler officials.

The impression arose from reports of legal developments affecting the plan in Alabama, where the ruling was made that the Palmetto Fire Insurance Co., Chrysler underwriters, was operating contrary to the state law. The company thereupon agreed to take out a license to do business in Alabama. At the same time, however, the assistant attorney general, J. Fred Johnson, Jr., made another ruling that supported the fundamental contention of the Chrysler interests—that the dealer by reason of negotiating a sale of a car with insurance included cannot be deemed an insurance agent.

Several states have declared the plan entirely illegal, and others are awaiting the outcome of court actions started in seven or eight capitals. Of these, the Wisconsin suit is regarded as the most important, as it will probably be the first to be carried to the higher courts. Chrysler counsel in this case, as in New York and others, have obtained a temporary order restraining the insurance commissioner from interfering with the business of the Chrysler Sales Corp. On August 24 the Chrysler company was allowed fifteen days in which to file a brief on the granting of an interlocutory injunction, and the insurance commissioner ten days additional to file a reply.

The Chrysler company is determined to carry the case to the United States Supreme Court, if necessary.

Toronto Man Made General Manager of Flint Motors

FLINT, Mich., Aug. 29.—At a meeting of the directors of the Flint Motor Company, R. H. Mulch of Toronto was elected vice president and general manager and C. O. Miniger of Toledo was elected chairman of the executive committee. Mr. Mulch is vice president and general manager of Durant Motors of Canada, formerly general manager of the Chevrolet Motor Company of California.

Mr. Miniger is well known in the industry as the founder and president of the Auto Lite Company of Toledo and the U. S. Light and Heat Company of Niagara Falls. He is also a director of the Willys-Overland Company.

During the last four months the Flint Motor Company plant has been completely re-arranged and three popular priced models developed under the direction of W. R. Willett. Sixty thousand Flint cars will be built during the calendar year of 1926. Mr. Willett has been appointed assistant to W. C. Durant, president of Durant Motors, Inc., with headquarters in New York City.

SQUEEKS and RATTLES

HEAVY DUTY



"Tell me again, George! What kind of a car are you going to buy me?"
"A two ton truck, dearest."
—Smith's Weekly

HOW TO JUDGE AN AUTOMOBILE

Ask the salesman.
Twist the right front door handle.
Look at the instruments on the dash.
Kick the left rear tire.
Bend down and look at the floor beneath the car.
Poke a finger into the upholstery.
Place right foot on front bumper and push gently.
Light a cigar.
Ignore your wife's suggestions.
Step back ten feet, close the left eye, and get the ensemble effect.
Ask the salesman again.
—Judge.

"I have heard," said Professor Short,
"That Babylon fell.
And Ninevah was destroyed;
And—
Some one in the class:
"Tyre was punctured."
—Notre Dame Juggler.

What a Shock

"My boss fired me because I took his car out last night."
"How did he know you took it out?"
"I ran over him!"
—Al Jolson in "Big Boy".

"An' phwat's become ov Moike Flanagan?"
"Poor chap! He mistook a taxi-horn for the midday whistle, an' stopped work crossing the Strand!" *—Gaiety.*

An acrobat knocked down by a motor in Holborn last week executed a somersault and escaped. This is the sort of thing that sours our taxi drivers.
—Passing Show.

At one stage of last year's Arctic Expedition the members could hear jazz music broadcast from London. Then they pushed on farther north.
—Humorist.

POLITENESS DE LUXE



He: "Do you think a lot of me?"
She: "Yes, I've loved you since the night you got up and gave me your seat in the Patrol Wagon." *—Smith's Weekly*

NEW STUTZ DEALERS

CHICAGO, Aug. 29.—Announcement has been made by F. D. Cerf, president of the Stutz Chicago Factory Branch, Inc., of the closing of Stutz dealer franchises with the Oak Park Sales & Service, Inc., of Oak Park, and the Schuenemann Motors, 2489 Milwaukee Avenue, Chicago. The former company is owned by Charles Raggio and A. T. Snow, the latter being vice president and general manager and actively in charge of the business. The Schuenemann Company is owned by father and son, both of whom have been actively engaged in the automobile business for a number of years.

SURETY CO. HAS SHOWROOM

HARTFORD, Conn., Aug. 29. — The Hartford Accident & Indemnity Co. has opened a salesroom at 39-41 Allyn street as an outlet for reclaimed cars. This is the first instance of an insurance company opening a salesroom for the sale of recovered and reclaimed cars.

Reo Reduces Prices on Speed Wagons and Passenger Cars

LANSING, Sept. 1.—Prices on Reo passenger cars and speed wagons, one and a quarter tons capacity, have been revised, the new prices ranging from $50 to $150 lower.

All models in the passenger line, as it is now manufactured together with the speed wagon with either the four or six cylinder engine are affected.

The new prices are: Series G. Sedan $1,565; Series G Coupe, $1,495; Reo Sport Roadster $1,665; Series G Deluxe Sedan $1745; Speed Wagon with four cylinder engine, one and a quarter ton capacity, $1,035 and Speed Wagon same capacity, but with the six cylinder engine $1,185.

During the last five months, Reo according to company officials, has broken all records in its 21 years to both production and sales. Recently the Series G sedan, coupe and sport roadster have been the biggest sellers. The speed wagon has also enjoyed an unusual demand so that the company now accounts for more than 125,000 speed wagons in active service.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
		"8-88"	
.....	4-p	Sport Roadster	1,975
.....	6-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	7-p	Sedan	2,550
.....	.....	Wanderer	2,400
BUICK		**"Standard"**	
.....	2-p	Roadster	$1,125
.....	5-p	Touring	1,150
.....	2-p	Coupe	1,195
.....	4-p	Coupe	1,275
.....	5-p	4d. Sedan	1,295
.....	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
.....	2-p	Roadster	1,250
.....	5-p	Touring	1,295
.....	5-p	Sedan	1,495
.....	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
.....	3-p	Sp. Roadster	1,495
.....	5-p	Sp. Touring	1,525
.....	4-p	Country Club	1,765
.....	4-p	Coupe	1,795
.....	5-p	Brougham Sedan	1,925
.....	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
.....	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
.....	7-p	Sedan	3,295
.....	5-p	Brougham	2,995
.....	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
.....	7-p	Touring	3,250
.....	.....	Phaeton	3,250
4400	5-p	Coupe	4,000
4490	5-p	Sedan	4,150
4590	7-p	Suburban	4,285
4655	7-p	Imperial	4,485
CASE		**J. I. C.**	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3223	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3128	5-p	Sedan 4d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1755	2-p	Roadster	$525
1870	5-p	Touring	525
2015	2-p	Utility Coupe	675
2110	5-p	Coach	695
2220	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$6,650
4500	4-p	Sp. Touring	6,150
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,895
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DORRIS		**"6-80"**	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4810	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		**A-22**	
.....	2-p	Sp. Roadster	900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	795
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,735
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,800
2845	5-p	Touring	2,650
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,200
3080	5-p	Sport Sedan	3,350
3275	7-p	Limousine	3,500
3135	5-p	Cabriolet	4,400
GARDNER			
		"6"	
2975	5-p	Touring	1,395
2925	.....	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3100	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3290	5-p	Sport Sedan	1,895
3300	.....	DeLuxe Sedan	1,895
		"8"	
3175	5-p	Touring	1,995
3100	.....	Sport Roadster	1,995
3300	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ		**D-1**	
3360	5-p	Sedan	$1,695
HUDSON		**"Super Six"**	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,195
3425	4-p	Brougham 4 d.	1,495
3675	7-p	Sedan	1,695
HUPMOBILE "R"			
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		**"23-25"**	
3025	4-p	DeLuxe Road.	$1,500
3015	5-p	DeLuxe Touring	1,320
3000	5-p	Coach 2d.	1,245
3150	5-p	DeL. Coach 2d.	1,400
3305	5-p	DeLuxe Sedan	1,680
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,275
3340	5-p	Touring	2,275
3450	3-p	Friendly "9"	2,575
3625	5-p	Brougham	2,575
3520	4-p	Victoria	2,475
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
3800	7-p	Suburban Sedan	3,375
KISSEL		**"55"**	
3130	2-p	Speedster	$1,895
.....	2-p	Sp'dster De Luxe	2,185
.....	4-p	Speedster	1,995
.....	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
.....	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
.....	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
.....	7-p	Touring	1,785
.....	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
.....	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,685
.....	5-p	Brougham 2 d	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
.....	5-p	Victoria De Luxe	2,685
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster De L.	2,585
.....	2-p	Speedster De L.	2,585
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Tourster De L.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Luxe	2,885
.....	5-p	Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,195
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,985
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	5-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4330	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
.....	.....	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

MOTOR AGE

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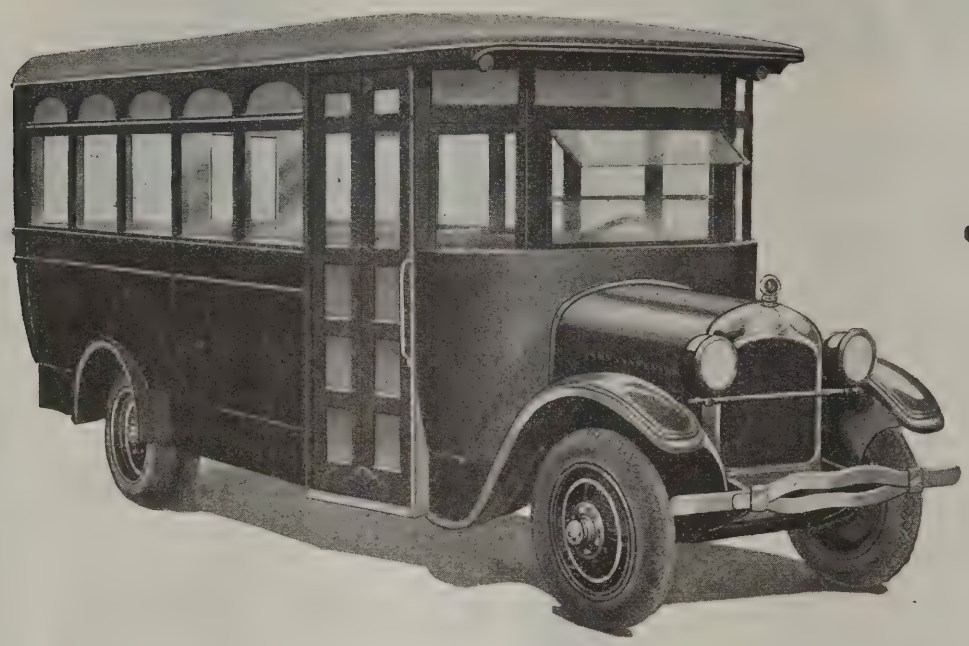
Coryright, 1925, by CHILTON CLASS JOURNAL COMPANY

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Miller BUILT BELLEFONTAINE, OHIO.

Model M

On City Streets, — and on the Highways

MILLER-BUILT buses mounted on the new Studebaker bus chassis are giving wonderfully satisfactory and profitable performance in both city and inter-city service.

Model M, Metropolitan Pay-Enter Type Bus, shown above, is ideal equipment for city service, where stops are frequent. The driver controls his bus, collects fares and oversees the entrance and exit of all passengers without leaving his seat. It seats twenty-one passengers comfortably, with ample room for a large number of standees.

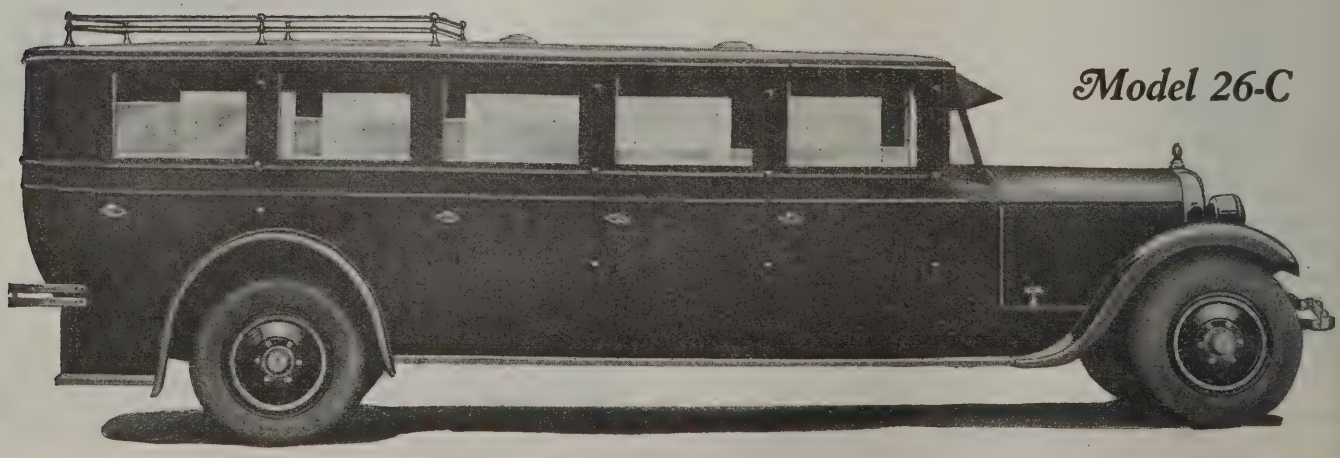
Model 26C, shown below, is one of the most popular designs for heavy interurban service.

Although rated as a nineteen passenger job, this bus will easily accommodate as many as twenty-two passengers.

The Miller-built line of buses on the new Studebaker chassis includes a model for every kind of bus service. Ask your Studebaker dealer, or write us direct, for complete specifications, prices, etc.

The A. J. MILLER CO.

BELLEFONTAINE, OHIO



Model 26-C

MOTOR AGE

Vol. XLVIII | Chicago, September 10, 1925 | No. 11

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

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Merger of Fageol and Hall-Scott with J. G. Brill and American Car & Foundry nears completion. Page 32.

Fords pay $16,493,160 income tax, nearly fourth of amount for first Michigan district. Page 34.

Chrysler Corp. buys Detroit plant of American Motor Body Co. Page 34.

Plans begin to take shape for 1926 National Automobile Shows in New York and Chicago on January 9 and 30 respectively. Page 35.

Ustick heads new company to distribute Rickenbacker cars in St. Louis territory. Merger combines two former distributors. Page 35.

New car sales reach peak in August in Southern California territory. Public shows excellent response to new models. Page 37.

Dallas, Tex., dealers plan to exhibit at State Fair of Texas October 10 to 25. Page 37.

U. S. revenue collections from automotive industry show big increase in July. Page 38.

President Sloan of General Motors Corp. urges level line of production in factories. Says dealers must carry heavier stocks at times to protect rush periods. Page 43.

August production expected to total 11 per cent greater than July, according to N. A. C. C. figures. Page 38.

New car sales show sharp increase in San Francisco territory. Used automobiles find less favor. Page 33.

Homer McKee takes place of E. S. Gorrell as vice president of Marmon, Gorrell going to Stutz as vice president. Page 33.

Franklin reduces prices $15 to $225 on all models. Page 33.

Beecroft sees heavy sales volume throughout last half of 1925. Page 33.

Used car sales during first six months of 1925 are 17 per cent greater than during same period of 1924, N. A. D. A. figures reveal. Page 39.

Iowa dealers report August business shows good increase over same month last year. Page 39.

Gasoline tax receipts in Ohio are far ahead of expectations of law's proponents. More than $3,500,000 collected in less than three months. Page 38.

Chevrolet Motor Company arranges co-operative plan to aid dealers with advertising in local media. Page 37.

Tire dealers in Carolinas expect excellent business this fall and winter. Movement to consumer is brisk. Page 36.

Louisville dealers predict good fall sales volume. August sales better than last year although slightly below July. Page 36.

Stocks of automobiles are light in Dallas, Tex., trade territory, with delivery the big problem in some lines. Page 36.

In Next Week's Issue—Millions of Cars Need Brake Service

Lower Prices
MEAN MORE TWO-CAR FAMILIES

Time Is Ripe for Dealers to Sell Owners on Desirability of Retaining Their Old Cars and Buying New Ones to Double Their Transportation Facilities

By SAM SHELTON

THE first thought of the automobile dealer, when the retail price of his wares is reduced by public announcement of the maker, is how to make up for the reduction of profit per unit of sale which is automatically reduced when the volume of sales in dollars goes down.

There is, in fact, opened up to the retail trade by the present situation an opportunity that it has never had before to so great an extent. It is simply this: the chance to augment profits and at the same time hit a body blow at the vexatious used car problem by converting more and more families to the two-car idea.

The two-car idea is easily comprehended by the head of any family and still more easily comprehended by the wife and daughter or son. One car cannot be two places at once. When father is driving it on business mother and the girls and boys must stay home or walk, or ride the street cars, or take a taxi or bus, or ruffle their good natures by some other substitute for modern personal transportation.

Social evolution has brought us to the stage of the two-car family and now, involuntarily, economic pressure has created a condition that makes possible the realization of the two-car family in town and country. In the early days of the industry most of the car owners were men of wealth and naturally they had reached the age where they had families of grown-up sons and daughters. Frequently they maintained two or more cars for the convenience of various members of the family. If they had only one car there usually was a chauffeur to see that it was available to take the different members of the family where they wanted to go.

Today the majority of cars are owned by men in the great middle class, and their families are in all stages of development. Families that got along very well with one



Waiting for the two-car salesman—Father has just announced that he will use the car today on business

car a few years ago are now feeling the need of two. Women are taking to driving more and more and boys and girls as they grow up are just naturally trained to look upon the motor car as the logical means of transportation. Almost every day in the life of the modern American family there arises a situation wherein the possession of two or more automobiles would have made everybody happier and probably would have proved a real economy for the family.

Here are the two great factors that have created the two-car opportunity:

1. Prices of new cars of real value are at the lowest point in history.

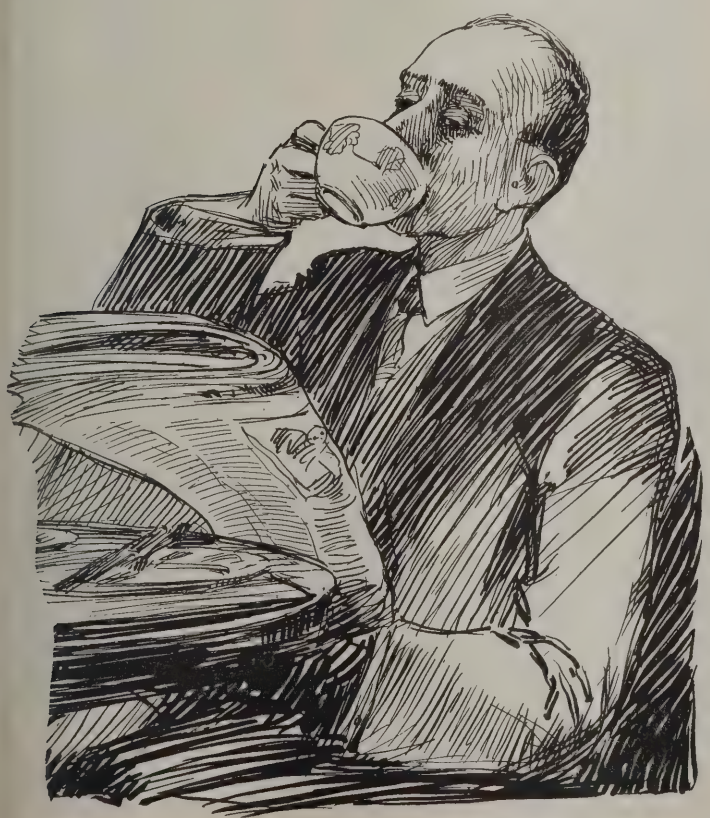
2. Used car allowances are lower than ever before.

Here is the way it works:

The man in the market for a new car gets an appraisal or valuation on his old car so low that for the time being it jars him loose from all thought of a new car. And yet he wants a new car. Probably his old one is an open model and the wife and children are clamoring for a comfortable enclosed car before the cold weather sets in. And the head of the family wouldn't mind having comfortable transportation for the winter months. And yet he may feel a decided reluctance in giving up the open car. Probably he enjoys long trips in it in the summer time. He may have weighed the advantages and disadvantages a long time before finally deciding that he would get a new car if he could make the "right kind of trade."

At present prices the "right kind of trades" from the standpoint of both owner and dealer simply can't be made. In self protection the dealer is compelled to keep allowances for used cars, especially open ones, very low. The price the dealer is able to offer for the old car often is very much less than what that car is actually worth to the owner.

The dealer or salesman who is awake to this situation takes advantage of it by approaching the prospective customer with the thought of how cheaply he can own two cars. Let us suppose the dealer has been able to offer



$300 for a 1923 touring car. The customer is interested in a new car that costs about $1500. By sacrificing his old car he can get the new one for an outlay of $1200, but from then on he has only one car. For only $300 more or a total outlay of $1500 he can have the satisfaction of owning two cars and the extra car will have cost him only $300, or looking at it another way, the average cost of the two cars is only $750 each.

Within the last two months almost every car of popular acceptance has been reduced in price. Values that were already phenomenal are still greater. But the automobile dealer is confronted with the necessity of selling more cars to do the same volume of business that he could have done before with fewer cars. It means greater sales effort, more energy applied to the sales of accessories, tires, supplies, service and miscellaneous items. But at the same time he is expected by the factory and the distributor to sell more cars. *If he will consistently follow up the opportunities offered of making clean sales of a second car to owners now possessing fairly good used cars he will open up a profitable field.*

The dealer who is in contact with a fairly large number of car owners, of the make he sells or a competitive make, has a made to order prospect list that he can work at low cost and with a high degree of selectiveness. The chances are he knows the financial condition of these families very well. He knows which ones have paid cash for their cars or have met their time payment notes promptly. He knows which ones are able to pay cash for supplies and repairs, and don't find it necessary to lay their cars up for lack of operating funds.

Hand Picked Prospect List

These families constitute a hand-picked list of prospects upon which to start the two-car campaign. If they are in comfortable circumstances financially they will listen attentively to the two-car argument. They have always wanted two cars, but they have never stopped to think how cheaply they could own them. If the old car was bought on the time payment plan and paid for without any great inconvenience, the owner is in a receptive mood to consider another deal of that kind. It may be, however, that he has prospered and may want to pay cash for the new car. He will be interested in learning what he can save by paying cash.

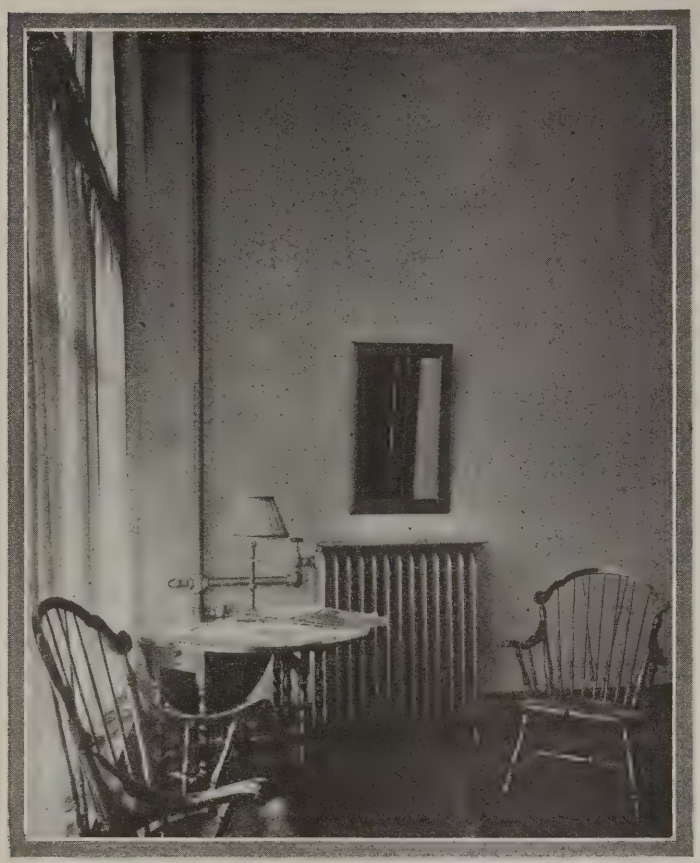
In many communities the cost of owning an extra car is not great. In the country and smaller cities where individual homes predominate there is usually shelter already available. At any rate the cost of a two-car garage is very little more than that of a single car garage. The garage cost is a more important item in the larger cities, but even so it is not prohibitive except in a few instances. In most cases it probably will be found that the family can work out a scheme by which the extra operating cost of the second car will be paid out of the allowances or separate incomes of mother or the children. Thus the burden on the head of the house will not be increased.

The capable automobile dealer or salesman will be able to think of any number of logical arguments to use in convincing the car owner of the desirability of retaining his old car.

For instance, if the owner keeps his old car and buys a new one he will have the old vehicle available for fishing trips, tours or outings that would subject it to rougher treatment than he would want to give a new closed car.

With two cars in the family he can use one for business and leave the other for the wife to use in taking the

(*Continued on Page* 20)



Slicking up the showroom or salesroom does not always mean the expenditure of much money. Often a corner can be treated as above to add comfort and attractiveness. Keep the decorations and fixtures simple, as this always is more dignified

Put New Atmosphere in the Salesroom

"Slick Up" Makes the Place More Inviting so It Won't Be Just Another "Garage". A Fresh Coat of Paint, Rearrangement of Furniture and Seasonal Display Will Work Wonders to Attract New Trade and Hold the Old

By B. M. IKERT

RECENTLY we observed a very fine specimen of a new home attractively finished with flower boxes, willow-green shutters, a beautiful white colonial door with solid bronze latch and knocker. It was beautiful, magnificent. But one thing spoiled the whole make-up. A flimsy 10 cent tin mail box painted jet black was stuck on the door frame. Just spoiled everything.

It reminded us of some of the showrooms of dealers wherein handsome cars often are deprived of an otherwise excellent setting just because someone was careless and forgot to place a drip pan under the engine, or part of a crate was left on the floor.

Some recent surveys of dealer establishments show clearly the need for a general cleaning up and putting the houses in order for company, so to speak. It has been a busy summer and many things have been left undone under the pressure of attending to the daily wants of customers and demands of tourists. Like the busy housewife who "just couldn't get her work done today" many dealers find they are in about the same fix. But it's time to slick up now, and while we are about it let's make ours a real place.

SLICK UP NOW FOR

Why have people refer to your place of business as just another "garage"? Why allow them to think that being in the automobile business means dirt, grease, oil and a lot of rotten looking signs with mispelled words and dots over the capital I's?

One cannot look over a lot of dealer establishments, both big and little, but what many things suggest themselves, which if carried out will give to the showrooms, and the establishment in general, a different and more pleasant atmosphere. The bigger places of business, with their pretentious showrooms and porters to keep them groomed have not much to get out of order, because the owners of such businesses set aside a certain amount each year for maintenance of the property.

Small Town Dealer's Problem

But the small town dealer who cannot afford a porter or two to do nothing but keep his place of business in order must adopt other methods and even lend a hand himself. Slicking up does not necessarily mean spending money for a lot of fancy stuff which instead of adding to the attractiveness of the showroom merely clutters it up.

Your showroom is after all the key room to your business. It is the living room of your house; the lobby of your hotel. Being placed in the most prominent part of your establishment it is right that it should be treated accordingly. It is the mingling place of customers, both old and new and by the atmosphere accorded them there they will largely judge the rest of the departments of your business. A neat, clean and dressy showroom suggest good mechanical work in the shop. A dirty and cluttered showroom, slovenly methods in the shop.

Just where to start a slick-up campaign as regards the showroom is difficult to say, but we dare say if the dealer took a pad of paper and pencil and jotted down the things he knows ought to be done, he would find plenty. Some of the things which follow perhaps sound superfluous, but our investigations would indicate it is the doing of the more obvious things that stands between a good and bad looking showroom.

Customers for one thing like to see a change. What if a furniture store never changed the order of things in the display windows? By dressing up the windows differently from time to time there is produced an incentive for people to buy. When you rearrange the contents of your showroom and doll it up a bit here and there it gives the impression that you have a fresh stock of merchandise. But, if it looks the same year in and out, people soon get the idea you have a lot of left over stuff on your shelves which time eventually will move rather than any direct sales appeal.

So, let's see what rearrangement we can make. Instead of making the showroom floor a storage space for cars, why not give it a different and more busy atmosphere by moving the bookkeeper and stenographer and perhaps the billing clerk into the center of the room and fence them off properly with a neat railing of some sort? Banks find it profitable to place a series of desks right in the center of their establishments where it is easy for patrons to do business. In the case of the dealer's showroom there still would be room to display a few cars well. Such an arrangement often gives the feeling of a busy place, not found, always, when the floor contains nothing but cars and the office force is tucked away where nobody ever sees or can find them. If you do rearrange your showroom

WINTER BUSINESS

as suggested, be sure to place a neat little "Information" sign on the desk nearest the customer who enters.

And, by the way, the subject of signs is something not to be overlooked in checking up. Signs are something which catch the eye very quickly and if there must be signs let's make them attractive. The time worn posters advertising last year's county fair and faded pink lettering of what was once a bright red sign painted on cheesecloth telling of a price reduction on a certain model ought to come down. It is a mistake to attempt making signs that should go to a sign painter. After all, the less signs you can get along with, the better your showroom, shop or any other department will appear.

Excepting for some spectacular temporary purpose, let the signs be as small as possible. The market affords many neat styles of signs or frames for signs and if you adopt a certain style stick to it all the way through. Thus, if you choose glass covered signs with a mahogany frame, don't get some frames of oak or jet black. Things should be harmonious. The customer may not know why the place looks inviting, but nevertheless, he feels it and it is attention to small details like this that makes it possible.

Wash the windows. Dirty windows are by far the most flagrant violators. Take down the cobwebs and if you want to give the place a different look, add some awnings. Not just the plain white kind. White is an unsympathetic color. Pick out some with stripes of green and gold, green and cream, etc. But if you do this and also want to carry out some new decorations on the inside, be sure to pick colors which do not clash.

Sometimes a gallon or two of paint, some varnish, and a stack of wall board will work wonders in giving the showroom a better atmosphere. We have seen where the interior in a plain every-day cross roads garage was made beautiful by painting the walls with "barrelled sunlight", the wainscoating a gray and the floor covered with battleship linoleum. Once a place is decorated like that it is not much of a job to keep it clean. When there is nothing but dirt and grease around there is no incentive to keep the place clean.

About one of the first things a person does when looking for a place to eat is to give it the "once over" from the outside before venturing in. If the windows are clean and the place otherwise looks attractive we sort of take for granted the service inside is all right.

Same thing with a well kept automotive store. But the looks must not all be on the outside. The interior, visible through the windows must appeal to the customer. If he sees a lot of parts scattereed around on top of the showcase and badly kept shelves he is likely to be led to another and more attractive place.

During the rush of summer business stock bins and accessory shelves are likely to get mussed up considerably. Some of the smaller establishments often build their own parts shelves and bins and unless a good job of it is done it detracts greatly from the appearance. The metal bins and racks which the market affords certainly look vastly neater and make it possible at all times to keep the parts stock in good shape.

If you do happen to have wood shelves and partitions for your stock room, see that they are of uniform thickness. That is, have all the horizontal shelves say, 1 in. thick and the vertical partitions ½ or ⅝ in. Don't have some ¾ in., some ¼ and still others of heavy cardboard. Plainly speaking, they look rotten.

Remove all the stuff which has a tendency to make your place a hangout for persons other than your customers. We all have seen the tonneau from an old car set in front of a dealer's place for the stick-whittling variety of folks. Far better for a place like that to remove the seat and put in its place, perhaps, a neat bulletin board attached to which is a road map, a flower box—anything, so long as it gives a better atmosphere to the place.

In sprucing up the showroom don't overlook the possibilities of getting new effects at night. That's the time when people look at display windows and if yours is dark and uninviting, it gives the impression you are not alive and business is not so good.

If you have never done so, you might try something like this. One dealer did it and got fine results. He placed one model of the car he was handling in one corner of his showroom and rigged up a spot light and battery in the opposite corner, so that when the spotlight was in operation it shone directly on the radiator of the car. No other lights were on at the time and naturally when viewed from the street the effect was clever. Usually his showroom was lighted conventionally at night, but to give it a little dif-

(*Continued on page 20*)

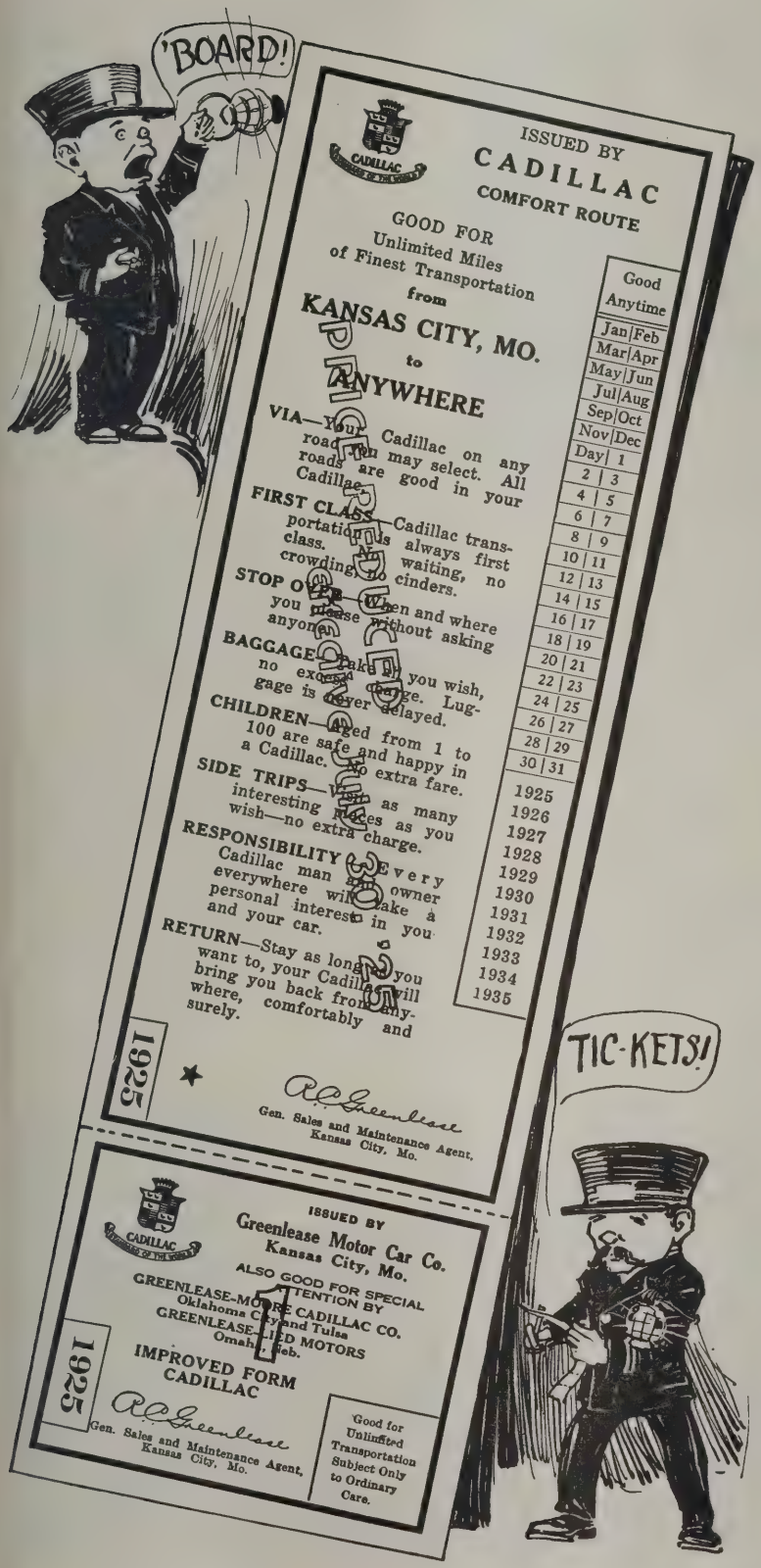


Here is shown a seasonal display in which the dealer has injected the autumn spirit into his showroom, which by the way is merely a corner in a "garage". Any small town dealer can do the same thing to change the looks of his place of business and attract buyers

MOTOR VEHICLE ELECTRIC LIGHTING LAWS

STATE	GENERAL: Regulated by	GENERAL: Lamps Lighted After Sunset Using Source—Hours	GENERAL: Front Lights Visible Ahead: Motor Vehicle	GENERAL: Front Lights Visible Ahead: Motorcycle	GENERAL: Front Lights Visible Ahead: Motorcycle Sidecar	GENERAL: Color of Front Lights	GENERAL: Data Applies to Vehicles Registered During Mo. or Yr.	HEADLIGHTS: Height Above Road: Maximum	HEADLIGHTS: Height Above Road: Minimum	HEADLIGHTS: Objects Visible Ahead: Motor Vehicle	HEADLIGHTS: Objects Visible Ahead: Motorcycle	HEADLIGHTS: Objects Visible to Side: Objects Visible to Side	HEADLIGHTS: Objects Visible to Side: And Ahead	HEADLIGHTS: High Intensity Must Not Project: At a Distance Ahead of	HEADLIGHTS: High Intensity Must Not Project: Or More	HEADLIGHTS: High Intensity Must Not Project: When Loaded	HEADLIGHTS: High Intensity Must Not Project: Lot of Approved Devices	HEADLIGHTS: American Standard Specifications: Motor Vehicle	HEADLIGHTS: American Standard Specifications: Motorcycle	HEADLIGHTS: Bulb Candle-power Limitations: Maximum	HEADLIGHTS: Bulb Candle-power Limitations: Minimum	HEADLIGHTS: Dimming Required	HEADLIGHTS: Where Within	HEADLIGHTS: REMARKS	SPOTLIGHTS: So Arranged that Beam at:	SPOTLIGHTS: Or More	SPOTLIGHTS: Will Not Rise Above Road More Than	SPOTLIGHTS: And Enter Beam Directed to Right	SPOTLIGHTS: Unless Issued to Physicians	SPOTLIGHTS: Or Extinguished	SPOTLIGHTS: Height Above Road: Maximum	SPOTLIGHTS: Height Above Road: Minimum	SPOTLIGHTS: Lot of Approved Spotlights	SPOTLIGHTS: Bulb Candle-power Limitations: Maximum	SPOTLIGHTS: Bulb Candle-power Limitations: Minimum	SPOTLIGHTS: REMARKS	AUXILIARY DRIVING LIGHTS	REAR LIGHTS: Color of Lens	REAR LIGHTS: Light Visible to Rear	REAR LIGHTS: Numerals Visible to Rear	REAR LIGHTS: Numerals Legible to Rear	REAR LIGHTS: Height Above Road: Maximum	REAR LIGHTS: Height Above Road: Minimum	REAR LIGHTS: Mounted to Left of Axis	REAR LIGHTS: Lot of Approved Devices	REAR LIGHTS: I E S Specifications	PARKING LIGHTS: Number White Lights Ahead	PARKING LIGHTS: Number Red Lights Rear	PARKING LIGHTS: Visible from	PARKING LIGHTS: Lights Not Displayed when Clearance Lights Visible	PARKING LIGHTS: Mounted Left of Axis	STOP SIGNALS: Required When Head Signals Not Visible	STOP SIGNALS: Visible from	STOP SIGNALS: In Bright Sunlight	STOP SIGNALS: Color of Light	STOP SIGNALS: Lot of Approved Devices	STOP SIGNALS: Indicator Light Required	REFERENCE NOTES
Alabama	State 10-1-19	½																																			Red		50′						Visible										
Arizona	State 6-9-21	1				White								42″	75′	Yes			32																			Red										Yes						
Arkansas	State 2-1-24	½ or When Objects are Not Visible 200′																																			Red	500′																		
California	State 7-4-25	½					†	54″										Yes	1922	1922	32	21																Red	500′	50′							1	1	500′	200′		Yes	100′	† Yes	† Red	Yes																		

Unlimited Mileage "Ticket" Helps Sell Cadillacs



Mileage ticket issued by Greenlease Motor Car Co., for advertising purposes. A complete list of Cadillac distributors in the United States is printed on the reverse side for the convenience of the tourists

Coupon Slip Resembling Railway Transportation, Issued by Kansas City Distributor, Attracts Interest and Emphasizes Travel Advantages of the Automobile

THE idea of unlimited mileage of comfortable transportation given by the modern automobile has been capitalized for advertising purposes by the Greenlease Motor Car Co. of Kansas City, Mo., distributor of the Cadillac in the Kansas City territory. This is accomplished by means of a printed slip resembling in general appearance a coupon ticket issued by a railroad. The appearance and text of the "ticket" are such as to assure its being read.

The ticket is issued by the Cadillac Comfort Route, and is Good for Unlimited Miles of Finest Transpartion from Kansas City to Anywhere. The route you take is VIA-Your Cadillac on any road you may select. All roads are good in your Cadillac.

The transportation is guaranteed FIRST CLASS —Cadillac transportation is always first class. No waiting, No crowding, No cinders.

You are at liberty to STOP OVER—When and where you please without asking anybody; and there is no excess charge for your BAGGAGE, so you can take all you wish. Luggage is never delayed.

There is no extra fare for CHILDREN, and they are always safe and comfortable at any age from 1 to 100.

Neither is there any extra charge for SIDE TRIPS—Visit as many interesting places as you wish. And along the route every Cadillac man will take a personal interest in you and your car —men who are perfectly RESPONSIBLE.

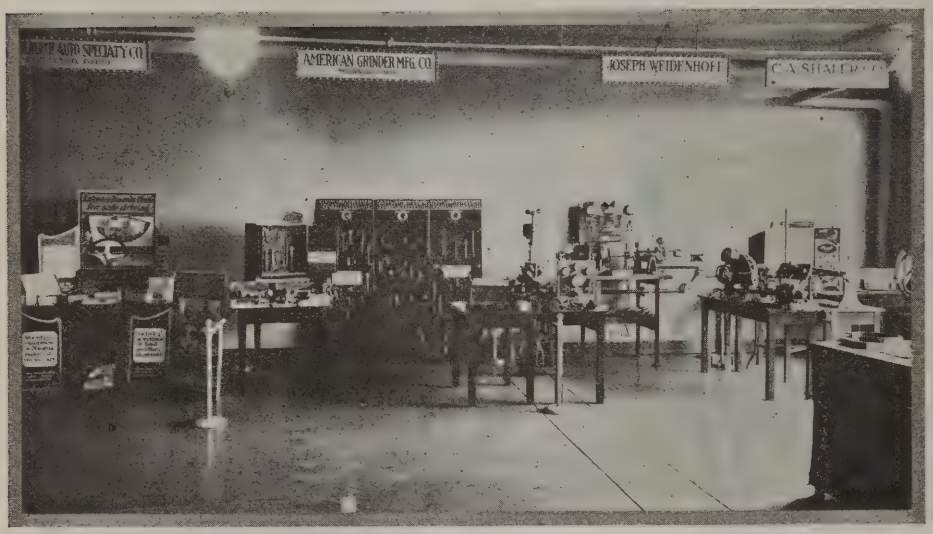
Stay as long as you wish, for when you RETURN, your Cadillac will bring you back comfortable and surely.

The ticket is signed by R. C. Greenlease, Gen. Sales and Maintenance Agent, Kansas City, Mo.

To the ticket proper, is attached a coupon, which is good for special attention by Greenlease-Moore Cadillac Co., Oklahoma and Tulsa, Okla., and Greenlease-Lied Motors, Omaha, Neb. Across the face of the ticket is printed in red ink: "PRICE REDUCED effective July 30, 1925."

On the reverse side of the ticket is printed a list of the Cadillac distributors in the United States, and a list of the Cadillac dealers in the Kansas City territory, and assurance is given that in case one needs help from a Cadillac service man, he will always be within reach by driving an hour or so.

42 Exhibits Now in Automotive Equipment Mart



A corner in the permanent exhibit of the Automotive Equipment Mart at Chicago.

Permanent Display Sponsored by Automotive Manufacturers' Association Provides Central Show Place and Market

THIS year for the first time a centrally located permanent exhibit of automotive merchandise which comes under the designations of accessories, supplies and garage equipment is being maintained in Chicago. And already, in less than three months of operation, the promoters of this enterprise are enthusiastic about its possibilities for bringing together the manufacturers and the wholesale distributors of automotive products.

When the Automotive Equipment Mart, as this exhibit is called, was opened by the Automotive Manufacturers' Association in June at 1315 Michigan avenue, Chicago, the event was recorded in MOTOR AGE as a happening of unusual news interest in the automotive world. Now it is possible to tell of some of the services performed by this institution in bringing together the producers and the sellers of automotive merchandise.

Thus far 42 manufacturers have taken space in the mart and installed attractive sales booths. Most of them have sufficient space to display samples of practically their entire line of products. The general offices of the Automotive Manufacturers' Association are on the same floor and Mr. W. E. Green, secretary of the association, is personally in charge of the exhibit. In this capacity Mr. Green receives visitors, shows them through the exhibit and arranges conferences for them with representatives of the manufacturers in whom they are interested. Nearly all of the visitors thus far have been wholesalers, but it is intended that arrangements shall be made for retailers to visit the mart as guests of the wholesalers with whom they do business.

The exhibit has an abundance of daylight, but this is supplemented with a very complete installation of powerful electric lights so that every booth is perfectly lighted. There is an electric power outlet convenient to each booth and adequate fuses and equipment have been installed so that electrical devices, lights, power driven tools and the like may be demonstrated in the booth.

Visitors who are interested in making purchases or in having demonstrations made are put in touch with the manufacturers by Mr. Green, who urges that a representative capable of closing sales come to the mart to meet the visitors. In this way it is possible for a buyer who has only a limited amount of time to see the products of a large number of manufacturers and talk business with their sales representative in a very short time.

In its early stages the mart has proved especially helpful to wholesale automotive distributors from other countries who have come to the United States to purchase merchandise. Among the visitors who recently have signed the register at the mart were Alexander Mair of Alexander Mair & Co., Ltd., Melbourne, Australia; A. D. Finlay of Finlay Motors Pty., Ltd., Melbourne; E. J. Hazell of Westcott, Hazell & Co., Sydney, Australia, and S. F. Anderson of Anderson & Hansen, Ltd., Napier, New Zealand.

Mr. Green spent a great deal of time with these and other visitors. One of these foreign buyers held conferences with about a dozen manufacturers' representatives in the two days that he had available to spend in Chicago and he placed some substantial orders.

Mr. Hazell, after reaching Seattle on his way home, wrote to Mr. Green; "I first want to thank you kindly for the way in which you treated me at Chicago. As chairman of the Association of five leading accessory jobbers of Australia I will convey to them and to the trade in general the method which you have adopted in connection with bringing about a display of accessories of leading manufacturers at a centralized depot. I can assure you that it saved me quite a lot of time and I am sorry that my stay in Chicago was cut so short. Had it not been for the method of displaying these particular lines in the show rooms it would not have been possible for me to



A sales conference held at the Automotive Equipment Mart by the Apex Electric Mfg. Co. Left to right: Bob Williams, T. S. Nichols, A. C. Johnson, sales manager; Miss Kissinger, Otto Frankfort, advertising manager; Frank Sheerin, H. P. Caldwell, R. C. Cassady, H. E. Smith.



Views of exhibits in Automotive Equipment Mart. The manufacturers whose booths are shown are identified by the neatly lettered signs above each exhibit.

place the business that I did through this connection."

Although it is considered desirable by Mr. Green for direct representatives of the manufacturers to deal with prospective buyers, he is nevertheless prepared to take orders for manufacturers who because of short notice or distance from Chicago are not always able to send their own sales representative. In one case recently a buyer who had visited the mart and noted the various types of merchandise in which he was interested later mailed an order to Mr. Green for certain articles that he was able to identify by brand but whose manufacturer he did not recall. In this case the order was relayed by Mr. Green's office to the exhibitor concerned.

Mr. Anderson of New Zealand, who was one of the recent visitors to the mart, was highly pleased with the convenience of a centralized display, according to his letter to Mr. Green. "I want to tell you how helpful I found the Automotive Equipment Mart and yourself and staff," he wrote, "in my endeavor to secure new lines of automotive equipment for jobbing in my own country. When I arrived in this country I was confronted with the difficulty of finding the various manufacturers of these lines and examining their merchandise. The mart solved my problem to a great extent by making it possible for me to examine the many lines and to interview representatives of your members exhibiting there. The time and expense saved by my availing myself of your facilities was indeed pleasing to me. It permitted me to transact much more business than I could have otherwise."

But it is not alone in the display of merchandise that the Automotive Equipment Mart is serving the industry. Large, light rooms are provided where the exhibitors may hold conferences with their sales staffs or meet with various groups of their customers. At the same time the accessibility of the exhibits affords the opportunity for a careful and leisurely study of the particular exhibitor's own line of merchandise as compared with other lines. One of the first exhibitors to take advantage of the conference facilities of the mart was the Apex Electric Mfg. Co. In one of the rooms this company recently held a sales conference which was attended by A. C. Johnson, sales manager; Otto Frankfort, advertising manager, and the following salesmen: Bob Williams, T. S. Nichols, Frank Sheerin, H. P. Caldwell, R. C. Gassady and H. E. Smith.

Every effort is made to keep the booths of the exhibitors neat and attractive. The whole floor is kept perfectly clean. The exhibitors are encouraged to follow an orderly style in the arrangement of their products.

The exhibits include almost every type of merchandise sold or used in the automotive establishment. There are bumpers, shock absorbers, timers, solder, batteries, battery equipment, electrical testing equipment, vulcanizers, lamps of all kinds, windshield wipers, wrenches, rim and tire carriers, piston rings, pistons, piston pins, electric drills, water pumps, radio, step plates and great variety of other products, including numerous types of package goods.

The permanent exhibitors now represented are:

Allklean Mfg. Co., Long Island City, N. Y.

American Automatic Devices Co., Chicago.

Blackhawk Mfg. Co., Milwaukee.

Anderson Co., Gary, Ind.

Apco Mfg. Co., Providence, R. I.

Apex Electric Mfg. Co., Chicago.

Atlas Specialty Mfg. Co., Chicago.

The Battery Equipment & Supply Co., Chicago.

Brown & Caine, Chicago.

Chicago Solder Co., Chicago.

Continental Sales Corp., Columbus, Ind.

Eclipse Timer Mfg. Co., Milwaukee.

E. Edelmann & Co., Chicago.

The Folberth Auto Specialty Co., Cleveland.

The Fulton Co., Milwaukee.

Gemco Mfg. Co., Milwaukee.

Gill Mfg. Co., Chicago.

F. C. Hersee Co., Brighton, Mass.

Hill Pump Valve Co., Chicago.

The Hinson Mfg. Co., Waterloo, Ia.

The International Stamping Co., Chicago.

Kales Stamping Co., Detroit.

(*Continued on page* 39)

Rayfield Model K Carbureter Combines Air Valve and Plain Tube Features

THE Beneke Manufacturing Company, Chicago, is now in production on what is known as the model K carbureter, designed to meet the requirements of a high class job keeping in mind low cost and simplicity of construction. The fundamental parts used in the construction of this carbureter are relatively the same as all standard makes in general use today and by certain combinations of old principles a new design has been created. In reality a carbureter was developed incorporating the advantages of the air valve and plain tube type.

In the accompanying cross-section view which incidentally shows only the important parts and is not a true reproduction of the actual carbureter, it will be noted that there is an idling by-pass A directly off the main jet B. The venturi C functions practically the same as in the plain tube carbureter in combination with an air valve which actuates a pump for acceleration. The air valve also functions slightly as a compensator between the low and intermediate speeds.

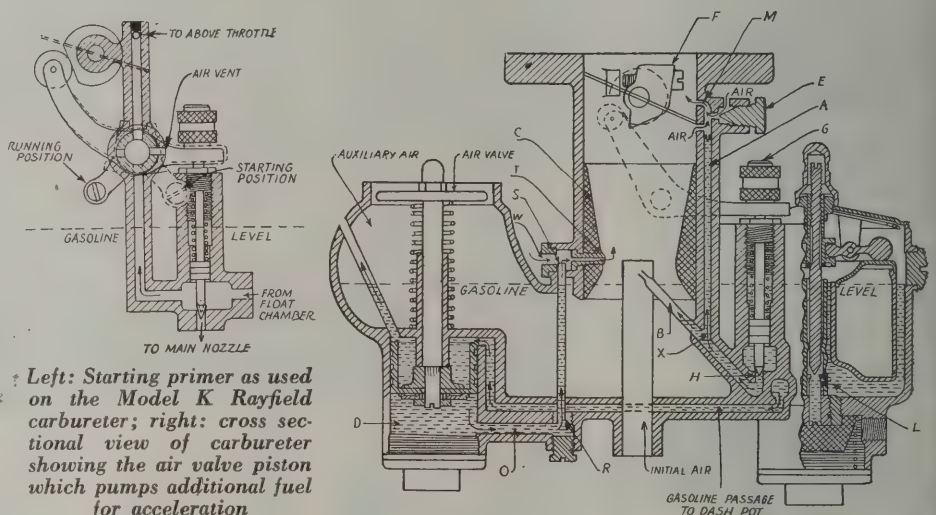
From the layout of the carbureter it will be seen that the part which furnishes the proper proportion of fuel and air for fixed or steady throttle openings is entirely independent of the accelerating mechanism. The dash pot D does not materially function as a resistance for the air valve, but operates a pump which in turn injects an extra amount of fuel into the main air stream during the period of acceleration and does not deliver any fuel when the air valve is in rest at any position. In working out a specification to meet the requirements of different engines, it will no doubt be found necessary to alter the value of the several items constituting a specification such as venturi diameter, air valve diameter, spring tension, cam lift, main gasoline nozzle size and injection nozzle size. The carbureters when leaving the factory are fitted with a specification termed standard, and all changes will be noted in terms reading direct, that is, the venturi will be made in 1/32 of an inch variation. The same rule applies to the air valve diameter and the cams will be stamped in thousandths of an inch lift. Nozzles will be given in drill sizes and springs marked, 2, 4, 6 and 9 points light or heavy.

The cam is fixed on the throttle shaft and the relative position to the throttle valve need never be changed. This does not mean, however, that the cam cannot be changed to one of more or less lift according to requirements of the engine.

By reference to the illustration a hole M and one directly below it will be noted. The action of these two holes is quite simple. The top hole is the idle jet proper and the bottom hole acts as an auxiliary nozzle. When the throttle is opened slightly, more fuel is drawn through the idle passage during the period when the main jet is coming into action. The drop in pressure in the main air passage or at the tip of the main nozzle gradually draws the fuel up in the main gasoline passage and starts to deliver into the air stream at the point where the idling jet is delivering its maximum flow.

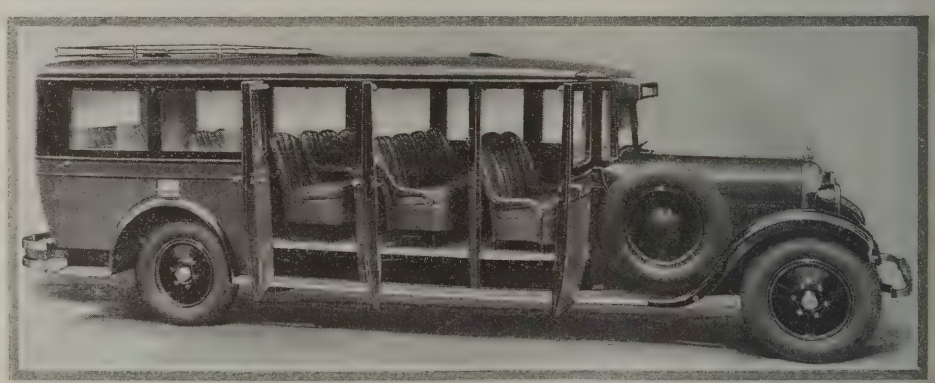
The dash pot piston is fitted to the check valve which allows for a quick return of the air valve to its normal position, but when pushed downward by the action of the air on the valve it becomes a pump, pushing gasoline through the passage O to the nozzle R whence it is finally drawn into the air stream inside the carbureter body. The delivery nozzle T is very small in proportion to the air vent W, therefore no gasoline is drawn out of the delivery tube excepting when it is elevated by the pumping action.

The principle of construction of a starting primer is made clear by the smaller cross view. The scheme is materially the same as used in previous Rayfield carbureters, that is, a single control operates both the primer for starting and the needle valve for warming up. When the control is pulled all the way out it opens the valve which allows gasoline to by-pass directly from the float chamber, but when pushed partly in closes the valve and the remainder of the travel is used to control the main needle valve so that more fuel is allowed to flow by the needle for warming up purposes.



Left: Starting primer as used on the Model K Rayfield carbureter; right: cross sectional view of carbureter showing the air valve piston which pumps additional fuel for acceleration

Studebaker Bus Is Roomy



Eighteen-passenger bus, mounted on the 184-inch Studebaker bus chassis, which has the Big Six unit power plant and 7.3 balloon tires, mounted on steel disk wheels. Seat cushions and backs are upholstered in genuine leather, and due to the ingenious design of the seats, each passenger has what is practically an individual chair. The body has six dome lights, three roof ventilators and two others above the windshield, beneath the destination sign. It has a roomy luggage compartment ahead of the rear row of seats and an extra luggage rack on the top

Supercharger Now Fitted to Laurel Motors Corporation Race Cars

SEVERAL new features of construction have been brought out in the racing equipment for Fords made by the Laurel Motors Corp., Anderson, Ind.

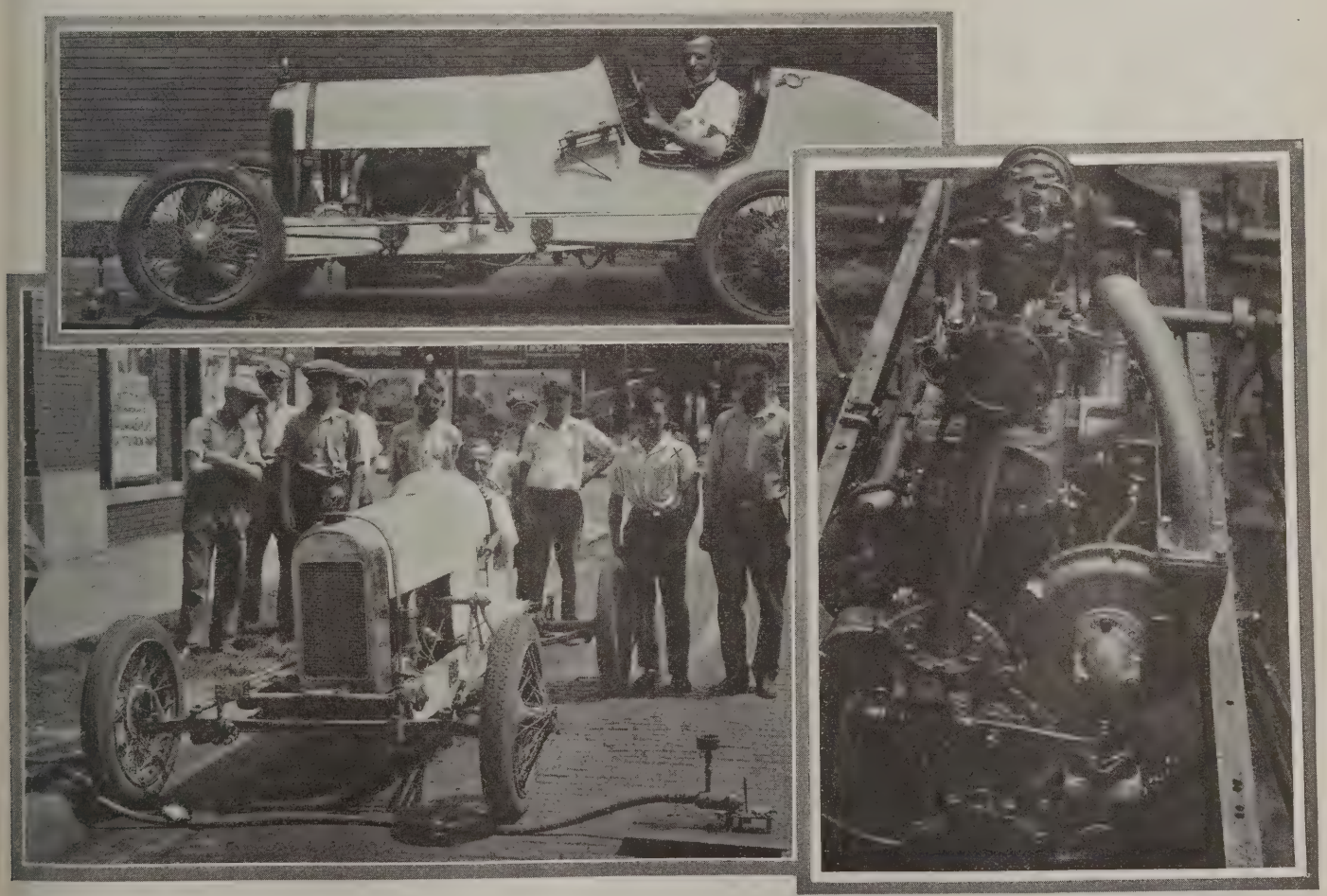
The outstanding development is the supercharging mechanism which the company has applied to its racing engine and the general method of installation is made clear by reference to the illustrations. The supercharger is driven from a ring gear on the flywheel and the pinion is carried in a ball bearing located where the starting motor ordinarily attaches. In the front view is shown a flexible shaft, but this has been changed to a straight line shaft drive with a ratio on the flywheel ring gear of 6 to 1. Thus, when the engine is turning 4,000 revolutions per minute the supercharger revolves 24,000. The makers state that there is a rapid building up of pressure in the intake manifold and that the acceleration of the car is materially bettered.

The impeller of the supercharger, owing to the high speeds at which it rotates has been carefully worked out and is mounted on ball bearings running in a pocket of oil. A felt washer is inserted between the impeller and the ball bearing recesses to insulate the impeller from losing the mixture ratio. The installation as shown is said to be very simple and the supercharger, carbureter and manifolds can be removed in 15 minutes.

The engine shown separately is the latest type overhead camshaft job and is known as the eight valve head. Ball bearings are used throughout and a vertical shaft is placed at the front of the engine to take the drive from the crankshaft. The cylinder head and overhead camshaft can be removed from the block without getting the engine out of time and the cylinder head can be removed in 5 minutes allowing inspection of the pistons and cylinders. The camshaft is a hollow type with oil spray coming out of each cam on the plunger. The oil pressure to the main bearings and the overflow from the pump is carried to the overhead camshaft and can be regulated by a valve on top. After it circulates through the hollow crankshaft it drains back into the crankcase.

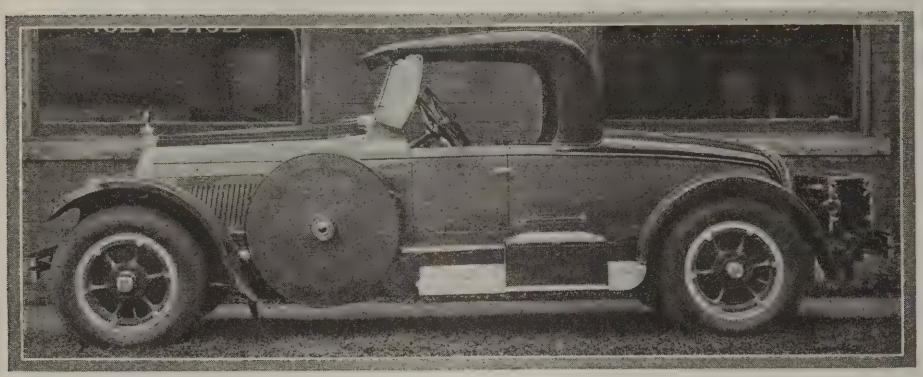
In the patents applied for the supercharger the latter is designed to be operated by two different methods, one by driving it from the ring gear on the flywheel and the other by a spiral gear carried on the crankshaft at the forward end. One of the photographs shows the latter type of drive.

From his previous racing experience, Mr. Robert M. Roof, chief engineer of the Laurel Motors Corporation, has brought out a hydraulic timing device shown in position in front of the wheels herewith. In this device the watch is operated by pressure created on the hose when the front wheels cross it. As the car passes over the hose a small plunger is operated in a barrel which in turn stops the watch. While the contestant is going around the track making his qualification lap the lever is pushed back and when the contestant passes over the hose again the watch is automatically stopped. This device was recently used with success at the Hoosier Motor Speedway.



Above are shown views of the latest products of the Laurel Motors Corp., Anderson, Ind. The car has an overhead camshaft engine built up from a Ford block and is fitted with a supercharger which revolves 24,000 r. p. m. at an engine speed of 4,000 r. p. m. The hydraulic timing device is shown in front of the wheels. The watch of this device is operated by pressure created on the hose by the front wheels. The designer and builder of the car and supercharger, Robert M. Roof is shown at the wheel

Revere Has Dual Steering System





The model 25 Revere which is fitted with a steering mechanism providing a reduction of 7 to 1 and 14 to 1. Normally the upper wheel is used for driving

A rather novel feature in the way of a dual steering system to take care of balloon tire equipment is incorporated in the latest model Revere, known as the model 25. In the belief that steering gears on cars fitted with balloon tires have too low a gear ratio to enable the car to be operated with safety at fairly high speeds, the Revere Motors Company, Logansport, Ind., has fitted a steering gear to the model 25 which allows of two entirely independent gear ratios.

One steering wheel is placed above the other, the upper operating the steering mechanism at a reduction of 7 to 1 and the lower at 14 to 1. The lower wheel is geared from the direct steering gear. The construction is said to check the rebound jolts. With this equipment, the company states the car can be handled very easily at slow speed, in parking and also at high speeds.

The model 25 Revere is fitted with a new type of roadster body and top of clever design. Aside from the new steering gear the chassis is substantially the same as Revere has been making for some time. The bodies are largely custom-built and wheel equipment also is optional.

Lower Prices Mean More Two-Car Families

(*Continued from page* 11)

children to school, marketing, shopping, social calls or the thousand and one other uses for motor transportation that arise every day.

If one car is open and the other closed it will be possible to adapt the vehicle to the weather conditions. On the beautiful days of Indian Summer there is nothing like an open car, but winter is just around the corner. The closed car is wonderful for inclement weather, but it cannot possibly provide the airiness of the open car. You may open all the windows of your bed room, but that will not make a sleeping porch of it.

Let the other members of the family contribute from their allowances or separate incomes toward the support of the second car. They will be glad to do it when they realize the freedom it gives them.

Get full time value out of motoring. Even the best of cars have to be laid up at times for maintenance service. A second car in the family will prove a joy at such times.

Good roads are reducing the cost of motoring. Long tours are made over paved highways today at a fraction of the cost a few years ago. Tires last longer, gasoline goes farther, wear and tear on the vehicle is slight. Repair costs are being reduced by improved methods and flat rate systems. It can very truly be said that two cars can be maintained now for what one would have cost a few years ago.

The time is ripe for the energetic pushing of the two-car idea. Social development, prices, economic conditions —all are working together to make the modern family want more than one vehicle of transportation. The automotive trade must seize the opportunity. Dealers and salesmen will find a much more fertile field among the two-car prospects than among a large proportion of the non-owners and shrewd traders.

Put New Atmosphere in the Salesroom

(*Continued from page* 13)

ferent atmosphere for a time he tried the stunt mentioned. Many other things of a similar nature are possible.

Simplicity is after all, the most desirable factor in making a place look neat. You don't have to spend much money to put new life into the showroom. From our observations in the smaller communities especially we believe a can of lye, Dutch Cleanser, some paint, plenty of rags, two or three pieces of furniture and a strong desire to remove all trash that does not belong on the premises is about all that is needed.

Keep your showroom as such. Don't let a mechanic wander into it with part of a differential to use the floor as an assembly bench. The shop may get cold in winter and so the showroom is used very often for many purposes for which it is not intended. Small as your place may be keep it departmentized. Don't have a few parts here and some more there. Remember it is like the living room of your house. The kitchen utensils do not belong in it and you do not want the ice man to walk through it on his way to the ice box. In just the same way keep your showroom isolated from the shop and when the expressman brings a crate of wheels, see that his path is not by way of the "best room" in your house.

RADIO SHOW SEASON OPENS

Many Automotive Dealers Interested in Displays of Latest Receiving Sets and Accessories

Two Shows at New York

OF a score or more radio shows to be held in various parts of the country between now and the first of the year, no less than eight are scheduled for the present month, while the number set for next week easily qualifies the dates Sept. 12 to 19 as "National Radio Week."

Three of this year's shows were officially endorsed by the Radio Manufacturers' Assn., and were thereby given the status of national expositions. One of these, the Third Annual Pacific Radio Exposition, closed Aug. 28 and the other two will be the Second Annual Radio World's Fair in the 258th Field Artillery Armory in New York, Sept. 14 to 19, and the National Radio Exposition, American Exposition Palace, Chicago, Sept. 28 to Oct. 3. Next week's calendar, however, will be the most crowded of the season.

In point of floor space and the elaborate program planned, the biggest show next week should be the Second Annual Radio World's Fair at the 258th Field Artillery Armory, claimed by the show management to be the largest hall in the world. Approximately 150 nationally known radio manufacturers will exhibit their wares at this exposition and an unusually ambitious broadcasting program is being arranged.

Simultaneously with this show will be a convention of the Radio Manufacturers' Assn., at which a number of vital problems will be threshed out, among them the row with the Society of Authors and Composers; and a "Radio Industries" banquet, a separate project to which a national aspect will be imparted by another elaborate broadcasting scheme. It is planned to blanket the nation with radio waves through the hook-up of a number of the larger stations from coast to coast. President Coolidge and Secretary of Commerce Hoover are said to have accepted invitations to address the nation on this occasion.

During this same week the Fourth Annual National Radio Exposition will be held at the Grand Central Palace, New York, opening Sept. 12.

An impressive program has been arranged for this show also. Its promoters have announced that an exchange of programs with London, Paris and Berlin, through a system of high power transmission, will be one feature. Another will be a complete manufacturing section, in which all of the production machinery and manufacturing processes employed in the construction of radio sets will be on display.

Other shows this coming week include the Pittsburgh Radio Show at Motor Square Garden, Sept. 14 to 19 and the Winnipeg, Canada, Radio Show, at the Royal Alexandra Hotel, from Sept. 14 to 19.

> WE started to handle radio early last fall, but did not really enter the game until the middle of December and sold over $2,000 worth of radio and equipment during December, January and February. We feel radio is a coming field for the small town garage man, as it gives him a line that he can push during the slack months of the automobile business.—Car Dealer, Cheyenne Wells, Colo.

During the remainder of the month shows will be held in Omaha, Chicago and Calgary, Canada.

Before the end of the year shows will have been held in Philadelphia, Minneapolis, Washington, D. C., Boston, two in Chicago, Montreal, Brooklyn, Cincinnati, Toronto, Detroit, Milwaukee and Cleveland.

Radio in Accessory Department

DURING the annual radio shows in San Francisco and during the Open Road week, the Chester N. Weaver Company have a radio in operation in their accessory department and two or three counters filled with radio sets. The set in operation is usually placed in an automobile which is outfitted as a camp car and arranged in the accessory department.

This greatly helps the sale of radio sets, as many people are interested on seeing this exhibit who would not otherwise. An indoor aerial has been installed in the accessory department near the ceiling which is provided with all wires and connections and is ready at all times to be connected to a radio set.

Some Comments on Radio

WE think that the radio business will be good this year, as we have a number of prospects now. We operate under a separate name in the radio business and have one man who does nothing else but sell and install radios. This man is a partner in the business. —Dealer, Reedsville, Wis.

WE find radio makes us about as much money as any other accessory in our line and helps out considerably during the dull winter months.—Car Dealer, Richmond, Ind.

WE are of the opinion a complete automotive service station is a proper place for a radio dealer. We expect a good radio business this next season. The reason our radio business was not profitable last year was that radio was not known here and it required too much time to make a sale. We feel by this time the people here are better acquainted with radio and its possibilities and sales will be much easier. —Accessory Dealer and Garage, Magazine, Ark.

I THINK radio is practical for a garage to sell, service and install, especially in a locality where the winter months cut the automotive business down to practically a standstill as it does here. I took on a small line of radio last January just to see how it would work in with the garage business and I find that with a small outlay of money one can do a very nice business in the winter months when the other line is idle. I expect to triple what business I did last season this coming winter.

WE think that radio fills in at the time of year when the automobile business is slack and it therefore helps to keep down the overhead.—Ford Dealer, North Dakota.

THE automobile dealer as a radio merchant has a good opportunity. Changes and improvements will make it necessary for him to be very careful and hold stocks as low as possible. I believe there is a future for the radio as a separate department in the automobile merchant's business.—Dodge Brothers Dealer, Duncan, Okla.

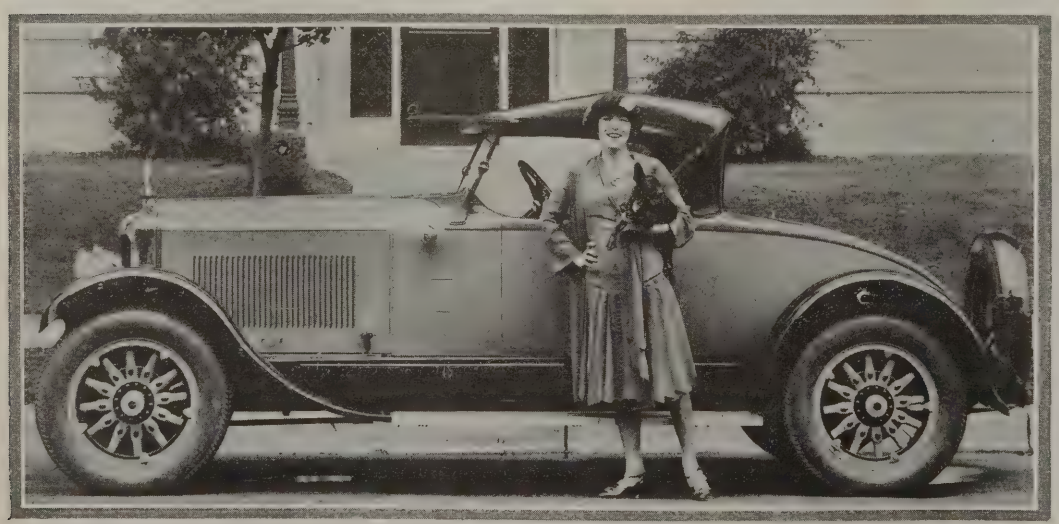
MOTOR AGE'S PICTURE PAGES



RADIO CONTROLS DRIVERLESS CAR. Radio equipped 1926 Chandler touring car being run through busy Broadway traffic in New York City without a driver. It was controlled by equipment in the car following it. The car was driven at a speed of between five and ten miles an hour. Francis P. Houdina, inventor of the radio control system, stood on the running board but did not at any time touch the steering wheel, brakes or gear-shift.

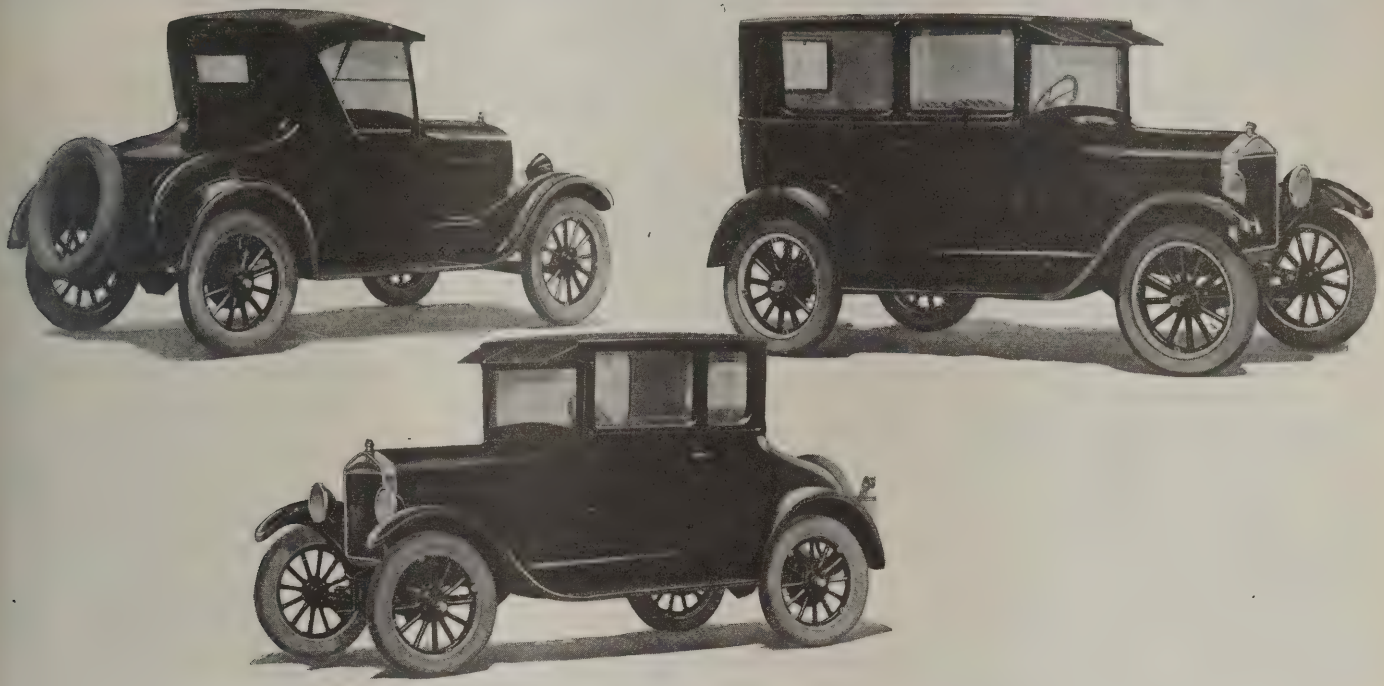


PREPARE FOR EPOCHAL FLIGHT. The picture shows one of the giant navy planes being prepared for the flight to the Hawaiian islands which started last week. It was taken as it was being moved from the hangar to the outdoor location prior to putting on the mammoth wings. The plane is officially known as a PN-9 ship.



READY TO GO. Yvonne D'Arle, prima-donna of the Municipal Opera Co., St. Louis, and the Diana Light Straight Eight. The Diana statuette on the radiator cap is now standard on all cars of this make.

OF AUTOMOTIVE INTEREST



NEW FORD MODELS. Roadster and closed cars recently announced by the Ford Motor Co. Details of changes were published in the September 3 issue of MOTOR AGE.



SHOWING OFF. Three motorcycle police of Chicago practising stunts for the annual police field meet held Aug. 29-30. The proceeds each year go to the benevolent fund to care for dependents of policemen killed in the line of duty.



GENERAL'S SON WORKS AS MECHANIC. Warren Pershing is spending his vacation in Paris as a mechanic in an automobile sales agency. He is shown getting a few tips from another mechanic.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Cadillac Steering and Packard Lubrication

Q.—Please give me by special as soon as you can a cutaway view of the steering gear and adjustment on the same of a 1914—4-cylinder Cadillac. — Hutchinson-Aldridge Motor Co., Logan, W. Va.

Internal mechanism of the Cadillac 1914 steering gear is illustrated at Fig. 236. Two adjustments are provided. The first is to take up end play in the steering staff. When this occurs loosen the jam nut B and the set screw C and remove the plug D. Then with a screw driver or something suitable turn up the adjusting collar which can be seen through the hole from which plug was removed. Then lock the collar with the set screw and jam nut and replace plug. The other adjustment provides for taking up wear on the worm and the sector.

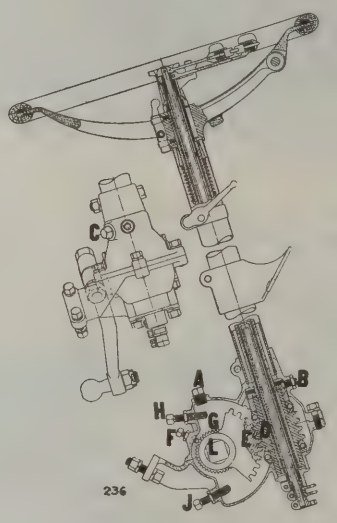
The sector has its bearing in a pair of eccentric steel bushings and should wear occur it is taken up by turning the bushings so that they throw the sector closer toward the worm. To do this proceed as follows: First remove the two set screws F which are on each side of the sector, but only one is shown in the illustration. Through the holes from which the set screws were taken two notched adjusting eccentric bushings may be seen.

Next with a wrench turn the hex heads on the bearing bushing forward moving the sector toward the worm just one notch of the bushing or more if necessary but one will usually be sufficient. In any event be very sure to turn both sides exactly alike, otherwise the gear will be thrown out of alignment. Then replace the set screws. H and J are stop screws which limit the range of movement of the steering gear and front wheels.

Q.—Also cutaway view of oiling system and adjustment on twin six Packard engine, 1922 model.

Since your letterhead gives the impression that you are a Packard dealer we have not troubled to make cut from our illustration which is taken from the Packard instruction book as the instruction books for the model 325 and 335 are probably available to you, we will briefly cover the path of the oil and the adjustment incorporated in the system. The path of the oil after it has gone from the crankcase reservoir is to the pump strainer contained in the pump housing from which place it goes to the oil pump and then to the main oil distributing manifold which is supported from the lower halves of the crankshaft lower bearing caps. From this manifold the oil is supplied to all main crankshaft bearings through holes in the bearing cap. Independent oil passages in the crankshaft leading from the main bearings carry the oil to the connecting rod lower end bearings. At the crankshaft front bearing there is a take off which sends lubricant to all camshaft bearings which are lubricated by oil which is forced through the hollow camshaft under pressure from the oil lead from the front main bearings.

The generator shaft and ignition distributer shaft bearings are lubricated by means of oil leads from the camshaft front bearing. The front end chain receives oil from the end of the drilled gen-



Steering gear of 1914 Cadillac

erator shaft. It can thus be seen that oil enters from the pump to the rear main bearing, travels to the front main bearing and from there to the camshaft front bearing at which point a lead is taken off to lubricate the chain and ignition distributor shaft. The main line from the front main bearing carries the oil through the camshaft to its rear end from which it goes to the oil pressure gauge on the dash.

You are aware of the fact that the crankcase is supplied with baffle plates in the bottom to prevent surging and that the model referred to has oil baffle plates fastened to the crankcase over the connecting rods, to prevent over oiling of the pistons.

METERING PIN TOO BIG

Q.—I would like to have a little information on a Rayfield carbureter. Some time ago I installed a Rayfield carbureter model M on an 86-6 Overland, year 1917. I am having a little trouble in adjusting it. When the high speed adjustment is to the right as far as it will go it works the best, but is still getting too much gas. I would like to know what size jets to use in this particular carbureter?—John M. Baker, 524 Bates St., Logansport, Ind.

Judging from the symptoms the carburetor has a metering pin that is too big. The manufacturer's recommendation for the Overland model mentioned are as follows: Carbureter Model M3V with a No. 4 metering pin, No. 34 air valve ring and No. 50 low speed nozzle.

Converting Dodge Brothers Engine to Racer

Q.—We have a 1916 Dodge Brothers engine and would like to make a racer out of it. We plan on using 16 overhead valves and 2 ½-inch Miller carbureter, racing camshaft, balanced crankshaft and aluminum pistons. Steel connecting rods will be used and we will put 3 to 1 gear ratio in the rear axle, using 33 by 4 tires. How fast or how many miles per hour will it do on a straightaway? Also where can we get a good racing body for it? —S. L. Skotz, care G. Gilbertson, Camp Crook, S. Dak.

It is impossible for us to accurately estimate the speed you will get from the car after making the changes mentioned. If it is to be used on mile or half mile tracks we would suggest a ratio much higher than the 3 to 1. Something in the neighborhood of 3¾ to 4¼ to 1 will be required in order to have enough power to take the car into and out of the turns at the necessary speed. The amount of speed that can be secured on the straightaway will depend upon how many r.p.m. the engine will turn at the time it is pulling the car, design of the body and many other factors which cannot be accurately calculated beforehand.

We do not know of anyone manufacturing race bodies for a Dodge Brothers car and we would suggest that you get in touch with the nearest tinner or with some custom body builder who can give you an estimate as to the probable cost of the special body.

MERCER VALVE TIMING

Q.—I would like to know the correct valve timing for a 22-72 model Mercer built in 1916. Also at what point should the spark occur for best general performance. Would top center at full retard be all right?—G. C. Munroe, 450 W. Main street, Compton, Calif.

Your idea as to the ignition timing is correct. However, if there is any doubt as to whether you have the engine on top center or not, it is better to have the piston a little past center, that is started down a small amount (1/64 to 1/32 inch) rather than take a chance that the engine will kick back when the starting switch is operated. The intake valve should be timed so that it opens 5 degrees after top dead center and closes 55 degrees after bottom dead center. The exhaust valve should open 70 degrees before bottom dead center and close 15 degrees after top dead center.

Planning Your New Building

By TOM WILDER

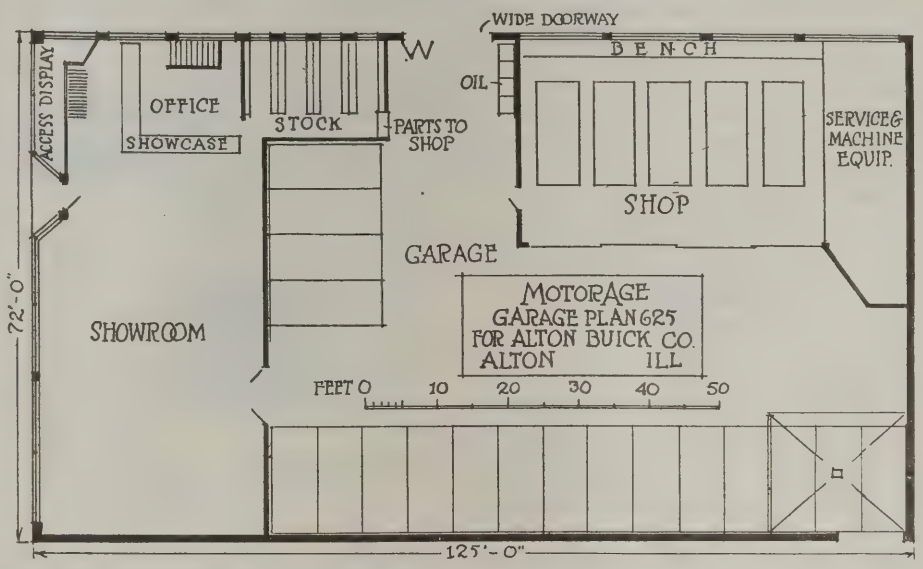
The READERS' CLEARING HOUSE

Alley Shop Entrance Better Than Center Front Entrance

Q.—We are contemplating making a change in our building which we hold under lease, also we are adding a little more space. Attached we have drawn up roughly the plan of our building as it now is, also one as we have contemplated. At present, you will note from the drawing, the only entrance to our building is a large door directly in the center at the front. This splits the front end so we do not have sufficient display space for new cars, and at the same time is very unsightly.

We are particularly interested in learning your opinion regarding our proposal to put an entrance door to our storage room on the alley to the west of the building. You will note under the new plan we will take over additional space in the rear of our building measuring 32 by 54 feet. This is a part of the building we occupy which we have not heretofore occupied. You will note also the addition of this space will give us an entrance from the east through a narrow passage way to the rear of the building adjoining us on the east.

What do you think of the door on the alley to the side? Also can you improve on the plans as contemplated otherwise? Alton Buick Co., Alton, Ill.



Building Widths Between 70 ft. and 80 ft. are Sometimes Difficult to Plan and Even Here There Might Seem to be Some Waste Aisle Space

The only question that arises in regard to your alley and using it as an entrance to your garage, would be its suitability as regard cleanliness and freedom from truck traffic. If it is paved and kept clean it is just as good as any other street.

We have not used the arrangement you suggest for the back part of the building for the reason that we wish to get more light into the shop by taking advantage of the windows on the alley side and also by placing the shop here where cars will not be parked in front of it the way they would the other way. Our arrangement also makes it possible to use the door way to the private alley as you could not use it if this doorway opened into the shop without considerable waste of space. We do not know the construction of your building and possibly this arrangement would not work out, but we believe that it would be worth while to make changes in the construction, unless they require too much expense. The new location for the wash rack is of course, not quite as desirable as the old one, but it is our opinion that the old one used more than its share of the desirable space. As a matter of fact we do not think that the rear enrance would be of much use and believe that windows installed here instead of a doorway would be better.

Perhaps we have not given you sufficient office space, but this is easily remedied as the showroom is amply large to permit additions to the office space and you know better than we how much you need.

The arrangement of sliding doors at the back of the shop, shuts the shop off from the rest of the garage very effectually, so that it is not only private, but makes it easier to heat in the winter. Sliding door equipment can be had that is fairly tight.

LEGAL QUESTIONS ANSWERED

By WELLINGTON GUSTIN

of the Chicago Bar

LIEN LAW IN IOWA

Q. Being a reader of Motor Age I have read several lien laws of different states but have not found any for the state of Iowa as yet. We have a Paige car which we have held sixty days for the repair bill on same. Owner refuses to take car off our hands. Can we sell this car in a certain length of time? If so, how long? Or what else can we do to get our money out of the job? Hawkeye Auto Co., Roland, Iowa.

A. In re: garagekeeper's repair lien in Iowa.

Section 10343, Chapter 456 of the Iowa Code of 1924 gives every person, "who renders any service or furnishes any material in the making, repairing, improving or enhancing the value of any inanimate personal property (automobiles, etc.) with the consent or assent of the owner, a lien upon the property affected for the agreed or reasonable compensation for the service rendered and material used. But possession must be retained over the property, the same as in the common law lien. Relinquishing possession of property to the owner or his agent releases the lien on the property. He is entitled to hold this car under the lien until compensation is paid. This lien has no priority over other liens already recorded, but is subsequent to other prior liens. So far this lien in Iowa is the same as the right at common law still prevailing in some states. But the statute does aid in that it gives the garagekeeper and repairman a right to sell the repaired property. Those garagekeepers in states who only have a common law lien are not empowered to sell repaired property to collect their charges. Now the Act in Iowa gives the repairman a right to sell the property. But to do so he must either bring suit in a court of equity or follow the same procedure given a common carrier to sell goods for charges. This is found in Chapter 454 of the Iowa Code of 1924. In brief, it requires personal notice of the sale to be given the owner; either actual notice or written notice by registered mail being sufficient. This notice must be served 10 days before the sale.

NEW TOURIST BOOK

A book on touring and camping, telling where to go and what to take, has been compiled by Bob Becker and Frank Brimmer for the Stewart-Warner Speedometer Corporation, Chicago, Ill. It is distributed free to the public through dealers handling Stewart-Warner accessories. In addition to the helpful data on camping and touring equipment, it contains a two-page map of the United States showing the organized highways.

The READERS' CLEARING HOUSE — Defeating Old Man Wear and Tear

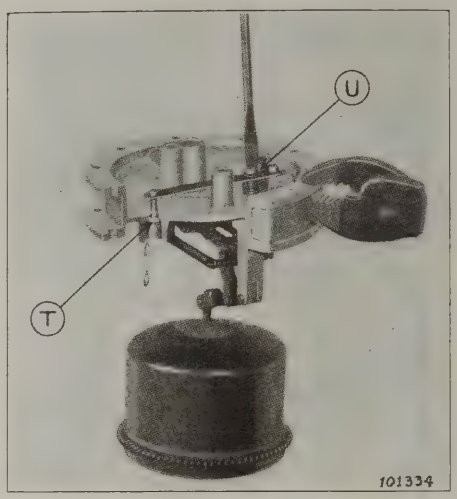
Repairing Oiling Filter On Rickenbacker

Q. Tell us how to repair the oiling filter on a Rickenbacker. Johnston Bros. Coshocton, Ohio.

A. The function of the filter or rectifier, as it is commonly called, is to draw oil and gasoline from the cylinder walls, return the oil to the crankcase and vaporize the gasoline so that it may be returned through the intake manifold to the combustion chambers. The rectifier operates in a manner similar to that of a vacuum tank. One possibility of trouble is in a leaky float which would fail to operate the valves and would permit oil to be drawn through the intake manifold into the combustion chambers. For this reason heavy smoke coming from the exhaust indicates trouble in the oil rectifier, which necessitates taking it apart to check up on the float and valve mechanism. We are showing an illustration which indicates a method of testing the thermostat. The thermostatic valve is adjusted to open at a pre-determined temperature, so as to allow the oil withdrawn from the side of the piston to pass directly into the lower chamber of the rectifier, without being forced into the upper part of the rectifier, where it would be overheated by the exhaust gases.

Thermostatic Valve Adjustment

Inasmuch as the mixture in the pipe connections and in the upper chamber is heated under vacuum, requiring a lower temperature for volatilization of the gasoline, it has been found that 150 degrees Fahrenheit is the temperature at which the thermostatic valve should normally be adjusted to open. To adjust this valve, the upper and lower chambers of the rectifier should be removed and the center casting with the thermostatic valve in place, should be submerged in a kettle or pan of cold water and heated to a temperature of 150 degrees Fahrenheit. The screw "U" should then be adjusted so that the hot water will cause the strip of thermostatic metal to bend, and thereby force downward the valve "T" sufficiently to permit water to drip through the valve opening. Upon completion of the adjustment, the rectifier should be reassembled and all connections and gaskets made tight. Upon the cylinders, pistons and rectifier becoming thoroughly heated, so that the aeration process is working at high temperature, the mixture will generally be heated, upon entering the rectifier, sufficiently to cause the thermostatic valve to open without the mixture being further heated by the exhaust gases.



The thermostat adjustment is tested in water at 150 degrees Fahrenheit

Knocks With Cutout Open

Q—A month ago I overhauled the motor in a Studebaker Light Six about 1921 or 1922 model. I tightened the mains, the rods, ground the valves, tightened the timing chain, honed the cylinders, and installed Kant-Skore pistons. In tightening the mains I found the two center mains were looser than the two end mains, outside of that I found the motor in exceptionally good shape, as the owner says it has run 35,000 or 40,000 miles. At about 150 miles it developed a slight click like a loose pin, but only with the cutout open. At 500 miles it still has that click or tap, plainest at about 25 miles per hour at light load, but can be heard at all times. Now if I close the cutout it is absolutely impossible to make it knock at any load or speed. Have checked exhaust pipe and cutout for any possible looseness but can find none.—Pedersen's Garage, Cozad, Neb.

A. You mention installing Kant-Skore pistons. We wonder if these have bronze bushings for the piston pin or whether the pins fit in aluminum bosses. If the latter condition exists, you may have trouble due to piston pins as these must be fitted more tightly under these circumstances on account of the expansion of the aluminum. With the piston hot from having been tested in boiling water the pin should be a tight push fit with the hand. With the piston cold it will be much tighter.

Another possibility is that you have piston ring click, which is relieved by loosely fittting the upper piston ring or by filing a few notches in the upper surface of the upper ring.

These suggestions are not made on account of the tests you describe and we cannot think of any condition which makes a knock audible with the cutout open when it is inaudible with the cutout closed. As an experiment you might try removing the muffler and leaving the cutout closed to see whether you get the knock or not.

Removing Main Bearing From Overland Six

Q. Kindly give information on fitti 6 cylinder Overland with main bearing Geo. Podlosek, 214 S. Ninth St., Readi Pa.

A. On the 6 cylinder Overland th main bearing cap is removable in th ordinary manner. The two halves of th main bearing, however, are split vert cally and are prevented from rotatin when the cap is in place. After the ca is removed, the crankshaft may be turne one quarter turn and one half of th main bearing may then be removed. It then turned again and the other ha of the main bearing will rotate with so that it also may be removed fro below. Reversing the procedure makes possible to install the new bearing. Thes main bearings are made with such accu racy that no machine work is considere necessary.

MAIN BEARING CAP REFUSES T COME OFF

Q.—We are having trouble tightening th main bearings on a Willys-Overland 19 model, equipped with six cylinder Cont nental engine. So far we have been u able to remove the lower half of the fro main bearing. We have tried to pull off with a gear puller and various kin of chisels. It will come down about in. but no amount of coaxing will brin it farther. Tennessee Subscriber.

We are sending you by separate lett page 28 of the December 18, 1924, issue MOTOR AGE, in the center of which was a illustration showing the bearing co struction of the Jordan car which als used Continental engine. In this co struction there is a wick packing whic must be pulled out by using a croch needle or similar device and it is als necessary to loosen the front gear cov and push it forward about ⅛ or $\frac{3}{16}$ in. i order that dowel in this cover wi not interfere with removal of the low half of the front main bearing.

MAKING THE GAS GAGE TELL TH TRUTH

Q.—Explain the working of the gas line gage on a Marmon 34 and how make the dial indicate accurately th number of gallons in the tank. Hammon & Kramer, Hagerstown, Maryland.

On Marmon 34 cars from 1918 to 192 inclusive the hand of the gasoline gag is operated by means of a magnet whic is controlled due to the operation of float in the gasoline tank. If the tan slips or pulls away from the dash s that there would be too much air spac between the magnet and the hand of th gage, then the gage would not indicat or would not indicate properly. Anothe possibility is trouble in the gears i the tank mechanism or trouble whic would be caused by a leaky float. A good mechanic should be able to investi gate and find out the nature of troubl which would make one of these gage read inaccurately.

Clearing Up Electrical Trouble

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Ailments That Make the Ammeter Nervous

Q.—What causes the ammeter hand on a Ford car to jump back and forth when the generator is charging? Does it mean that new brushes are needed? Is there anything else that would cause this besides the brushes?

If the engine is missing on one cylinder or due to too rich a mixture is running unevenly there will be a tendency for the ammeter hand to jerk back and forth. This is due to the jerky motion of the engine, which slows up the generator and then causes it to go faster. With these changes in generator speed there is a change in generator voltage which causes the cutout to close and open the points. In other cases a defective cutout may close and open its points at medium speeds, as for example 15 or 18 miles per hour.

You can detect this, however, by either removing the cover of the cutout and holding the points together or else by connecting the wire which normally goes from the instrument board to the cutout directly on the generator terminal. This would, of course, cause the battery to discharge through the generator while you are making the connection, but as soon as the engine starts the generator charges the battery. If the vibrating of the hand is no longer experienced then you would know that the trouble was due to the cutout. If the cutout is not to blame then it might be due to brushes making a poor contact with the armature or might be due to a partial ground in the armature. Any sort of intermittent trouble as for example a brush holder grounding occasionally with the vibration of the engine would tend to produce the same results.

Getting Water Pressure For Radiator Testing

Q.—Is it possible to use a Ford gas tank filled with water to give a 10 pound pressure? If this cannot be done what would you suggest in the way of fixing up an outfit to obtain this pressure to test out Ford radiator tubes for water leaks? We have no water works here. How high do we have to put the tank if it could be worked. In doing this we intend to take the cores out of the radiator.—Tennessee Radiator Shop.

The test that you apparently contemplate is to put water inside of the radiator core under pressure and then watch to see where it comes out. The 10 pounds pressure would be too much in our estimation and we doubt if the ordinary gasoline tanks would stand this much pressure.

Ten pounds per square inch means that a square foot of tank surface would have to withstand a pressure of 1440 pounds. The average radiator after being used for awhile will also hardly stand this much pressure, three or four pounds being sufficient. You could get this much pressure by having a tank about eight or ten feet high and have a hose come down from the tank and connect it to the radiator. Every foot that you raise the tank will give you a pressure of .435 pounds, so that with the tank 10 feet high you would have a pressure of 4.35 pounds.

Another way of testing radiator cores is to use air pressure, assuming you have a pump and tank for the purpose of inflating tires. In this case the core is connected to the air line and then put under water in a large tank, the test being similar to that used on inner tubes when hunting for a puncture. In a test of this sort it is necessary to have a valve together with a low pressure gage connected between the valve and the radiator. The valve is opened for an instant and then closed and the air pressure gage is watched to see that the pressure does not go over three or four pounds. We are sending you by separate letter copy of a story which appeared in the Winter Service Issue of MOTOR AGE under date of November 6th and we will also give the name of a concern which can supply you with items needed in radiator repair work.

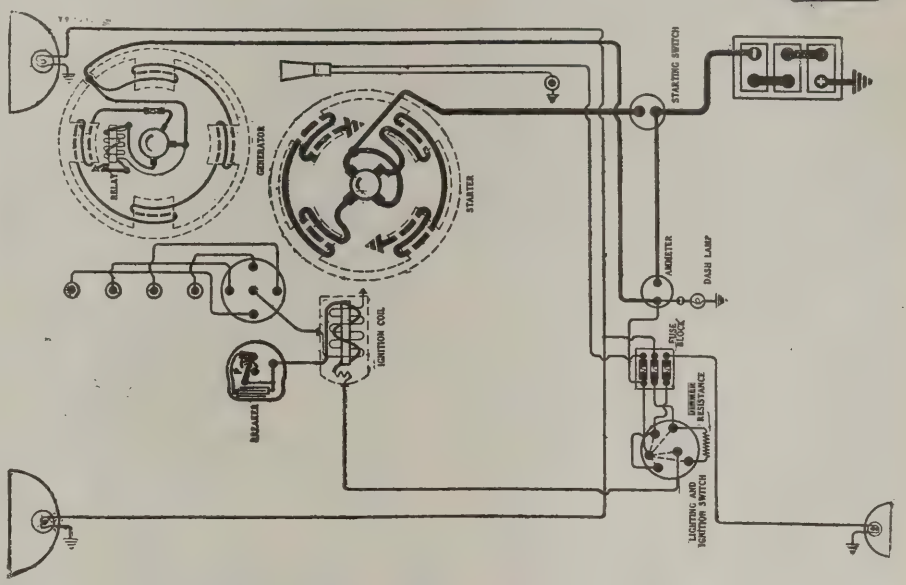


Fig. 101062—Internal and external Hupmobile circuits, 1921 to 1925

CIRCUITS FOR THE LAST FOUR YEARS

Q.—Send me wiring diagram of Hupmobile for the last four years and also internal diagrams of starting motor and generator.—R. H. Oswald, 5943 W. Iowa St., Chicago, Ill.

We are showing at the top of this page one diagram which gives the circuit for the last four years as no appreciable change has been made.

Ground Return for Lighting Plant

Q.—Can I use a copper tube with an insulated wire inside, underground for a distance of 50 feet from the house to a 32-volt lighting plant? Would there be any electrolytic action between the copper tubing and the ground? I expect to use ½-in. copper tube and largest size insulated wire possible. I would like to know if it is impractical to bury the wires as above described, having one insulated and using the copper tubing for a return circuit. About what size wire and tubing of equal current carrying capacity would be necessary in your estimation for power appliances using up to 500 watts?—Paul Smidesang, Wylie, Minn.

The scheme is all right, except that in making a grounded system of it you will have a short circuit if you get an accidental ground. For example, if you are using a drop light in the house and a wire in the drop light touches the shell of the socket and you get the socket up against a water pipe, you would have short circuit. We believe it would be just as cheap to use ordinary iron pipe or conduit such as is used in wiring up houses and run two wires through the pipe.

Weather proof wire should be used either No. 8 or No. 6. With 500 watts being transmitted at 32 volts you will have a loss of about one volt and a loss of about 15 watts with the No. 8 wire, whereas with the No. 6 wire the loss will be about .6 volts and 10 watts. The copper tubing method will work if everything is all right and the total cross section of the copper tubing should be about as much as the cross section of the wire used. We do not see any advantage, however, in grounding the system.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

What About the Small Job?

NO doubt one of the most difficult things with the service man, dealer, repairman or anyone else selling maintenance on a flat rate basis is how to charge for the small job.

Incidentally the small jobs are the most frequently performed and in many cases there are no flat rate schedules covering them.

What are you going to do, for example, when a customer comes in for a 10 minute job on a door which does not close properly? Or, when a customer says he has lost a couple of small screws out of the windshield frame and a mechanic spends 5 minutes finding new ones and 5 more installing them?

Sometimes a screen in the fuel line gets clogged or an oil cup is knocked off and a dozen and one similar small jobs come in the course of a day.

There is ever present the desire to do many of these jobs without charge to the customer and in some instances the service station is justified in so doing. It is, after all, largely a matter of local conditions. Surely when an old customer comes in for a new grease cup which takes not over 5 minutes to install, the dealer or shop does right in making no charge for the installation.

There are some who say there should be a minimum charge for all such operations which require less than ½ hr. to perform. Some dealers, for example have a minimum charge of 50 cents for such operations.

But in the smaller places of business we doubt very much if such practice will ever be successful. In most cases the customer waits for his car and it just doesn't seem right to charge him a half dollar for doing a little job requiring but a few minutes.

Perhaps a happy medium is the answer. Why not do the small jobs for nothing, but when they run over 15 minutes charge the half dollar?

Better Cars—Less Service Operations

As time goes on the number of flat rate operations for the various makes of cars will probably be reduced considerably.

This is so because the makers of cars constantly are bettering their product. Better bearing layouts, better fuel handling systems producing more complete combustion, oil filtration devices, automatic chassis oiling systems and numerous other things will insure the car's mechanism "staying put" over larger periods, thus eliminating many of the now common service operations.

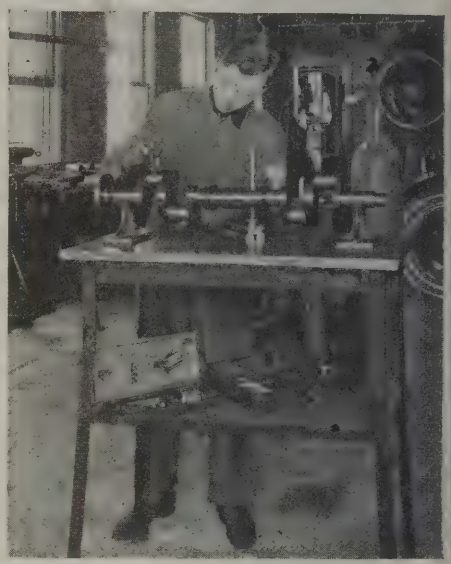
Charges Based on Hourly Rate

The charges in Motor Age's Flat Rate Manual were figured at an hourly rate of $1.50. In most instances the prices which represent the labor charge only were thus derived. Should a different hourly rate seem avisable it is possible to convert the prices to conform to any desired hour rate by proceeding as follows:

To sell at $1 per hour multiply the price listed on the chart by .67. To sell at $1.25 an hour, multiply the price by .87 and to sell at $2 per hour, multiply by 1.33.

Although Motor Age's Flat Rate Manual does not cover every make of car it can be applied very accurately to 90 per cent of the passenger cars now in production. The reason for this is that the cars listed include practically every type of construction being used today. The chart can be used to sell repairs on cars not listed and this can be done as follows:

Find out which car listed most closely resembles the car in question. When doing this the particular unit to be worked upon must be had in mind. Then select from the cars listed one that is in about the same price class, find the amount given and if the car is more than four years old add 20 per cent to the figure to take care of any additional labor that might be involved due solely to the age of the car. If the car is less than two years old use the same price; if over two and less than 3, add 10 per cent of the price as listed in the manual.



THINGS THAT HELP FLAT RATE

When a complete engine overhaul is necessary it is of paramount importance to have facilities for checking the units. Here is shown a large surface plate, V blocks, a dial gage and micrometer for accurately testing a crankshaft as to alignment and wear

MOTOR AGE'S FLAT RATE FORUM

No. 30

FLAT RATES FOR

DODGE BROTHERS TRANSMISSION OPERATIONS

Manufacturer's Official Designation		Time
	(Continued from Sept. 3 issue)	
3215	Remove and install one transmission high speed shift fork	3 hrs.
3216	Remove and install transmission case cover and straighten one shifter fork	3 hrs.
3217	Remove and install one transmission shift bar yoke	3 hrs.
3218	Remove and install one transmission shift bar	3 hrs.
3219	Remove and install one speedometer gear and support assembly	1¾ hrs.
3220	Remove and install one high speed sliding gear	5 hrs.
3221	Remove and install one low and reverse sliding gear	5 hrs.
3222	Remove and install one second speed sliding gear	5 hrs.
3223	Remove and install one high speed internal gear	5 hrs.
3224	Remove and install one countershaft drive gear	8 hrs.
3225	Remove and install one countershaft second speed gear	8 hrs.
3326	Remove and install one countershaft low and reverse gear	8 hrs.
3227	Remove and install one reverse idler gear	3 hrs.
3228	Remove and install one transmission shaft	6 hrs.
3229	Remove and install transmission case cover, put pin in internal gear	3 hrs.
3230	Remove and install one transmission countershaft	8 hrs.
3231	Remove and install one reverse idler gear shaft	3 hrs.
3232	Remove and install one transmission shaft rear bearing	6 hrs.
3233	Remove and install reverse idler gear bushing	3 hrs.
3234	Remove and install countershaft low and reverse gear bushing	8 hrs.

THE MARKET'S NEW OFFERINGS

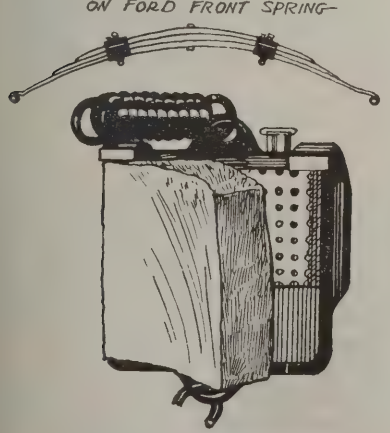
Accessories—Equipment—Supplies

Royal Brake for Ford Trucks

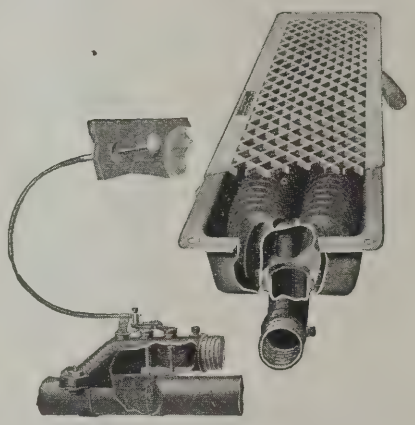
AN appliance known as the Improved Royal Brakes for Ford One Ton Trucks is a product of the Raybestos Company, of Bridgeport, Conn. It is designed for operation by the foot pedal now controlling the transmission brake band. Installation is possible without alterations in the truck chassis or drilling holes and the brake operates on the outside of the drum to which the internal brake is applied at present. It is claimed that the use of this brake insures ability to lock wheels when necessary and eliminates the chatter of glazed, oil-soaked transmission bands. It also reduces the working pressure on the brake lining to a pressure consistent with the accepted practice on rear wheel external brakes operating under normal conditions. Elimination of strains transmitted through the differential in making emergency stops is another advantage stressed by the makers. The brakes are equipped with Raybestos brake lining 1¾ x 3/16 in. all parts being of durable materials and coated to prevent rust. List price, $17 per pair, not installed; $22 per pair, installed.

Brad-Cup Spring Lubricator

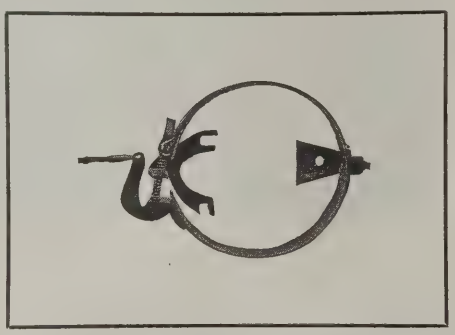
A SPRING lubricator known as the Brad-Cup is a product of C. Goodwin Bradley, Inc., 432 N. Franklin Street, Syracuse, N. Y. It is designed to attach to the spring and lubricate evenly all leaves, a felt pad which distributes the oil keeping the different leaves constantly lubricated with a thin film of oil. The Brad-Cup may be attached to the spring with a pair of pliers or a buttonhook. It has a reservoir for the lubricant. It is said the device will not loosen, rattle or shake off: Prices, Single Side Brad-Cup, 50 cents, set of eight $4; Double Side Brad-Cup, 85 cents, set of eight, $6.80. Cars having ½ ellipticsprings front and rear require 8 Brad-Cups, two to each spring. Cars such as Cadillac with platform springs on rear require 10; Fords and Overlands require four, two front and two rear.



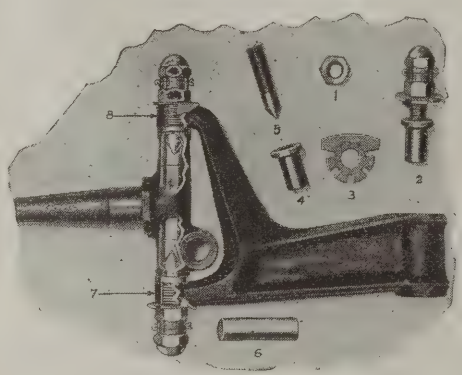
Brad-Cup spring lubricator



Gladiator floor type heater



Royal brake for Ford trucks



Adjustable spindle bolts

Adjustable Spindle Bolts

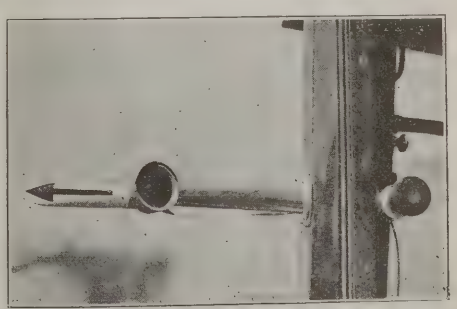
A number of advantages are claimed for the Adjustable Spindle Bolts being produced by the North Piston Ring Company, Toledo, Ohio. The North device, fitting into the steering knuckle, takes the place of the standard bolt equipment. It is declared that this equipment will prevent front wheel shimmy, make steering easier, add to the life of wheel bearings, make for safer driving, lengthen tire life and serve other useful purposes. The North adjustable bolts are quickly installed, not requiring reaming or close fitting and they can be used without oil. Price per set for Fords and Chevrolets $7.50.

New Gladiator Heaters

EXHAUST heaters in both grille type combination heel board and foot rail type as well as manifold heaters for Chevrolet and Ford cars are included in a new line of heaters recently announced by the Gladiator Manufacturing Company, Auburn, Ind. Sales are handled by the Zinke Co., Chicago. A special model of floor board or grille type heater for Fords and other small cars has been designed by this company. One of the features of the company's new exhaust heaters is a universal valve, fitting all cars and which is controlled from the dash in a way to obtain perfect regulation of the heat supply, according to the announcement. Quick heat with safety from fire is claimed for the contrivance. It has a hinged cover and clean-out door. There is a wide range of sizes and prices. The manifold heaters, new in design, are of one piece cast iron construction and take the place of the ordinary manifold entirely. It is claimed the heater gives forth no odor or noise while it is fireproof and does not overheat the engine. Heat is controlled by a floor shutter. The company offers complete line of these products.

Tuthill's Ideal Direction Signal

TAKING the place of signaling cars behind with movements of an extended arm a new signal device has been evolved and placed on the market by H. G. Tuthill, 2466 Hidalgo Ave., Los Angeles. The company describes it as "the signal which can be seen from any direction". As with use of the arm for signaling the Tuthill device indicates stopping with "down", left turn with the indicator in a horizontal position and right turn with the indicator inclined upward. It operates simply within the car even when windows are closed and an automatic lock holds it in position until the driver changes it. It can be illuminated at night by a contact switch, lighting up while moving to position. The Tuthill signals are made to fit any car or truck. Retail price $9.50.

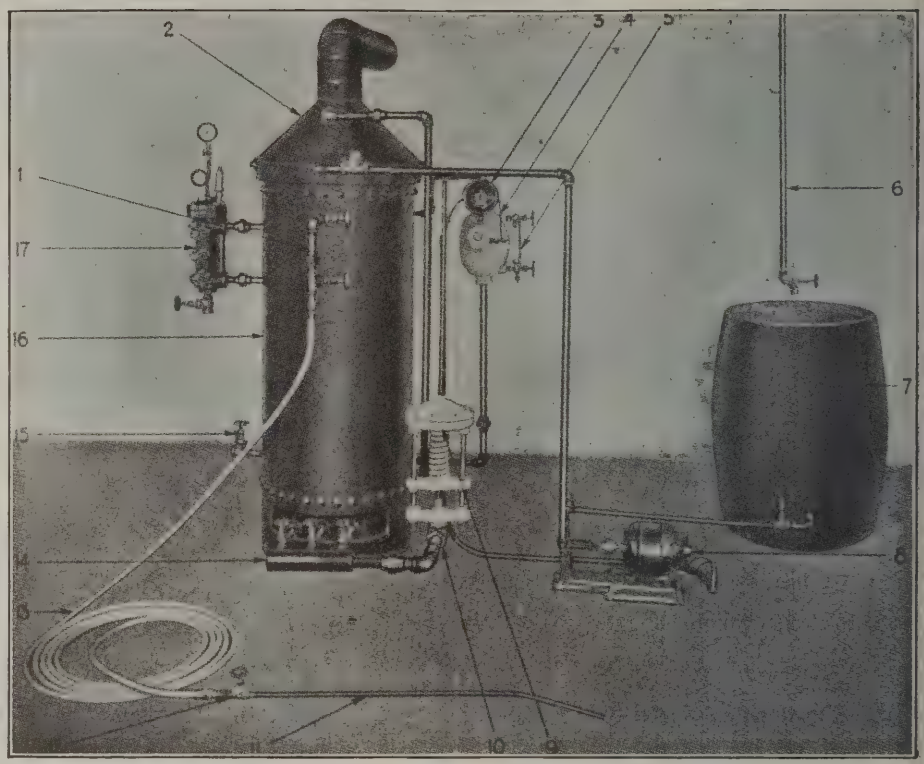


Tuthill direction signal

GETTING MORE OUT of the SHOP

Super-Steam Plant

The advantages of steam for cleaning purposes in the automotive repair shop or paint shop have long been recognized and to that end Waterman & Greer, 1420 S. Michigan boulevard, Chicago, have brought out an apparatus known as the super-steam plant. They are built in one size only which has been found to work in most places to better advantage than a smaller or a larger unit. The plant uses either gas or oil for fuel and is automatic in its action, the operator having only the hose to look after as every other feature takes care of itself. A typical set-up is shown in the accompanying illustration in which 1 is the steam and solution outlet, 2 the pre-heating dome, 3 automatic electric switch, 4 water level control chamber, 5 water level sight glass, 6 city water supply, 7 water or solution supply, 8 automatic generator feed pump, 9 fuel control regulator, 10 double seated fuel valve, 11 spray nozzle, 12 operating valve, 13 special copper loned hose, 14 special fuel burner, 15 blow-off valve, 16 large capacity generator, 17 alarm column.



Super-Steam plant for washing cars and paint removal purposes

New Long Stroke Pneumatic Drill

A new design of four cylinder pneumatic drills has been brought out by the Ingersoll-Rand Company, 11 Broadway, New York City. A complete line of this type is now available, in both reversible and non-reversible sizes. One feature alone—the speed governor—will, in approximately a year's time pay the entire cost of all the drill in the amount of air saved, it is stated. Furthermore, every wearing part is renewable at small expense. The following are some of the important features set forth by the company:

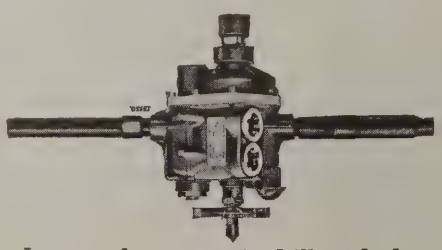
Speed governor, which limits the speed of a drill after it has passed the point of maximum horse power and so prevents racing and extra consumption of air. In addition, it avoids the wear and tear on the drill of high free speeds, excessive friction heat and consequent lubrication troubles.

Cylinder liners—of special steel fitted into the steel casing and easily removable and renewable. A worn cylinder may be easily renewed at small cost. The cylinder case proper never wears out. With this construction, in addition, it is practically impossible to dent a cylinder and cause sticking of a piston. A space between the cylinder liner and cylinder case walls prevents this.

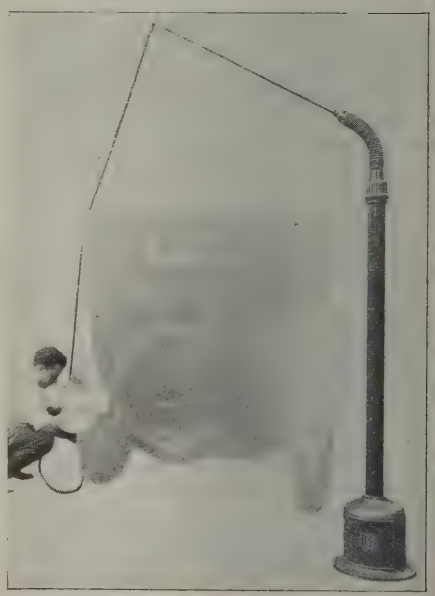
The cylinder liners are held in place by cylinder heads which screw into the liner and shoulder against the case. The threads are in the liner and not in the case, so that stripped threads would necessitate only a new cylinder liner.

Crank pins are fitted with a sleeve held stationary on the crank pin, so that all the wear takes place on the sleeve instead of the crank pin. In other words, the wearing of the crank pin is impossible and it is only necessary to renew the worn crank pin sleeve. Lubrication of the crank pins is from the inside as well as from the outside. With this new method a combination of the venting of the case with holes drilled through the crank, as in automobile engines, assures proper lubrication of the crank pin bearings.

The main valve is of large diameter with long bearing surfaces. It is air balanced so as to avoid wear on its bushing. It is gear timed so that no intricate valve mechanisms, toggles, levers or cranks are needed. Gearing is of helical type giving stronger construction and smoother operation than straight spur teeth. The crank pinion is renewable independently of the crank, so that a damaged pinion does not mean the replacement of a complete crank shaft. Connecting rods are of one-piece drop forgings and the crank shaft construction permits the use of solid end connecting rods and renewable crank pin sleeves. It is accurately counterbalanced to insure smooth operation. The complete crank shaft with pistons and connecting rods can be assembled outside of the case and then inserted in place.



Long stroke pneumatic drill made by Ingersoll-Rand



H. B. Air Tower

(Cut Shown Above)

Hobart Brothers Co., Troy, Ohio, have placed on the market a new air tower, known as the HB. The air tower can be used with any type of air compressor and is designed to keep a clean dry hose at all times rather than the usual wet, muddy curb connections.

It is enameled in a combination of standard Hobart battleship gray and brilliant yellow. It is compact and sturdy. The price is $39.50.

EDITORIAL

Getting Paid for Shop Equipment

ONE of the chief arguments in many of the smaller garages and service stations against the installation of more labor-saving equipment is that in their particular communities they cannot charge high enough rates to pay for the equipment. Where the flat rate system is adopted this problem solves itself, the reduced cost of performing operations resulting in a constant profit.

But because of location and competition there still are many shops that feel they cannot adopt flat rate, nor raise their hourly labor charge above $1. No one will deny the inadequacy of $1 an hour to pay for the time of an operator and the use of an expensive power-driven tool.

How one small-town garage proprietor has solved this problem is interesting. His rate for labor is $1 an hour, but he knows that good machine equipment helps him to do better work. Therefore he sells the idea to his customers. He shows them his equipment, tells them how expensive it is and how much it costs to operate it, and explains how it improves the quality of work turned out.

Then he explains that although his labor charge is only $1 an hour it is necessary for him to receive additional compensation for the use of machine equipment which reduces the time required for various operations and assures a more uniformly satisfactory job, thus actually saving the customer money.

In this way he sells his customers on the idea of paying a flat rate fee, in addition to the hour rate for labor, for the use of equipment. The rate for the cylinder grinding machine on complete engine regrind is $10. The valve refacing machine is paid for at the rate of 15 cents a valve. Other power tools are charged for accordingly, and in this way this shop finds it very profitable to be well equipped.

How many families in your community are waiting for the two-car salesman to do his stuff?

Tragedies of the Air

LAST week's aerial disasters strikingly demonstrated the fact that not yet has our motor transportation industry been transferred from crowded streets and highways to the multitudinous lanes of the air. A great naval airship was crushed like paper in a storm with sad loss of life and a powerful airplane, also representing the navy, flew over the vast expanses of the Pacific into oblivion, taking also its toll of human life. These two catastrophes coming so close together and so spectacularly, could not help but have an adverse effect on the development of aviation.

But it is worth pointing out that the most successful demonstration of commercial aviation yet revealed in this or any other country—the air mail—goes on undisturbed. Every day, rain or shine, the winged vehicles of the postoffice, speed the business intercourse of New York, Cleveland, Chicago, Omaha, San Francisco, and hundreds of intermediate cities and towns.

The air mail is piling up thousands of miles of profitable flying with an accident ratio so low that it is practically insignificant. The great engines, much like those of an automobile, whirr over the land in daylight and darkness and what is written in Chicago this afternoon is read in New York tomorrow morning. We shall have use for our streets and highways a long time yet and we must keep on building and widening them, but the paths of the air will be put to greater and greater use despite an occasional discouraging accident.

Spare the broom and spoil the sale.

Better Trade Days

AT THE National Automobile Shows held last January it was demonstrated under adverse conditions that the automotive trade appreciates some days exclusively its own to visit and study the car, accessory and equipment exhibits free from the turmoil and crowding that accompanies public attendance. The trade days last year were Friday and Saturday preceding the public opening of the shows on Saturday night.

To take advantage of the trade days meant that dealers from any distance had to spend the week end and Sunday away from home and business. And yet the attendance of dealers, distributors and manufacturers was enough that the show management was highly pleased.

It was thought, however, that even more representatives of the trade should have attended and now the management is trying to set the trade days at a more convenient time. At the shows this year, at both New York and Chicago, the hours from 10 a. m. to 1 p. m. on Monday and Tuesday of show week will be reserved exclusively for trade attendance. These two days are ideal for show attendance and are admirably suited for the convenience of the great majority of dealers who expect to attend either of the shows. It is to be hoped, therefore, that the retail trade will make a special effort to record a large and profitable attendance on these two days at New York and Chicago.

The laborer is worthy of his hire; so is a good machine tool.

SOME Things to Sell Now:
Winter tops—New side curtains—Heaters—Chains—Tires—Inner tube repair outfits—Robes—Bumpers—Windshield wipers. Winter is coming.

Automotive Business at Firm Level

August Sales and Output Set New Record for Month

Plenty of Credit Available Throughout Country for Financing Time Transactions

NEW YORK, Sept. 9.—Automotive business is holding at a firm level. August production and sales, even if they did not quite come up to the most optimistic predictions made when the new models and price cuts were being announced, nevertheless set a record for that month, and there is a possibility that the September totals will be even better. An intensive selling campaign by manufacturers and dealers is meeting with response from the public, which apparently has both the means and the desire to invest further in transportation.

Plenty of credit is available in most sections of the country for the financing of sales on the time payment plan and in the west, particularly, this is leading to a further extension of the period allowed for settlement of the unpaid balance. Easy payment terms are perhaps a greater aid to sales than price reductions. A stimulus of another sort, and sounder economically, is being applied by the manufacturers in the form of reduced financing and insurance rates in deferred payment transactions.

As is normal for this season, the production of closed cars is gaining at the expense of open models. But the seasonal trend is accentuated by the price reductions of the last six weeks, which have mainly affected closed cars, thus further reducing the price differential between the two classes. From a competitive standpoint, the reductions have had little effect, since most of the large-volume producers have maintained their relative standing as to prices.

Accessory and equipment makers are sharing in the general activity, with, of course, the body builders, and the manufacturers of sheet steel and body hardware somewhat ahead of those whose products are used in quantities that do not vary with the body type under production. Tire manufacturers despite the higher prices made effective this summer, are producing at the highest rate for the season that they have ever attained.

The used car market was dealt something of a blow by the price reductions, and some losses and a certain degress of stock increase has been the result, but this appears to be a temporary situation that will correct itself if the dealers maintain sound merchandising methods.

GRAHAM CUTS $100

DETROIT, Sept. 5.—Graham Brothers, truck manufacturers, have announced a reduction of $100 in the price of their one-ton truck, effective September 9. A reduction of $80 in this model was announced about four months ago.

CLEVELAND ADDS MODEL

CLEVELAND, Sept. 5.—The Cleveland Automobile Company has announced the addition of a de luxe 5-passenger touring car to its 6-cylinder "31" line. This model which lists at $1025, is equipped with front and rear bumpers, hand windshield wiper, trunk and trunk rack, windshield wings, cowl ventilator, rear view mirror, heat indicator, cowl lights and ignition lock. The body is finished in a two-tone green Duco, and leather upholstery is used.

Americans Place Fourth and Fifth in Monza Grand Prix

MILAN, Italy, Sept. 6—(By Cable)—Americans came in fourth and fifth in the Grand Motor Car Prix of Italy held in the Royal Park at Monza today. Tommy Milton, with a Duesenberg, and Peter De Paolo with an Alfa-Romeo, were the drivers who placed. A third American driver, Peter Kreis, also with a Duesenberg, suffered an accident when occupying first place. His car turned turtle on a curve. He was uninjured.

The individual winner was an Italian, Brilliperi, with an Alfa-Romeo, who covered the 800 kilometers (497 miles) in 5 hours, 14 minutes, 33 seconds. Two other Italians, Campari and Constantini, also with Alfa-Romeos came in second and third respectively. The race wins for the Alfa-Romeo car under the new rules the title of world's champion.

De Paolo never got better than second place. His exhaust pipe dropped off and he was further delayed by a loose choke tube in his carburetor. The Duesenbergs had no engine trouble and in practice showed the highest speed of any of the cars but owing to transmission trouble could not prove their worth in the race.

The technical conclusion is that America secures better engine results with simplified construction but owing to lack of road races is lacking in clutch and transmission practice.

FLINT REDUCES PRICES

FLINT, Mich., Sept. 5.—Reduction in prices on the four Flint models have been announced by the Flint Motor Company. The new prices include a $100 reduction on the B40 touring car, a $185 reduction on the B40 sedan, a $185 reduction on the B40 brougham, and a reduction of $250 on the model 555 brougham.

BUYS ELDREDGE COMPANY

SPRINGFIELD, Mass., Sept. 5.—The Eldredge Electric Mfg. Co., manufacturers of ammeters, voltmeters, spark plug testers for the Ford, and radio transformers, has been purchased by R. W. Ellingham, who for 10 years was works manager of the Hendee Mfg. Co. (now Indian Motocycle Co.). Established lines will be continued, with emphasis on automotive and radio products, by a new company called the Eldredge Electrical Mfg. Co., Inc.

Merger of Hall-Scott and Fageol Nears Completion

Representatives of American Car and Brill Company Working Out Details of Big Deal

OAKLAND, Cal., Sept. 5.—Representatives of the American Car and Foundry Co. and of the J. G. Brill Co., headed by S. M. Curwen, have completed the purchase of the Hall-Scott Motors, Inc. of Berkeley, manufacturers of the Fageol bus motor and the Hall-Scott Liberty motor, and also have completed negotiations with the board of directors of the Fageol Motors Co., of Oakland, for the purchase of the Fageol plant and interests.

Sale of the Fageol company must be confirmed by a two-thirds vots of the stockholders and by the results of an appraisal of the Fageol properties now being made by a San Francisco auditing company.

American Car and Brill have agreed to pay the Fageol company, in case the sale is confirmed, the present appraised value of the properties plus net current assets, and to give Fageol $500,000 for good will. This will make the Fageol common stock worth between $5 and $5.50 per share.

A new corporation is planned including both Fageol and Hall-Scott, with plant assets of about $6,000,000, with capitalization of $10,000,000 in preferred and 150,000 shares of no par value common stock. Preferred stock will be taken almost entirely by the American Car and Brill interests.

Although no financial statement has been issued, it has been reliably reported that Hall-Scott Motors received $450,000 for plant and business and $500,000 for good. will. Neither Fageol nor Hall-Scott companies will lose their identities in the new corporation and both plants will be enlarged and continue operations in their present locations.

WESTCOTT SOLD AGAIN

SPRINGFIELD, O., Sept. 8.—A deal has been closed by which Jack Andrews, who represents Chicago men, has purchased the good will, patents, dies, tools and cars on hand and material from the Westcott Motor Car Co. through Richard M. Rodgers, who recently acquired this property from Receiver J. M. Rehe. The purchase price has not been made public. It is understood that the company may be reorganized and that the manufacture of Westcott cars may be continued in Springfield or in another city. For the present a service department will be maintained in Springfield under the name of The Westcott Company.

New Car Sales Increase Sharply in San Francisco

Used Automobiles Find Less Favor After Price Cuts on Popular 1926 Models

SAN FRANCISCO, Sept. 5.—General reductions in the prices of a majority of the makes of new cars, particularly those priced at $1,500 and under, were responsible for an upward turn of the sales curve in the automotive industry in the San Francisco district during the last week of August, and the first week of September. Sales of used-cars, both rebuilt and "as-is", dropped materially, though these sales, with very small down payments and instalments spread over long periods, had been the greatest factor in sales-resistance of new cars during July and the first part of August.

In addition to this, many of the dealers, notably Chevrolet, Star, Ford and Oldsmobile, have begun extensive campaigns, both by advertising and by personal calls, for the sale of new cars on installments. In this campaign, the credit of the prospect in other lines of business is taken as a standard in fixing the down payment on the car. While this makes the payment scale irregular, nevertheless it has enabled hundreds of men of small but good credit to own cars who otherwise might have been compelled to buy used automobiles.

This campaign also has resulted in sales of a number of one and one-and-a-half ton trucks to small merchants, particularly in the smaller towns of the state. Many such trucks also have been sold to fruit-growers, owning or leasing small orchards, who heretofore have been dependent on public trucks to haul their crops to market. Banks have "loosened up" considerably on automobile paper in this section of California, largely because a number of the dealers in the lower-priced cars have formed the system of discounting this paper in banks in the communities in which the buyers of the cars and trucks live. These dealers say that they find the well-informed local banker their best aid in selecting prospects as to their credit and their ability and willingness to pay.

Though September usually is a dull month in automotive merchandising, indications are that this month, this year, will be better than usual.

Homer McKee Is Appointed Vice President of Marmon

INDIANAPOLIS, Sept. 5.—G. M. Williams, president of the Nordyke & Marmon Company, manufacturers of Marmon motor cars, today announced the appointment of Homer McKee as vice president of the company to succeed E. S. Gorrell, who has resigned to accept an important position elsewhere.

H. H. Brooks, who has previously been sales manager, has been appointed general director of sales. President Williams, who came to Marmon eighteen months ago and who is responsible for the introduction of the new Marmon motor car, said:

"Mr. McKee is recognized as one of the most seasoned and aggressive merchandisers in the United States and his acquaintance in the automobile trade extends over a period of many years."

Mr. McKee will retain the presidency and active management of the McKee Company, Inc., of Indianapolis.

Gorrell Is Elected Vice President of Stutz Co.

INDIANAPOLIS, Sept. 8. — Eugene V. R. Thayer, chairman of the board of directors of the Stutz Motor Car Company of America, Inc., announced from the New York executive offices, today the election of Edgar S. Gorrell as vice president of the company. Mr. Gorrell, who had resigned as vice president of Nordyke & Marmon Company the previous week, will be elected as one of the directors of the Stutz organization at an early meeting of the board.

Fredrick E. Moskovics, president of the Stutz company issued the following statement from the Indianapolis factory in connection with Mr. Gorrell's election:

"The election of Edgar S. Gorrell as vice president of the Stutz Motor Car Company of America, Inc., comes as another forward step in the development of this institution. I have known Mr. Gorrell for years and his affiliation with this company is the result of his knowledge of our plans for development and his thorough confidence in the future of Stutz.

"Mr. Gorrell's career in business marks him as one of the leading men in the automotive industry and, following his remarkable army record, assures me he is exactly the type of men we need as a Stutz executive."

Franklin Reduces Prices on All Models $15 to $225

SYRACUSE, N. Y., Sept. 5.—H. H. Franklin Automobile Co. has made the following price reductions:

	New Price	Old Price	Reduction
Sport Roadster	$2,750	$2,800	$ 50
Touring	2,635	2,650	15
Sedan	3,090	3,200	110
Sport Sedan	3,225	3,350	125
Limousine	3,275	3,500	225

Chrysler Corp. Declares $2.00 Quarterly Dividend

NEW YORK, Sept. 5.—The Chrysler Corp. has declared the regular quarterly dividend of $2 a share on the preferred stock for the third quarter of the year, payable October 26 to holders of record of October 10.

The following statement was issued in connection with the dividend declaration:

"Shipments for August are running 50 per cent ahead of those for July and will total over 18,000 cars for the month. Orders on hand represent 60 days' business at the current rate of production."

Beecroft Sees Heavy Sales Volume Through Last Half

Trade Authority Tells Advertisers Last Year's Production Will Be Exceeded

NEW YORK, Sept. 5.—A cheerful view of prospects in the automotive industry for the remainder of 1925 was taken by David Beecroft, business manager of Motor World Wholesale, in a talk today before the Advertising Club of New York.

"It is highly probable that the unusually heavy sales of July and August will continue during the major portion of the second half of the year, by virtue of the increased value and lower prices of the 1926 models," Mr. Beecroft said. "It can be definitely stated that unless some unusual conditions arise, the second half of 1925 will exceed by a very substantial margin the business done during the second half of 1924. The 4,000,000 production mark set in 1923 may be approached, and it is certain that last year's total will be exceeded."

Mr. Beecroft sees the year to date distinguished in two ways. First, because several leading manufacturers have made a continuous and effective effort to regulate car production and retail sales for the purpose of not over-stocking the distributors and dealers, as well as keeping inventories in a fluid state.

"The year has been quite unusual in another way," Mr. Beecroft continued "The motor car manufacturers have so timed their announcements of 1926 models with price reductions as not to flatten out the sales during June, when old models were closed out. The effect was to stimulate business in July and August so that new records for retail sales and productions were made for these months, July production this year being 68 per cent over the corresponding month a year ago."

Ford Orders Being Taken at Rate of 10,000 Every Day

DETROIT, Sept. 5.—Since the announcement of the changes in the roadster, touring, tudor, fordor and coupe models by the Ford Motor Company, orders have been coming in at the rate of slightly more than 10,000 a day, it was said at the factory today.

There are now on the company's books more than 100,000 orders with additional orders coming in faster than ever before in the history of the company.

While no effort has been made to segregate the orders as to cars, they are about evenly divided. There is a strong trend towards the coupe and the roadster.

Reports available at the Ford Motor Company of Canada, Ltd., are much the same. Orders there have been coming in at the same rate and will tax the company to the utmost to catch up with those already taken.

Chrysler Corp. Buys Detroit American Motor Body Plant

Company Believes 700,000 Additional Feet of Floor Space Will Insure Future Production

NEW YORK, Sept. 5.—Purchase of the Detroit property and plant of the American Motor Body Co. by the Chrysler Corporation is announced by Walter P. Chrysler, president.

"Because of the present inability of the Chrysler Corporation with its various plants to keep anywhere near the demand for Chrysler sixes and fours, the Chrysler Corporation has purchased the Detroit plant of the American Motor Body Co. which will give the Chrysler Corporation 700,000 square feet of additional space," said Mr. Chrysler.

"The first and second floors of the new plant will be used for general manufacturing purposes and the other floors will be used for building open cars, including Chrysler four-cylinder touring cars and six-cylinder and six-cylinder phaetons and roadsters.

"During the last year the Chrysler Corporation experienced body shortages on several occasions with a consequent unavoidable slowing up of production. With the new plant, which is regarded as one of the finest body plants in America and directly across the street from the Jefferson Avenue plant of the Chrysler Corporation, we are assured of an adequate supply of quality bodies. The purchase of this plant is simply assurance for the future. It will make certain our ability to meet the demands for the Chrysler cars."

The Chrysler Corporation has arranged to take over contracts for bodies made for other motor car companies. The amount of the purchase price was not announced.

Packard Co. Pays Preferred Stockholders $7,282,440

DETROIT, Sept. 5.—The Packard Motor Car Company has announced the distribution of $7,282,440 to its preferred stockholders to retire at $1.10 a share the entire issue of preferred stock of the company.

With retirement of this stock, the company announced it has no outstanding securities except common stock and no obligations other than current liabilities on the company's books. After paying off the preferred stock, it was announced, the company has on hand approximately $14,500,000 in cash and marketable securities and all future earnings will be available for payment of common stock dividends.

During the last four years the Packard company announces that it has repaid $11.000.000 in bank obligations and has paid off and retired $15,500,000 of outstanding preferred stock.

STROMBERG EARNINGS

CHICAGO, Sept. 5.—Stromberg Carburetor Co. for the quarter ended June 30, 1925, reports net profits of $225,063, after all expenses and deductions. This was equal to $2.81 a share earned on the 80,000 shares of capital stock outstanding. In the same quarter last year net profits were $166,403, equal to $2.21 a share on the 75,000 shares of capital stock outstanding at that time. Net profits for the first six months of 1925 amounted to $385,368, after all deductions, equal to $4.81 a share on the capital stock against net profits of $370,708 equal to $4.93 a share in the same period last year. Directors declared the regular quarterly dividend of $1.50 a share on the capital stock, payable Oct. 1 to shareholders of record Sept. 10.

"Balloon Bumper" Co. Pays 15 Per Cent on Common

CHICAGO, Sept. 5.—Dividends of 8 per cent on the preferred stock and 15 per cent on the common have been announced by the Automobile Equipment Manufacturing Corporation, makers of "Balloon Bumpers." The dividends affect stockholders of record July 1.

The corporation recently celebrated the end of its first year in business as a manufacturer. It was incorporated, however, only on May 18, this year. The firm is capitalized at $80,000, of which $40,000 has been paid in cash. There are 6,000 shares of common outstanding and about 100 shares of preferred.

The plant is making about 100 shipments daily at present, but has recently been enlarged to allow of an output of more than 500 sets of Balloon bumpers daily. The officers of the company are: F. D. Cerf, president of the Stutz Chicago Factory Branch, Inc., president; G. M. Cerf, vice-president, and J. W. Suporter, secretary and general manager.

BOYLE REPRESENTS INDIA

AKRON, Sept. 5.—The India Tire & Rubber Co. has appointed J. R. Boyle as direct factory representative, with headquarters at Erie, Pa. Boyle has spent many years in that territory as the representative of the Goodrich Tire & Rubber Co.

Charles S. Wells, Widely Known Photographer, Dies

SUMMIT, N. J., Sept. 5.—Charles S. Wells, of the firm of Spooner & Wells, automobile photographers, New York, was killed Aug. 31 in an accident near his home at Summit, N. J. He was out or preparing to go out in his car with his partner, F. Edward Spooner, when the car took fire on an upgrade. He was widely known in the industry, as in connection with his photographic business he attended most of the automobile contests, races, shows, etc., particularly during the earlier years of the industry. At one time he held the long distance cycle championship of the United States. He was 60 years of age at the time of his death.

Fords Pay Almost Fourth Of District Income Taxes

General Motors Follows in Second Place for Detroit—Dodge Brothers Next

DETROIT, Sept. 5.—The Ford Motor Company, Henry Ford and Edsel B. Ford paid almost one-fourth of the income tax collected by the first district of Michigan on 1924 earnings, it became known today when the books of Fred L. Woodworth, internal revenue collector, were thrown open to the public.

The income for the district was $90,624,855.90. The Ford Motor Company paid $16,493,160.91, Henry Ford paid $2,608,808.85 and Edsel B. Ford $2,158,055.99. Both paid higher taxes in 1923, with the company paying approximately $2,000,000 more on its 1924 earnings. The drop in the amounts each of the Fords paid is explained in the decreased rate on the income tax for 1924 over 1923.

Next comes the General Motors Corporation. The exact figures are not known, but are believed to be in the neighborhood of $5,000,000. The exact figures will be announced in the annual statement to be issued by that company.

The Fisher Brothers, Charles T., Fred J. and Lawrence paid a total of more than $1,000,000. Mrs. Anna Thompson Dodge, widow of Horace E. Dodge, paid $993,028.48. Mrs. Mathilda R. Wilson, widow of John F. Dodge, paid $110,392.27.

Others well known in the automotive world and the amounts paid follow:

Dodge Brothers, Inc.	**$2,450,843.67**
Alvan McCauley	**53,531.06**
Walter Briggs	**146,449.79**
Howard E. Coffin	**45,809.48**
Roy Chapin	**63,206.38**
James R. Murray	**9,332.08**
Chas. T. Fisher	**369,306.93**
Fred J. Fisher	**382,476.44**
Lawrence Fisher	**250,803.39**
Fisher Body Corporation	**2,240,000.00**
Hudson Motor Car Company	**1,120,587.00**
Packard Motor Car Company	**751,862.41**
Briggs Manufacturing Company	**1,590,060.77**

Moon Offers Plant for Sale and Seeks Larger Quarters

ST. LOUIS, Sept. 5.—Moon Motor Car Co. has advertised its main plant for sale with the stipulation that the concern be allowed six months in which to vacate after selling.

The company seeks a larger plant, where it can consolidate its departments and expand.

The company will not make any definite plans as to its future location until its present plant has been disposed of. It is not known whether the concern will remain in St. Louis or move to some other city. According to an official, this depends solely on the inducements offered.

Both the Diana and Moon plants are running at full capacity, while arrangements for increased production are being made.

Plans for 1926 National Show Progressing Rapidly

New York Exhibit Jan. 9 in Grand Central Palace—Chicago Exposition Jan. 30

NEW YORK, Sept. 5.—Steady and active progress is being made in the plans for the 1926 National Automobile Shows in this city and Chicago, and there is no reason to doubt that both these old-time fixtures will again prove the leaders among the industrial displays of the coming year. Both exhibitions will last for a week, as usual, the one in this city opening on January 9 and that in Chicago January 30.

Of interest as concerning the New York renewal is the fact that it will again be held in Grand Central Palace, Lexington Avenue, 46th and 47th Streets, after an absence of two years, during which it was held in the Kingsbridge Road Armory in the Bronx. While the location in the Bronx offered the unique advantage of permitting the entire industry to show its products on one floor—possible in no oher building in the world—there was always the possibility that heavy storms might disrupt traffic or at least make motor car attendance impossible.

The Grand Central Palace, on the contrary, is in the center of the metropolis, and close to all the principal hotels, an advantage that greatly outweighs the necessity of using four floors. Another feature of importance in the return of the automobile industry to the big show building on Lexington Avenue lies in the alterations that are under way, the doubling of the number of exits and entrances and placing in service additional elevators for the accommodation of the big crowds that the National Show always attracts.

The two trade days which were a feature of the last renewal of the National Automobile Show will be repeated next year, but under a different arrangement that is expected to suit the convenience of local and visiting factors in the trade and industry. Instead of setting aside Friday and Saturday ahead of the regular opening for the accommodation of the trade, parts of Monday and Tuesday during the actual period of the display will be reserved for buying and selling. The hours reserved on these days will be from 10 a. m. to 1 p. m., the public being excluded during that time. For visitors to the city intent on placing orders for their season's trade this will preclude the necessity of coming here 48 hours in advance.

Complete details regarding the trade days have not yet been worked out, and will be announced in detail by Manager S. A. Miles at a later date. The days and the hours reserved, however, are authoritative, and intending visitors will be able to make their plans on that basis. Credentials will again be free for those who visit the show during the trade periods.

The distribution of blank applications for car space both in the New York and Chicago shows has begun by the show department of the National Automobile Chamber of Commerce. The same procedure will be followed by the Motor and Accessory Manufacturers Association for the accessory sections of the two exhibitions.

Ford to Leave Problem of Old Models up to Dealers

DETROIT, Sept. 5.—While nothing official can be had, it is generally known that Ford dealers throughout the country who were caught with old models on their hands, will have to solve individually the problem of disposing of the old models. Some method in offering them to the public may be suggested in the near future by Ford officials but nothing of that nature is being contemplated at the present time.

At the factory it is said that not many of the old models were left on the dealers' hands.

Production of the new models is rapidly nearing capacity. Those being turned out now are being turned over to the dealers for show purposes. Up to the present none of the 33 Ford dealers in Detroit or the surrounding territory have displayed any of the new models. By the last of the week enough cars will have been turned out so that they will be shown to the motoring public in all parts of the country.

Charlie Myers Wins Pike's Peak Climb With Chandler

PIKE'S PEAK SUMMIT, Colo., Sept. 7.—Charlie Myers burned up the Pike's Peak alley of altitude Labor Day with a Chandler, winning the seventh annual world's championship hill climb and smashing all former records. He drove the 12½ miles in 17 minutes, 48 2/5 seconds. The former record was 18 minutes, 15 seconds. Glen Schultz in a Stutz was second in 18 minutes, 52 4/5 seconds. J. V. Plenderlith in a Lexington, was third in 20 minutes, 3 2/5 seconds.

Myers will receive $1,000 of the $2,000 cash prize money and the permanent $10,000 Penrose silver trophy which he may keep in his possession by placing a bond, until some other driver breaks the record he established this year.

Schultz will receive $350 of the cash and Plenderlith, $150. The record of last year was made by Otto Loesch in a Lexington.

There were ten starters and the track was hard and fast. A larger crowd than last year witnessed the race. Rain that fell Sunday night did not injure the track. Weather conditions were almost perfect.

Ustick Heads Rickenbacker Distribution in St. Louis

Merger Combines Two Firms—Captain "Eddie" Present at Opening of New Concern

ST. LOUIS, Sept. 5.—Rickenbacker St. Louis Co., has been appointed Rickenbacker distributor in St. Louis, succeeding the Diesing Motor Sales Co. E. T. Ustick, Jr., formerly of the Ustick Motor Car Co., a Rickenbacker dealer, is head of the new company. The Ustick Motor Car Co., will be merged with the Rickenbacker St. Louis Co. and will occupy the building at 2218 Locust street formerly occupied by the Diesing Co.

Other officers of the company in addition to E. T. Ustick, Jr., are E. T. Ustick, Sr., vice president and E. M. Walsh treasurer.

George L. Griese, office and credit manager of the Diesing Company will be retained in that capacity as will W. C. Baker, service manager.

Carl E. Methudy, well known in automobile circles, will join the sales force of the Ustick Company and it has been announced that four more salesmen will be added to the force.

Capt. Rickenbacker who was in St. Louis to help launch the new company stated that he was completing a 35-day tour of the country in company with Walter F. Zimmer, president of Zimmer-Keller, Inc., Detroit, the advertising agency for the Rickenbacker Company.

Announcement of the change in the distributorship was made at a dinner to Rickenbacker dealers at Hotel Claridge at which Rickenbacker, Zimmer, Ustick, James A. Westbury, St. Louis district manager of the Manufacturers' Trust Co., were the speakers. Details of the meeting which was attended by Rickenbacker dealers in eastern Missouri and southern Illinois, were handled by F. N. Morgan, factory representative of the Rickenbacker Co. in St. Louis territory.

INDIA NAMES BARNHOLT

AKRON, Sept. 5.—L. L. Barnholt has been appointed New York branch manager by the India Tire & Rubber Company of Akron. Barnholt has served in the New York territory for several years as assistant branch manager. He is well known throughout the New York district and is thoroughly familiar with conditions in that territory.

SEGELHORST PROMOTED

ST. LOUIS, Sept. 5.—A. A. Segelhorst has been elected vice president and treasurer of the Renaud Motor Car Co., Inc., Kissell distributor in St. Louis, located at 3116 Locust street. Segelhorst has been connected with service work on Kissell cars for 13 years both at the factory at Hartford, Wis., and in St. Louis. James A. Renaud is president of Renaud Motor Car Co., Inc., and Edward R. Ellrich is secretary.

Carolina Tire Dealers See Good Business for Winter

Movement to Consumer Remains Brisk Although Demand is Slightly Less Than Usual

CHARLOTTE, N. C., Sept. 5.—Good business is the prospect for this winter for the automobile tire dealers of the two Carolinas and the branches here of the large tire manufacturers, according to information obtained from branch managers.

Though there is a perceptible slackening of demand, largely because of conditions in the textile industry and the exhaustion of the farmers' supplies of cash just prior to the harvesting season, the movement of tires into consumers' hands continues brisk. Some of the branch managers reported depleted stocks as a result of this steady influx of orders.

A sharp reduction in the number of tire sizes within a short time is anticipated by several branch managers. It was reported that many dealers in the Carolinas are showing a disposition to buy cautiously, with the view of avoiding overloading their shelves. No reduction in tire prices is anticipated before the New Year and in some quarters some expectancy exists that further small increases may be announced within a few weeks.

All the tire manufacturers' branches in this territory are making unusually vigorous sales efforts. This policy is regarded as being largely responsible for the continuing steady flow of tires into dealers' and consumers' hands at a time when the agricultural industry's influence on business is unfavorable in large sections. Dealers and branch managers are co-operating to avoid overloading the former and dealer stocks in this territory are reported rather low at this time.

Dealers Expect Good Fall Sales Volume in Louisville

LOUISVILLE, Sept. 5.—Price reductions have failed to prove the sales stimulus expected, although dealers look for increased sales later due to the lower prices. Sales for August are slightly below July but are about 10 per cent better than the same month last year. The general outlook for fall business is optimistic. Registrations for the first half of 1925 for the state are greater than the entire year of 1924. Some dealers are still experiencing difficulty in making deliveries on certain models.

More and more, dealers are refusing to increase sales through exorbitant allowances for used cars and, while this restricts new car sales to some extent, beneficial results are apparent in smaller used car stocks on hand. Medium and higher priced used cars are moving well but some difficulty is being experienced in disposing of the low priced used cars, although, on the whole, the situation is better than last year.

CALIFORNIA PLANS SHOW

SACRAMENTO, Cal., Sept. 5.—Distributors of automobiles throughout the state of California have taken 50,000 square feet of exhibition space at the annual California State Fair, which opens at Sacramento, September 5, and continues through September 13. It has been necesssary to provide additional housing for the automotive exhibits at the fair, according to Charles W. Paine, secretary-manager of the show. This year's automobile display will be the largest ever attempted at a state fair on the Pacific coast, largely the result of the considerable business done last year directly due to automobile exhibits made at the 1924 state fair. Lines of passenger cars, trucks and tractors will be presented by 25 distributors, representing 35 different makes of cars at the September fair. From lists of exhibits now in the hands of Secretary Paine, it appears that closed cars will predominate among the passenger car exhibits.

Ford to Resume Capacity Production at Charlotte

CHARLOTTE, N. C., Sept. 5.—The Ford Motor Company's assembly plant here, which has been closed since August 1, will resume full-time operations about September 1, it was definitely stated by officials of the company today. This plant employs between 1,000 and 1,100 skilled mechanics when working at capacity.

The date when full-time operations will be resumed depends on receipt of quantity shipments of materials for the new model Ford cars, which are expected to be more favorably received in this territory than any former model produced by this company.

The advent of the few models finds the dealers in this territory with practically empty show-rooms and prepared for perhaps the most intensive selling campaign ever made in behalf of Ford Motor Company products.

NEW STUDEBAKER DEALERS

CHARLOTTE, N. C., Sept. 5.—Important progress in the reorganization of this territory by the sales department of the Charlotte branch of the Studebaker Corporation was indicated in the announcement that factory representatives had closed contracts directly with a number of dealers, some of which formerly dealt with the Rust Motor Company, of Charlotte, until recently distributor of the Studebaker line in this section.

Direct contracts were made, the announcement said, with the Douglass Motor Company, of Winston-Salem, N. C.; T. & H. Motor Company, of Greensboro, N. C.; Dan River Motor Company, of Danville, Va.; Davis Motor Company, of Asheboro, N. C.; Gastonia Motor Company, of Gastonia, N. C.; Standard Garage and Sales Company, of Hickory, N. C.; Tate's Garage, of Rutherfordton, N. C.; Auto Supply and Repair Company, of Concord, N. C.; Greene Motor Company, of Rock Hill, S. C.; Parker & Harris, of Abermarle, N. C., and Doggett Brothers, of Shelby, N. C.

Car Stocks Are Light in Dallas Trade Industry

Delivery on Some Lines is Problem —Used Automobile Stocks Heavy

DALLAS, Tex., Sept. 5.—Despite continued inceased output at the factories and reported seasonable declines in sales of new automobiles in most sections of the country, no increased stocks of new automobiles are to be found in Dallas trade territory, or in most parts of Texas. Distributors and dealers, almost to a man, report their stocks lighter than a year ago and declare they are having trouble getting deliveries on certain lines.

Buick, Studebaker, Nash and Chevrolet dealers have been borrowing from each other to make deliveries while distributors have been hounding the factories for certain lines. The Nash distributor and dealers are way behind with deliveries on Special Sixes. Buick dealers can't get new models fast enough to supply the demands. Chevrolet distributors and dealers are short on closed cars and are begging for them. Overland dealers can't get enough Standard Sedan Sixes or Straight Six Tourings.

Hupmobile stocks are light, especially in the Fours. Hudson, Essex and Chrysler dealers are not overstocked but they have not been selling as rapidly as other dealers, due to change in franchise ownerships and dealers in trade territory.

Moon, Jewett, Flint and Cleveland lines carry pretty good stocks. Cadillac, Paige and Pierce dealers and distributors are not heavily stocked. They have been enjoying a banner year and expect continued bumper business.

A canvass of the new car situation showed the sales in August were better than for June and July and some twenty per cent better than for same month a year ago. Used car stocks are pretty heavy and are increasing, because practically every new car sale involves a trade in and 70 per cent of the used car deals involve another. Used car stocks are becoming a serious problem with some dealers right now.

FLORIDA LICENSES UP

PENSACOLA, Fla., Sept. 5.—That 1925 will undoubtedly prove by far the biggest automobile year in the history of Florida is indicated by statistics announced the early part of August by the state automobile license department, showing a total of 284,914 license tags issued in Florida the first seven months of the year. This total is more than 70,000 in excess of the entire total for the year 1924, which was the previous largest year in the history of the state. It is now practically certain, in fact, that pleasure car and motor truck sales in Florida this year will exceed 1924 by at least 40 to 45 per cent, and possibly as high as 50 to 60 per cent.

New Car Sales Reach Peak in California During August

Public Shows Excellent Response to New Models—Used Stocks Move Well

LOS ANGELES, Sept. 5.—With the new models of nearly a dozen different makes of cars all presented during the early part of the month, accompanied by the most vigorous advertising and merchandising campaigns known in this market for many years, sales throughout Southern California reached the peak of the year during August, and they are believed tot have considerably exceeded August sales of a year ago. The continued development of the metropolitan dealer plan in the greater Los Angeles area by several distributors has served to greatly intensify the bid for business in this section, and it is generall accepted in automotive merchandising circles that this year is seeing the most trenchant competition in the history of this district.

Distributors report the public has shown excellent response to the new models. At the same time those distributors handling cars which do not feature yearly changes declare their sales have not suffered during the avalanche of new models. The only weak spot in the sales situation in Southern California, as compared with last year, is in certain quarters of the low-priced field.

Used car stocks continue to move well, with many dealers reporting new high records in volume of used merchandise during August.

Along with the new era of competition in this market, the twenty-four month time payment plan has definitely arrived in Southern California. It was introduced by one large distributor and other distributors have followed suit. Even the dealers who believe the new low down payments and the excessive monthly payment periods will result in a decidedly unhealthy situation over a period of time have gone in for the two-year payment plan in order to meet competition. There are now comparatively few dealers in Los Angeles who will not accept the two-year payment plan if the prospect insists on it, although many of them do not openly feature an appeal longer than eighteen months.

Dallas Dealers to Exhibit at Texas Fair Oct. 10-25

DALLAS, Tex., Sept. 5.—Preparations for the annual automobile show of the Dallas dealers and distributors have about been completed. The show will be held October 10 to 25 inclusive in the specially constructed building at the State Fair of Texas.

In addition to forty regular dealers and distributors who will show the new designs in passenger cars, busses, etc., a considerable number of manufacturers will display their wares at the coming show.

The committee in charge of the show this year consists of C. R. Nachtreib, G. B. Gillespie, Ray Shelton, H. E. Spencer and J. H. Shelton. J. H. Connell, executive secretary for the Dallas Automobile Dealers Association, said the show this year will eclipse anything ever undertaken by the Dallas dealers and distributors.

Horse Market Goes Out for Cars

WATERLOO, Ia., Sept. 5.—The most famous horse market in the central west is being demolished this week to make way for a filling station to serve Dobbin's successors—the automobiles. Harry Fee, operator of the new station, obtained this site at Sycamore and East Sixth street, where thousands of the proudest of horse flesh in eastern Iowa stamped before prospective owners or stood hitched as buyers bartered, for his latest addition.

ENTERS RADIO FIELD

OAKLAND, Cal., Sept. 5.—The Western Auto Supply Company announces its entry into the radio field with a five-tube tuned radio-frequency set to be known as the "Western Air Patrol." The outfit is sold complete, with cabinet, batteries, tubes, aerial and all equipment. Heretofore the Western Auto Supply has sold its goods only for cash, but a payment plan, with a fifteen-day approval clause is offered on these radio outfits.

DEALERS RESTRICT SERVICE

OAKLAND, Cal., Sept. 5.—Hamlin & Wichman, Hudson-Essex dealers in this city, made an unusual ruling and one new to California, when they announced late in August that hereafter they would give the free guaranteed service of the Hudson-Essex factories only to owners of cars purchased from them. All other Hudson-Essex owners will have to pay for all service rendered by Hamlin & Wichman, who maintain a large repair shop exclusively for these two makes of cars.

MICHIGAN RECEIPTS UP

LANSING, Sept. 5.—Upwards of $1,000,000 was collected from the state gasoline tax during July, Charles J. DeLand, secretary of state, has announced. The gross receipts were $1,001,656, with refunds of $53,987, making the net returns $947,677. Since the gas tax went into effect six months ago $4,378,150 has been collected. During that time the refunds have amounted to $242,677. This is about half of the yearly revenue which state officials estimate would accrue from this source.

Chevrolet Co-operates With Dealers in Local Advertising

New Plan Will Give More Space to Agency Owner at Lower Cost

DETROIT, Sept. 5.—A cooperative advertising campaign in connection with its dealer organization is announced by the Chevrolet Motor Company. Under the new plan, the company in reality becomes the advertising department of each of its dealers and provides them with an advertising campaign through which it is possible to key local and national advertising making it possible to broadcast a single message in both local and national publications at the same time.

Briefly the plan is as follows: for each car shipped the dealer the company charges him a small amount which is put into the Chevrolet dealers' advertising fund. To this fund, the company adds a substantial amount all of which goes for advertising in the dealer's territory.

Before any advertising is placed or the copy is prepared, the needs of the dealer are analyzed and his choice in the selection of the different media taken into consideration. The dealers are kept in constant touch with the advertising plan and are given advance proofs of all newspaper advertisements.

The problems analyzed and the media selected, the company prepares the advertising campaign, buys the newspaper space, sends out the ads, prepares and purchases the art work and handles all the minor details.

The plan does not apply to the national advertising carried by the company in the various magazines which is paid for by the company. The dealer can if he chooses do additional advertising with the help of the company.

DAY TAKES TOLEDO FLINT

TOLEDO, Sept. 5.—Willis F. Day has taken over the Toledo Flint Motor Co., 1719 Adams street, a direct factory branch established here a few months ago by J. H. Zwee. Day has been a Flint dealer here ever since the car was brought out by the Durant organization. W. C. Bahnsen, formerly with Buick and Chrysler sales staffs, has now become associated with the Toledo Flint organization, it is announced.

SAFETY FILM READY

ST. LOUIS, Sept. 5.—A movie film entitled "Food for Thought", designated to educate motorists and pedestrians to obey traffic laws and promote highway safety by the proper use of streets and highways has been completed by the Automobile Club of Missouri and will be shown in first run motion picture houses in St. Louis soon. The Gardner Motor Co., provided the automobiles used in the picture.

Ohio Gasoline Tax Receipts Far Ahead of Expectations

Road Maintenance to Get $2,288,000 of $3,555,873 Collected in Three Months

COLUMBUS, O., Sept. 5.—The amount of money collected by state officials with the 2-cent gasoline tax in Ohio for the first three months of its existence far surpassed the hopes of the proponents of the bill when the fight was made for the passage of the tax in the Ohio legislature. A report covering April, May and June, with the latter month incomplete, shows that a total of $3,555,873.58 was colleced, of which amount $2,288,000 will be distributed to the cities and counties of the state for road maintenance.

According to the law 25 per cent of the total is to go to the counties, which makes $6,500 for each of the 88 counties of the state. Columbus will receive $46,756, which is the proportionate amount for the 59,944 cars accredited to the city.

A compilation of the amount received shows that each owner has paid $2.80 in gasoline taxes in the three months and Columbus owners paid $167,843 in taxes. Ohio owners paid as stated above $3,555,673.58. Each owner used on the average 140 gallons and Columbus owners used 8,392,160 gallons while all owners in the state used 177,793,679 gallons.

At the rate of 15 miles per gallon, which is figured as a close average, each owner traveled 2,100 miles in the period, while Columbus owners traveled 1,880,235,300 miles and state owners traveled 2,666,905,185 miles.

Money spent for gasoline at 22½ cents per gallon average $31.50 for each owner while Columbus owners spent $1,880,235 and state owners paid $40,003,577 for gasoline.

Dealers Work Harder for Their Business in Boston

BOSTON, Sept. 5.—Motor car sales slacked off somewhat in August. It did not slow down business to the same extent which marked this same month in other years, but it was noticeable enough, speaking generally, to cause distributors to work harder to put over sales. In a few cases the dealers are behind in their orders, but these are not very many.

Part of this is due to announcing new models of popular lines and not having enough coming through. There are others who got rid of everything so that the new cars would not be handicapped by comparisons with 1924 models on which a depreciation would be heavy and so are booking orders satisfactorily. Outside Boston the dealers are not doing so well as some had expected.

A check up on the used car situation as revealed by the figures compiled by officials shows that the percentage of used cars taken in trade this year is larger and the percentage of sales smaller than last year, or in other words the demand for used cars apparent in the early spring and summer months each year was no different when the warm weather arrived than formerly.

Also the registrations show that July this year had 32,671 cars listed against 29,107 a year ago, while the total to date for the year was 584,234 against 580,489 for 1924 for the same period. There were 3,088 trucks registered in July this year and 2,645 a year ago that same month, while the total to August 1 this year made 90,840 when to that date in 1924 the total was 91,826.

MANITOBA TITLES 44,000

WINNIPEG, Man., Sept. 5.—Approximately 50,000 motor vehicles will carry Manitoba license plates this year. More than 44,000 licenses have already been issued, according to the license department. To date 40,000 licenses have been issued to passenger cars and 3,500 for trucks. It is estimated that there are 5,000 motor trucks in Manitoba, so about 1,500 more licenses have yet to be applied for in this group.

U. S. Revenue Collections Show Big July Increase

WASHINGTON, Sept. 5.—Internal Revenue Bureau collections from the automotive industry for July last amounted to $14,837,609.19 or an increase of $3,364,189.56 over collections during July, 1924, which were $11,473,419.63, it was announced here this week.

The total July, 1925, collections, it is further announced, including income tax, were $125,866,689.58 or an increase of $15,051,804.43 over July, 1924, collections, which were $110,814,885.15.

The segregated taxes of the automotive industry for July, 1925, give automobile trucks and automobile wagons $659,666.70 as compared with $902,219.74 in July, 1924; other automobiles and motorcycles, $12,332,971.60 in July, 1925, as compared with $7,605,505.18 for July, 1924, and automobile parts and accessories for July, 1925, $1,844,970.89 as compared with $2,965,694.71 for July, 1924.

CHEVROLET DEALERS MEET

ATLANTA, Ga., Sept. 5.—Chevrolet salesmen and dealers representing the Chevrolet Motor Co. in the Southeast held a conference at the Ansley Hotel in Atlanta the latter part of August under the direction of the southern branch of the Chevrolet company in Atlanta. Merchandising and advertising plans for the coming few months were discussed, and conditions as they affect the automobile business in the southeastern territory. The outlook for fall and early winter is particularly good in nearly every part of the district this year because of the excellent condition of the agricultural industry in the South, and a heavy volume of automotive sales is looked for as a result.

August Production Expected 11 Per Cent Ahead of July

Preliminary Estimate Places Output 74 Per Cent Greater Than Year Ago

NEW YORK, Sept. 5.—Preliminary estimates of August production of cars and trucks, made yesterday at a meeting of the board of directors of the National Automobile Chamber of Commerce, indicate that the totals for the chamber members will run about 11 per cent over the July figures and 74 per cent over August of a year ago. When Ford production is included, however, the total may be slightly below the July mark this year. The meeting was held at Blind Brook Country Club, Portchester, N. Y., and was followed by a dinner given by A. J. Brosseau, president of Mack Trucks, Inc.

The trade outlook was reported good, with stocks in dealers' hands lower than normal for the season and with exports constantly increasing. John N. Willys reported on the foreign situation and it was decided to broaden the activities of the chamber's foreign trade committee.

The appointment of a committee was authorized with a view to considering plans for better schools for mechanics, with curricula to be drawn up by the N. A. C. C.

A preliminary meeting of the insurance committee was held, and a survey program laid out. Another meeting will be held in about 30 days, when, it is expected, the necessary data will have been collected. On the committee are A. R. Erskine, Roy D. Chapin, R. E. Olds, Windsor T. White, William E. Metzger, Clifford B. Longley and Arthur T. Waterfall.

MISSOURI LICENSES UP

JEFFERSON CITY, Mo., Sept. 5.—License fee collections from Missouri motorists for the first six months period of the current fiscal year Feb. 1-Aug. 1 total $6,742,083, as compared to a full year's collection in the previous year of $4,525,914.90, the current half year's excess over 1924 being $2,216,168.90. The money goes into the good roads fund and the license fee receipts indicate a 50 per cent increase in the number of cars. The detailed summary for the year shows: automobiles, 493,199; trucks, 50,921; dealers, 2,034; chauffeurs' licenses, 19,547; operators, 3,570; motorcycles, 1,668; trailers, 977. St. Louis, with 122,068 cars last year, showed 118,625 August 1 and Kansas City, 66,465 last year, had 62,730 August 1. Only 19 counties in the state have less than 1,000 licenses and two of these are under 500.

SANTRY IS SALES MANAGER

CINCINNATI, Sept. 5.—Frank J. Santry, former president of the Cincinnati Auto Dealers Association, has taken over the work of Robert Lanzing, sales manager of the Nash-Cincinnati Motors Company, who resigned recently to go to Florida. A successor to Mr. Lanzing has not yet been designated.

Used Car Sales 17 Per Cent Better Than First of 1924

Dealers Tell N. A. D. A. Stocks Are 40 Per Cent Lower July 1 Than Last Year

ST. LOUIS, Sept. 5.—Used car sales for the first six months of 1925 were about 17 per cent in excess of used car sales during the first six months of 1924, according to estimates by N. A. D. A. This estimate is believed by N. A. D. A. headquarters to account for the fact that dealers had used car stocks on hand July 1, 1925, of 40 per cent below the stocks at the same time last year.

Closer understanding between car dealers and the public is believed responsible for the greater sales and reduced stocks. In placing before the public the facts concerning the automobile business, automobile dealers have appealed to the element of fair play in the American people.

Owners of automobiles are beginning to understand that in using an automobile they are wearing out the value which must be sacrificed when a new car is bought. Also it is becoming plainer to owners that if they dispose of their old cars only on the basis of what they can get for it, regardless of what new car they obtain, they are likely to buy a potential "orphan automobile," or to pay a higher list price for the new car than is justified by its quality.

Automobile dealers are considering closely the salability of a used car when making trade in allowances. Thousands of automobile owners are going to find out during the remainder of 1925 and throughout next year that the car they chose a year ago, on the basis of the old car allowance, has no market demand and is not wanted in dealer stocks at any price.

Wardman and Justice Form New Company in Washington

WASHINGTON, Sept. 5.—Consolidation of the Wardman Motor Car Company and the Justice Motor Company, the two Overland and Willys-Knight distributors here under the name of the Wardman Justice Motors Inc., was announced this week. This is the largest consolidation of motor car firms that has ever taken place in Washington and one of the biggest that has happened at any time in the eastern section of the United States.

The two establishments, that of the Wardman Motor Co. at 1111 Vermont avenue and the Justice Motor Co., at 1516 Fourteenth street, will both be maintained and operated as salesrooms. For the present there will be no changes in the staff of 150 employes on the pay roll of the two companies.

Harry Wardman, well known in real estate and financial circles, is president of the consolidated company. Frank N. Justice, founder and president of the Justice Motor Co., and who has been connected with the sale of motor cars in this city for the past fifteen years is one of the two vice presidents of the new concern. E. H. Gilcrest, who has been general manager of the Wardman Motor Co. since its organization last summer is also a vice president of the new company. Hubbert R. Quinter, long connected with Harry Wardman, is secretary of the new company and J. D. Hobbs of the Wardman organization is treasurer.

A. A. A. Members to Aid Tourists

WASHINGTON, D. C., Sept. 5.—Henceforth automobiles bearing the emblem of the American Automobile Association will serve to designate a car owner from whom motor tourists may obtain information regarding local traffic, road conditions and other matters in which the motor traveler is vitally interested.

An announcement from the national headquarters of the association today declared that this is one feature of a plan developed by the national motoring body to restore the camaraderie of the road which the tremendous increase in automobile registration had all but extinguished.

Thos. P. Henry, president of the A. A. A., explained that this form of car owner cooperation represents a voluntary offer on the part of many thousands of experienced A. A. A. members to function as "branch offices" for the local affiliated clubs. Although the service is primarily intended for members of the association, all motorists will benefit, Mr. Henry said.

AJAX APPEARS ON COAST

LOS ANGELES, Sept. 5.—The Ajax car has attracted wide attention in Los Angeles since it was placed on display for the first time a few weeks ago. Robert S. Breyer, vice president and general manager of the Troy Motor Sales Company, Nash and Ajax distributors, reports that actual count showed more than 23,000 visited the salesrooms and inspected the Ajax during the first eight days of its initial showing.

SEE LOWER GAS PRICE

WASHINGTON, Sept. 5.—Sixteen-cent gasoline for District motorists is predicted by officials of the Penn Oil Company. Three cuts in prices during the past two weeks already have brought the cost down to 18 cents, and the 16 cents prediction, if it materializes, will bring the price down equivalent to the 1924 low level. Overproduction in the western fields has resulted in the local price reduction. Local stocks are primarily supplied by the fields of Pennsylvania and the overproduction in the West has resulted in competition from that source.

Iowa Dealers Report Nice Increase Over Last August

Inability to Get Deliveries on Closed Models Is Problem in Des Moines

DES MOINES, Ia., Sept. 5.—Inability of car manufacturers to make deliveries has caused some Iowa distributors and dealers worry. New models have greatly stimulated the business, most houses reporting nice increases over August of last year. One distributor reports that he has more than 50 unfilled orders on hand. Shortages are especially sharp in closed types, the demand for open cars representing but a small part of the trade.

Although the spurt in business partly is due to the introduction of new models, an excellent business is expected during the remainder of the year. Crop prospects are excellent, a factor which has bettered rural business. Dealers have fewer used cars on hand than for several years. Used cars are selling fairly well, but the reduction in stocks is due, for the most part, to more conservative trading.

General line jobbers are showing increases averaging about 15 per cent better than last year. The tone of the supply business is good. Replacement parts, oil and general supplies are the best selling lines. Accessory business is still lagging. Although not many retailers are reporting radio sales, dealers are stocking in anticipation of good business within the next thirty days.

Advancing prices of tires provoked a stimulus to this phase of the business which has been followed by a slight reaction.

List of Exhibitors in Equipment Mart

(*Continued from page* 17)

Kirk-Barber Co., Chicago.
Mann & Briggs Mfg. Co., Chicago.
Marquette Mfg. Co., St. Paul.
Milwaukee Circulating Pump & Mfg. Co., Milwaukee.
National Aluminum Co., Racine, Wis.
New Era Spring & Specialty Co., Grand Rapids, Mich.
The Niehoff Corp., Chicago.
Joseph Pollak Tool & Stamping Co., Boston.
Scranton Glass Instrument Co., Scranton, Pa.
C. A. Shaler Co., Waupun, Wis.
Stone Mfg. Co., Chicago.
Storm Mfg. Co., Minneapolis.
Thompson-Neaylon Mfg. Co., Chicago.
Thorn Machine Tool Corp., Syracuse, N. Y.
Triple-A-Specialty Co., Chicago.
Van Cleef Bros., Chicago.
Vesta Battery Corp., Chicago.
Warner-Patterson Co., Chicago.
Joseph Weidenhoff, Chicago.
Whitaker Battery Supply Co., Kansas City.

Along Automobile Row

SAN FRANCISCO.—Girola Brothers, of Oakland, distributors of the International truck, announce the taking on of the Moon and Diana cars, as retail dealers. The firm has enlarged and improved its showrooms, and added shop facilities to care for repairs on the two passenger cars.

CEDAR RAPIDS, Ia.—H. G. Bloom, for five years with the Chicago Buick, has come here as Buick agent and will take over the H. D. Miller Company, the business to be known as the Bloom Auto Sales.

BLYTHEVILLE, Ark.—Tom A. Little, local Chrysler agent, has taken the agency for the Oldsmobile. In addition to the models of pleasure cars handled by him, he will handle International trucks and a general line of farm implements and wagons.

DETROIT.—W. B. Brodt, formerly sales engineer with the Budd Wheel Company, is now associated with the American Autoparts Company as sales engineer. Mr. Brodt was at one time chief engineer of the latter company.

NEW WESTMINSTER, B. C.—The City Line Garage and Machine Works has been started here by H. B. and J. H. Wood. They will handle all repairs and stock accessories. It is the only Alemite lubricating station between the International Boundary and Vancouver.

CINCINNATI.—Harry T. Gardner, manager of the Cincinnati Automobile Dealers Association, has gone north and east on his vacation. While in the factory sections he will inspect the 1926 models in preparation for the 1926 automobile show in Music Hall.

DETROIT.—Joseph A. Orbits is the latest Ford dealer in Detroit. He was a former employee of the Ford Motor Company working in the engineering department of the company and also with the W. B. Deyo Co., local Ford dealers, sales force.

VANCOUVER, B. C.—David Blanck, manager B. C. Auto and Truck Wreckers, Ltd., announces plans for ten branch stores in operation by the end of the year. The company has been in the automobile parts business in Vancouver since 1924 and is at present employing twenty men.

CHICOPEE, Mass.—Miller Bros have been named as dealers for the Studebaker in this city.

MILWAUKEE.— R. C. Freitag, formerly assistant general sales manager for the Eveready Hosiery Company, Milwaukee, has been made advertising and sales promotion manager of the Kissel Motor Car Company, Hartford, Wisconsin.

SEATTLE.—Green Porter Nash Corp. has opened at 500 East Pike St. and a downtown location at Fourth Ave. at Columbia and University Branch at 4343 Tenth Ave., N. E.

SIOUX CITY, Ia.—Ray H. Darling, has contracted to handle Oakland in Sioux City territory.

QUINCY, Ill.—C. N. "Tip" Waner, long identified with the automobile business here, has taken over the Oakland agency for this territory and will be established in the Hilgenbrink Garage.

CINCINNATI.—Articles of incorporation were filed this week by the Stevens Buick Company of Springfield, Ohio, capital $20,000.

DETROIT.—The Cawood Sales company of Port Huron has taken over the Willys-Overland franchise and will sell Overland and Willys-Knight cars in the Port Huron territory, John Cawood is vice-president and general manager. Otto Sickles has charge of sales with Roy Walker head of the service department.

LOUISVILLE.—The George Cole Motor Company, Ford and Lincoln dealers in Louisville and Nashville, has purchased property at Clay and Broadway with a frontage of 123½ feet on which its new two-story building, to cost approximately $150,000 will be started as soon as buildings on the site can be razed.

DES MOINES.—Earl Andrews, formerly of the Andrews Chevrolet Co., Des Moines, Iowa, has opened a Chevrolet agency at Nevada, Iowa.

TORONTO.—C. W. Lewthwaite, who has been connected with Tire, Chains and Accessories, Ltd., for some time has gone into business on his own account and has established himself at 97 Jarvis Street, Toronto under the name of C. W. Lewthwaite & Co. Mr. Lewthwaite will specialize on several well known lines of automobile accessories.

BOSTON.—William B. Sawyer, for the last five years manager of the Boston Oakland Company, has been appointed eastern district manager for the New England district by Sales Manager Matheson. He will make his headquarters at Boston. Previous to joining the Oakland he had been identified with the Willys-Overland Company both at the factory and in the New England territory.

SIOUX CITY, Ia.—LeRoy Lavitz, connected with the Ryal Miller Chevrolet company three years as assistant manager has been made sales manager. He has been in the Sioux City field 12 years, coming here with Mr. Miller from Mitchell, S. Dak. Mr. Lavitz's promotion followed the appointment of Duane S. Kidder as manager of the company.

AKRON.—Papers have been filed with the secretary of state, chartering the Thornton Chevrolet Co., with an authorized capital of $25,000 to buy, seal and deal in automobiles.

ROCHESTER, N. Y.—Edward A. Horn, formerly with the Paige Sales Company, has joined the sales force of C. L. Whiting, Buick distributor.

SEATTLE.—Harry L. Jensen and L. B. Hannah have formed a partnership at East Forty-Fifth Street, and will handle sales and service on the Chrysler line.

CHARLOTTE, N. C.—Organization of C. W. Upchurch and Company, which will engage in the automobile business in Charlotte as dealer in Studebaker motor cars, was announced at the factory branch here of the Studebaker Corporation.

SAN FRANCISCO.—Bert Goodfield, one of the veterans of the automotive industry in California, has been appointed manager of the O'Neill Motor Company, local Star dealers. Goodfield comes from Los Angeles, where he has been for some time assistant sales manager of the Durant Company's branch.

OAKLAND, Cal.—The Forman Motor Company has been organized to handle sales of Oldsmobile and Peerless cars in Oakland. Show and salesrooms are at 2835 Broadway. The company is headed by G. H. Forman, for many years connected with J. W. Leavitt & Co., pioneer San Francisco dealers. Other members of the new firm are C. E. Root and L. E. Nicholson, salesmen and, A. H. Bolling, manager of the service department.

MOOSE JAW, Sask.—In order to provide for more space the Superior Motor Company, Ltd., has removed to 119 River St. West. Among the features of their new location are free parking space, air and water, lubrication rack, etc. They handle Durant and Star cars in Moose Jaw.

CLEVELAND.—Economy Cut Rate Auto Supplies, Inc., is the name of a new concern, recently chartered with a $10,000 capital to deal in auto supplies and accessories.

FORT DODGE, Ia.—The Bryant Motor Company, has contracted to handle the Oakland line in Ft. Dodge. A. A. Bryant, manager, has been associated with the Rehder-Cadillac Co. for the past three years.

DAVENPORT, Ia.—Twenty-five dealers and salesmen of the southeastern Iowa district of the Willys-Overland Co. attended a sales conference in the Lytle-Overland Co. office here as guests of that company. H. J. Lytle outlined an intensive campaign for the fall season.

SAN FRANCISCO.—The California Auto Sales Company, of Oakland, has been appointed dealers for the Star car, operating in conjunction with Field & Lee, distributors of Stars in Oakland.

HARTFORD, Conn.—W. F. Cloudman, Jr., for many years associated with the sale of Ford cars and trucks in the Hartford territory has joined the sales department of the Motor Sales Co., 258 Main street.

ST. LOUIS.—Lewis Knapp, who has been with the Lewis Automobile Co., Chandler distributors, for 12 years as a salesman, has gone with the Berry Motor Co., Packard distributor in St. Louis.

SPRINGFIELD, Ill.—Roy L. Bragg and William J. Menghini have organized the East Side Hudson-Essex company and opened a garage and sales agency at 808-12 East Monroe st. Bragg has been engaged in the automotive business at Shelbyville, Ill., for a number of years, while his partner was a salesman for many years with the Jennings Auto Sales Company of Springfield.

CALGARY, Alta.—Fred Partridge has resigned from McLaughlin Motor Company sales staff after nine years service and has taken charge of the Flint car sales for Premier Motors of this city.

BERKELEY, Cal.—C. W. Leppla has been appointed Nash and Ajax dealer for Berkeley.

BARBERTON, O.—The Ralph Myers Chevrolet Co., has been chartered with an authorized capital of $25,000 to buy, sell and deal in new and used autos and accessories.

DETROIT.—Chalmers G. Hall has been appointed as assistant director of sales development of the Oakland Motor Car Company, according to a recent announcement by Wm. Chamberlin, director of sales development.

CHICAGO.—Bill Fry's Stewart-Warner Products service station has moved from 1827 Grand Avenue to 2600 Grand Avenue, where he will continue a retail Stewart-Warner accessories and radio.

SALT LAKE CITY.—The Richardson-Bower Co., Dodge distributors and dealers, has purchased real estate for a modern fireproof building as the company's new home. The entire tract will be covered which will provide a structure with about 97,200 square feet of ground space. The new building will be used for both storage and distribution purposes.

MARYVILLE, Mo.—The Hudson-Carlson Motor Co., with headquarters at the Kramer Garage, has been formed here by Edgar Carlson. He has the agency for the Hudson and Essex automobiles.

MOUNT MORRIS, N. Y.—The firm of Mann Brothers, Buick dealers, has been organized into a corporation known as Mann Brothers, Inc., with a paid in capital stock of $55,000. The officers of the new company are Maurice H. Mann, president; Carl B. Mann, vice president and Bert R. Mann, secretary and treasurer.

MOLINE.—C. C. Clair has been appointed manager of the Moline branch of the Horst and Streiter company, Ford agents here. Mr. Clair has been manager of the Muscatine branch. He succeeds C. C. Morse who resigned two months ago to go into the real estate business in Florida. A. C. Graham who has been acting manager here will continue as sales manager.

BURLINGTON, Ia.—The Triangle Auto Supply company, operating in Iowa City, Oskaloosa, Washington and Fairfield, Iowa, will open its fifth branch at 215 Washington street, in the building formerly occupied by the A. & E. Motor company. C. L. Deming, formerly of the Oskaloosa branch, will be the local manager, H. F. Moffett, a member of the firm, arranging the establishment of the Burlingtno store announced.

With the Associations

Plan to Have Lien Law

ST. LOUIS, Sept. 5.—A plan for a mechanics' lien law in Missouri to apply to automobiles, similar to the law which now covers work done on buildings was launched at a recent meeting of all divisions of the Associated Automobile Service companies of St. Louis.

The Service companies want a lien law which gives a claim for work done on automobiles precedence over the mortgage claims against the automobile on the same terms as a claim for work done on a building takes precedence over the mortgages on the real estate of which the building is a part. The theory on which this precedence is based is that the work done adds a value to the property which did not exist previously, for which the worker who added the value is entitled to prior compensation.

It is planned by the association to form a state-wide organization of automobile repair firms in Missouri, the St. Louis organization to carry on the work for the formation of such a body. The bill for the lien law is to be introduced at the next session of the Missouri General Assembly and it is expected that state wide interest in the bill will aid in its passage.

Peoria Resumes Meetings

PEORIA, Ill., Sept. 5.—The Peoria Automotive association resumed its fall and winter series of weekly luncheons this week, devoting the opening meeting to a discussion of the national campaign to reduce auto taxes. The local group will join whole-heartedly in the project. Rollin Travis discussed the seasonal outlook in relation to general business conditions and the association also acted on further arrangements for the National Automobile Association sales congress here September 10.

Plan to Fight New Law

SAN FRANCISCO, Sept. 5.—Automotive trade associations of California have just received copies of an interesting ruling by the state attorney general of Oregon, in which that official holds that any service car, whether it be the equipment of a garage or a sales company, is a common carrier for hire, and as such is to be regulated by the Oregon Public Service Commission. Dealers and garages maintaining service cars are required, under the law controlling "for hire" vehicles, to obtain a common carrier license and to keep such cars covered with liability insurance. The common-carrier license costs $10; the state license a minimum of $40; certificate of title, $3; and driver's license $2—all told a minimum expenditure of $55 for fees alone on every service car operated in Oregon. The state automotive trade association is preparing to fight the law.

Will Fight Freight Rates

CHARLOTTE, N. C., Sept. 5.—The fight for lower freight rates on gasoline shipments into North Carolina, launched at Raleigh by a committee of bulk dealers, members of the Carolina Automotive Service Association, will be adequately financed and will be taken before the Interstate Commerce Commission as quickly as the case can be prepared, according to W. S. Creighton, of Charlotte, one of the South's best known traffic experts, who will personally conduct the North Carolina association's effort.

The Oklahoma refiners, through their spokesmen, have agreed to join with the North Carolina organization in this effort to obtain more equitable freight rates on the product from the midcontinent fields to the Southeastern states, according to Mr. Creighton.

The alleged discriminatory freight rates are being roundly denounced by the North Carolina dealers, who declare that gasoline can be shipped from Fort Worth, Texas, to New York for only twice as much as it can be shipped from Wilmington, N. C., a port, to Greensboro, N. C., an inland city.

Alabama Bonds Opposed

BIRMINGHAM, Ala., Sept. 5.—Members of the Alabama Automotive Trades Association, in a meeting held in Montgomery, went on record as being opposed to the $75,000,000 road bond issue which was suggested by Senator John A. Rogers, chairman of the state highway commission. At the same time, however, the automobile men expressed themselves as being in favor of a much smaller bond issue.

It was the opinion of the executive committee that the proposed large issue of road bonds would too heavily increase the tax burden of the people of the state and that a smaller issue than the one for $75,000,000 would be sufficient for the present needs of Alabama in regard to road building and repairs.

The committee at its meeting decided on a program to be presented to the state automotive trades association at its January meeting and intended to be proposed by that committee to the state highway commission.

Rental Men Organize

DES MOINES, Ia., Sept. 5.—Representatives of "drive-it-yourself" auto livery systems from Iowa and Nebraska, met in Des Moines to organize the Iowa-Nebraska section of the American Drivurself Association. H. F. Tyrell, manager of the Hertz system of the Yellow Cab Co. of Omaha, was chosen as chairman of the section. The next meeting of the section will probably be held in Des Moines during the first part of October.

Akron Elects Savidge

AKRON, Sept. 5.—Directors of the Akron Automobile Dealers' Association have elected S. L. Savidge, of the Summit Chevrolet Co., as president of the association. He succeeds W. F. Jones.

F. E. Richardson, of the Richardson-Wellock Co., was elected vice president; Lucius D. Lyman, of the Overland-Akron Mart Co., secretary, and F. E. McClure, of the McClure Motor Co., treasurer.

The new officials plan to start a campaign to enlarge membership in the association, and make for greater cooperation among local dealers. A closed car show will be held this winter.

Iowa Tradesmen Meet

WATERLOO, Ia., Sept. 5. — Board members of the Iowa Automotive Merchants association were entertained last week by the Black Hawk County Motor Trades bureau at the quarterly session of the board, attended by 15 members, including W. E. Wissler, Des Moines, president and A. J. Knapp, Des Moines, secretary and manager. Mr. Knapp, who was attending his last meeting as an Iowa officer, prior to his resignation September 1 to go to Florida, was presented with two special golf clubs and had opportunity to use them on the Sunnyside links that afternoon as the board members were entertained at that club. The executive committee was empowered to select Mr. Knapp's successor and no choice has been announced.

Study Oregon Law

SAN FRANCISCO, Sept. 5.—The legal department of the San Francisco Motor Car Dealers' Association, and of the San Francisco Automotive Trade Association is studying the new Oregon law providing for the issuance of certificates of title to automobile owners as a pre-requisite to their obtaining a license in that state. The local associations probably will present a similar law to the next session of the California state legislature. Under the Oregon law—whole adoption cost the voters of that state $55,000—it is possible to determine immediately, and without inconvenience, the real ownership of any automobile bearing an Oregon license. It is claimed that dishonest sales or transfers of automobiles in that state are now impossible, since the law requires that the secretary of state issue a certificate of title only on the sworn statement of the actual owner of the car. In no instance may the state grant a license for the operation of an automobile or truck, without legal assurance of ownership being filed. The law makes it unlawful for a car-owner to apply for a license in any other name than his own, nor can he claim ownership unless his equity in the car is in fee simple.

Coming Motor Events

Automobile Shows

Dallas, Tex.—Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

De Pere, Wis.—Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.

Fresno, Cal.—Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Oklahoma City, Okla.—Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Shreveport, La.—Oct. 24-Nov. 3
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York—Nov. 15-21
Twenty-first Annual Automobile Salon.

White River Junction, Vt.—Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.

Chicago—Oct. 10-17
Seventh annual Used Automobile Show under auspices of Chicago Automobile Trade Association, at Coliseum.

Chicago—Nov. 5-7
Annual show in connection with convention of National Standard Parts Association, Coliseum.

Chicago—Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Danbury, Conn.—Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston—Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago—Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City—Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Boston—Oct. 12-17
Annual radio show in Mechanics' Building. Shelton Fairbanks, manager.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

New York—Sept. 18-19
Meeting of National Battery Manufacturers' Association at Commodore Hotel.

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Races

Charlotte, N. C.—Nov. 11
Fresno, Cal.—Oct. 3
Los Angeles, Cal.—Nov. 26
Syracuse, N. Y.—Sept. 19
Rockingham—Oct. 17
Baltimore—Oct. 24

Conventions

Buenos Aires, Argentine—Oct. 3-13
Pan-American Road Congress.

Cleveland—Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.

Cleveland—Sept. 15-16
S. A. E. production meeting and exhibition.

Des Moines, Ia.—Nov. 12-13
Automotive Merchants' Association Convention.

Montreal, Que.—Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Pittsburgh, Pa.—Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis—Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Eaglesmere Park, Pa.—Sept. 14-17
General meeting of the Automotive Electric Association.

Montreal—Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Foreign Shows

Berlin, Germany—Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina—Oct. 3-13
Pan-American Road Congress.

London, England—Oct. 8-17
Olympia Passenger Car Show.

London, England—Oct. 29-Nov. 7
Annual Truck Show.

Ford's Mexican Plant Now Turning Out Assembled Cars

DETROIT, Sept. 5.—The Ford Motor Company of Mexico has been organized in Mexico City and is now turning out assembled Ford cars and trucks for distribution in that territory. In all its essential details, the Mexican plant is similar to Ford plants in other foreign countries and the United States. Production has begun and while facilities at present only permit assembly of chassis, additional equipment is now being installed. This includes enameling ovens and also facilities for building bodies.

The Ford Motor Company plant is Mexico's first automobile factory and its operation is regarded as much a show place of the city as an industrial enterprise by the citizens and Mexican government officials. The plant is housed in a two-story building of 48,000 square feet of floor space which has been remodeled to conform with Ford standards of production. General offices of the company are located in the building.

The company now has 18 foreign plants and associated companies. Others, in addition to Mexico City, established this year are at Pernambuco, Brazil, and Yokohama, Japan.

CHEVROLET OFFICIALS ADVANCED

FLINT, Sept. 5.—Three executives, high in the ranks of the Chevrolet Motor Company have been promoted to better positions in Europe with the General Motors Export Corporation, according to an announcement made by Edwin R. Palmer, comptroller of the company. The three: C. C. McBratney, T. C. Egan and H. W. Vane will form the financial directorate for the General Motors plants abroad. Previous to his new appointment, Mr. McBratney had been assistant to Mr. Palmer while Mr. Egan had supervision of the payrolls and similar accounting. Mr. Vane has been in charge of general accounting work of the company.

STAR DEALERS MEET

PORTLAND, Ore., Sept. 5.—Star and Durant dealers throughout Oregon assembled in Portland during the past week for a conference with E. T. Tuller, general sales manager of the Durant Motor company of California, and James Houlihan, the factory's advertising counsel. Plans were discussed for the coming quarter and methods explained regarding the "model branches" in California. June and July were the largest months in the history of the factory. Sectional meetings were held in the state of Washington last week.

NEW LOCOMOBILE DEALERS

BRIDGEPORT, Conn., Sept. 5.—The Locomobile Company of America, Inc., announces the appointment of the following companies as direct dealers to handle the new Junior Eight car, deliveries of which are now being made by the factory at the rate of 25 daily:

The Locomobile Company of Altoona, Altoona, Pa.; Locomobile Sales of Hartford, Hartford, Conn.; Locomobile Sales Company of Keene, Keene, N. H.; The Locomobile Company of Raleigh, Inc., Raleigh, N. C.; Locomobile Sales, Ltd., Vaucouver, B. C.; Economy Motor Sales Corporation, Harrisburg, Pa.; Atlantic Locomobile Company, Atlantic, N. J.

GRAF CHIEF ENGINEER

CINCINNATI, Sept. 5.—Andrew Graf formerly assistant chief engineer of the United States Motor Truck Company of Cincinnati, has been appointed chief engineer according to an announcement made public today. Mr. Graf succeeds E. C. Shumard who has been with the company many years.

BIG VELIE DRIVEAWAY

MOLINE, Sept. 5.—One of the biggest driveaways ever staged by Velie took place here last week when 77 cars left the plant for points in nearby territory. The consignment consisted of the first new broughams to be put on the market.

Sloan Urges Level Line of Production Be Maintained

Distributors and Dealers Must Carry Heavier Stocks Some Times to Protect Rush Periods

NEW YORK, Sept. 5.—Alfred P. Sloan, Jr., president of the General Motors Corp., in a recent message to dealers, takes up the problem which confronts every automobile manufacturer, that of the regulation of the flow of cars to the consuming public.

Figures showing the percentages of the year's deliveries made by General Motors to consumers by months, are as follows:

January	4.86	July	7.11
February	5.15	August	4.25
March	11.75	September	6.96
April	14.70	October	7.60
May	13.50	November	6.94
June	11.68	December	5.50

From this table it is seen that a much greater number of cars must be available for retail distribution at certain times of the year than at other, Mr. Sloan points out. Yet it is impractical to vary production schedules to as great an extent as would be necessary to keep in line with seasonal variations.

The nearer a factory can approach a level line of production, Mr. Sloan believes, the more economic the general result will be. This means not only a better product, but a lower cost, with a resulting lower list price. Production schedules, therefore, should be laid down always bearing this in mind, and should be promptly adjusted whenever the trend of retail sales indicates the necessity for such adjustment, in order that the stock to be carried by the distributors and dealers shall not be either greater or less than the economic necessities of the situation require.

From this outline of General Motors policies, it is seen that distributors, dealers and the factory's own branches must carry stock at certain seasons if it is going to be possible to meet the seasonal peak of retail demand, Mr. Sloan concludes.

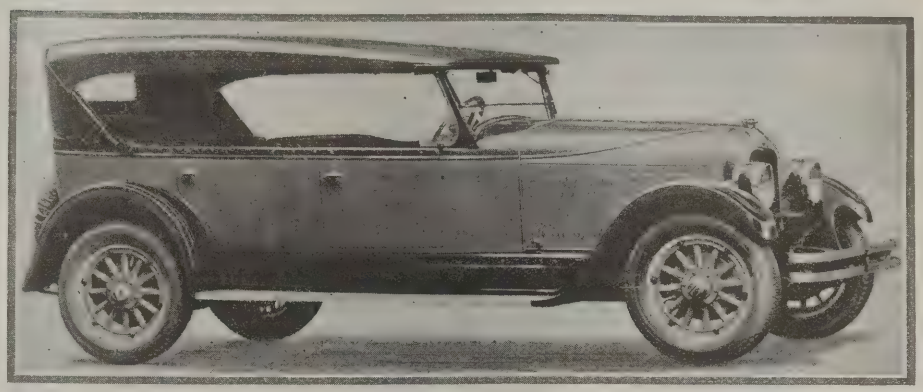
GOODYEAR TO BUILD

AKRON, O., Sept. 5.—Goodyear Tire & Rubber Co. has joined the ranks of Akron rubber companies which have under way or contemplate the erection of new buildings to take care of increased business. Officials of the company announce that construction of a new factory building, five stories high, will be started soon in the rear of Plant 1, on Kelly avenue. The estimated cost is $750,000, and the building will contain 198,580 square feet of floor space, constructed of reinforced concrete, with brick facing.

NEW HAMPSHIRE GAS TAX

CONCORD, N. H., Sept. 5.—That a gasoline tax is profitable is proven by New Hampshire where the figures for the last two fiscal years show the state had received $1,065,023.49. Of this amount $262,027.22 was paid into the state treasury during the first six months of this year.

Auburn Announces New Touring Models



New Auburn touring car now available on both the six and eight cylinder chassis. List price of the six and eight are $1395 and $1995 respectively

The Auburn Automobile Company is now in production on touring car models on both the six and eight-cylinder chassis. These new cars accommodate three passengers in both front and rear seats.

On the eight-cylinder chassis the touring car is upholstered in hand buffed, dual-tone, Brown Spanish leather and the folding top is covered with double texture dark tan Rolls Royce top material.

The six-cylinder touring car is also upholstered in Brown Spanish leather but a black folding top is standard.

Both models have windshield wings built integral with the windshield and so constructed as to swing with the doors when curtains are installed. This permits attachment of curtains to rear edge of windshield wing, giving clear vision.

All instruments are in one panel under glass on the instrument board and include heat indicator, gasoline gage and speedometer. Equipment includes four wheel brakes, balloon tires, transmission lock, rear vision mirror and automatic windshield wiper. The lighting switch is located on the steering wheel for convenient operation.

The emergency brake is controlled by pull type lever under the instrument board, removing this lever from the front compartment.

Wood wheels are standard equipment with Smith expanded steel wheels optional at slight extra cost. The list price of the six cylinder touring is $1395 and of the eight $1995.

SQUEEKS and RATTLES

Clever, Indeed!

Sam (watching the construction of a new gasoline station): Boy, I sez, white folks is shure intelligent.

Sam's Friend: How come you 'rive at sech a reduction, Sam?

Sam: Dawgone, they knows jest what lots to dig fer to get gasoline.

—Washington Dirge.

The Paris police department has issued a one hundred and ninety-two-page book on traffic regulations. After a Parisian has memorized the traffic rules and figured his income taxes, he must be about done for.

—Buffalo Express.

The Getaway

The village improvident was observed dickering with an automobile salesman for an expensive motor.

"What do you mean," asked a candid friend, "by buying a big, fast car when you can't even pay your bills?"

"That," admitted the improvident, "is the main reason I am buying a big, fast car."

—American Legion Weekly.

Yes and No

Free State Patrol—Have ye yer permit on ye for dhriven the cyar?

Motorist—I have that. Are ye wantin' to see ut?

Free State Patrol—What for would I be wantin' to see ut if ye have ut? It's if ye had ut not that I'd want to look at ut.

—Punch.

Requiem

Little flasks of silver,
Midnight rides by twos,
Put the railroad crossings
In the daily news.

—Life.

"I just bought a Rembrandt."

Patriotic American—Well, American cars are good enough for me!

—Judge.

Woman's intuition isn't so impressive when she is deciding which way to turn in traffic.

—Rochester Times-Union.

Mrs. 'Arris (seeing sky-writing for first time)—Lawk, Mrs. 'Iggins, wot be that?

Mrs. 'Iggins—That'll be some o' that there wireless caught fire, I'll be bound.

—The Tatler.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
-------	4-p	Sport-Roadster	1,495
-------	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
-------	------	Wanderer	1,845
		"8-88"	
------	4-p	Sport Roadster	1,975
-------	6-p	Touring	1,995
-------	5-p	Brougham	2,250
------	5-p	Sedan	2,350
-------	7-p	Sedan	2,550
-------	------	Wanderer	2,400
BUICK		**"Standard"**	
-------	2-p	Roadster	$1,125
-------	5-p	Touring	1,150
-------	2-p	Coupe	1,195
-------	4-p	Coupe	1,275
-------	5-p	4d. Sedan	1,295
-------	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
-------	2-p	Roadster	1,250
-------	5-p	Touring	1,295
-------	5-p	Sedan	1,495
-------	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
-------	3-p	Sp. Roadster	1,495
-------	5-p	Sp. Touring	1,525
-------	4-p	Country Club	1,765
-------	4-p	Coupe	1,795
-------	5-p	Brougham Sedan	1,925
-------	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
------	2-p	Coupe	$3,045
-------	5-p	Sedan	3,195
-------	7-p	Sedan	3,295
-------	5-p	Brougham	2,995
-------	7-p	Imperial	3,435
-------	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
-------	------	Roadster	3,250
		(138 in. W. B.)	
-------	7-p	Touring	3,250
-------	------	Phaeton	3,250
4400	5-p	Coupe	4,000
4490	5-p	Sedan	4,150
4590	7-p	Suburban	4,285
4655	7-p	Imperial	4,485
CASE		**J. I. C.**	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3223	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3128	5-p	Sedan 4d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$6,650
4500	4-p	Sp. Touring	6,150
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
------	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
------	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DORRIS		**"6-80"**	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
-------	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		**A-22**	
-------	2-p	Sp. Roadster	500
2225	5-p	Touring	810
-------	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
-------	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
-------	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
-------	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
-------	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
-------	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
-------	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	795
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,785
		"40"	
2715	5-p	Touring	1,285
2940	5-p	Sedan 4 d.	1,680
2965	5-p	Brougham	1,760
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	$45
		With Balloon Tires	370
1644	5-p	Touring	$75
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
3135	5-p	Cabriolet	4,400
-------	5-p	Oxford Sedan	3,172
GARDNER			
		"6"	
2975	5-p	Touring	1,395
2925	------	Sport Roadster	1,595
3100	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3290	5-p	Sport Sedan	1,895
3300	------	DeLuxe Sedan	1,895
		"8"	
3175	5-p	Touring	1,995
3100	------	Sport Roadster	1,995
3300	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ		**D-1**	
3360	5-p	Sedan	$1,695
HUDSON		**"Super Six"**	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,195
3425	4-p	Brougham 4 d.	1,495
3675	7-p	Sedan	1,695
HUPMOBILE "R"			
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		**"23-25"**	
3025	4-p	DeLuxe Road.	$1,500
3015	5-p	DeLuxe Touring	1,320
3000	5-p	Coach 2d.	1,245
3150	5-p	DeL. Coach 2d.	1,400
3305	5-p	DeLuxe Sedan	1,680
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,275
3340	5-p	Touring	2,275
3450	3-p	Friendly "9"	2,575
3625	5-p	Brougham	2,575
3520	4-p	Victoria	2,475
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
3800	7-p	Suburban Sedan	3,375
KISSEL		**"55"**	
3130	2-p	Speedster	$1,895
------	2-p	Sp'dster De Luxe	2,185
------	4-p	Speedster	1,995
------	4-p	Sp'dster De Luxe	2,285
3580	2-p	Enc. Speedster	2,285
-------	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
------	4-p	Tourster De L.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton De L.	1,885
-------	7-p	Touring	1,785
------	7-p	Touring De L.	1,985
3430	4-p	Coupe	2,185
------	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	1,995
-------	5-p	Broug. Sed. DeL.	2,685
-------	5-p	Brougham 2 d	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
------	5-p	Victoria De Luxe	2,685
		"75"	
-------	2-p	Speedster	2,195
------	2-p	Speedster De L.	2,485
------	4-p	Speedster	2,295
------	4-p	Speedster De L.	2,585
-------	2-p	Speedster De L.	2,585
------	2-p	Enc. Sp'd'r DeL.	2,985
------	4-p	Tourster	2,195
------	4-p	Tourster De L.	2,385
------	5-p	Phaeton	1,985
------	5-p	Phaeton De Luxe	2,185
------	7-p	Touring	2,085
------	7-p	Touring De Luxe	2,285
------	4-p	Coupe	2,485
------	4-p	Coupe De Luxe	2,885
-------	5-p	Sedan	2,395
------	5-p	Broug. Sed. DeL.	2,985
------	5-p	Brougham 2 d.	2,195
------	7-p	Sedan De Luxe	3,485
------	7-p	Berl. Sed. De L.	3,585
------	7-p	Victoria	2,585
-------	7-p	Victoria De Luxe	2,985
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,845
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	5-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
------	------	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

MOTOR AGE

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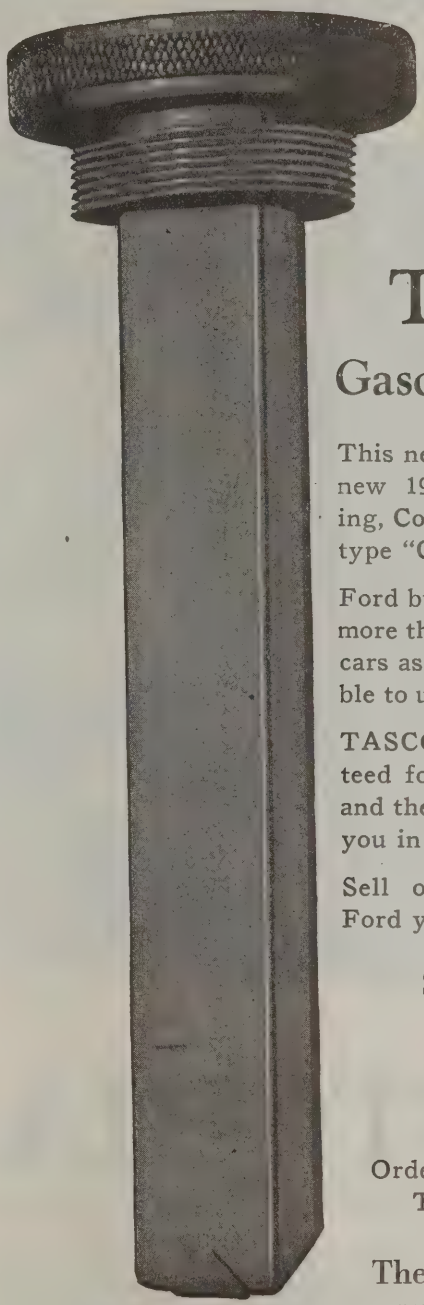
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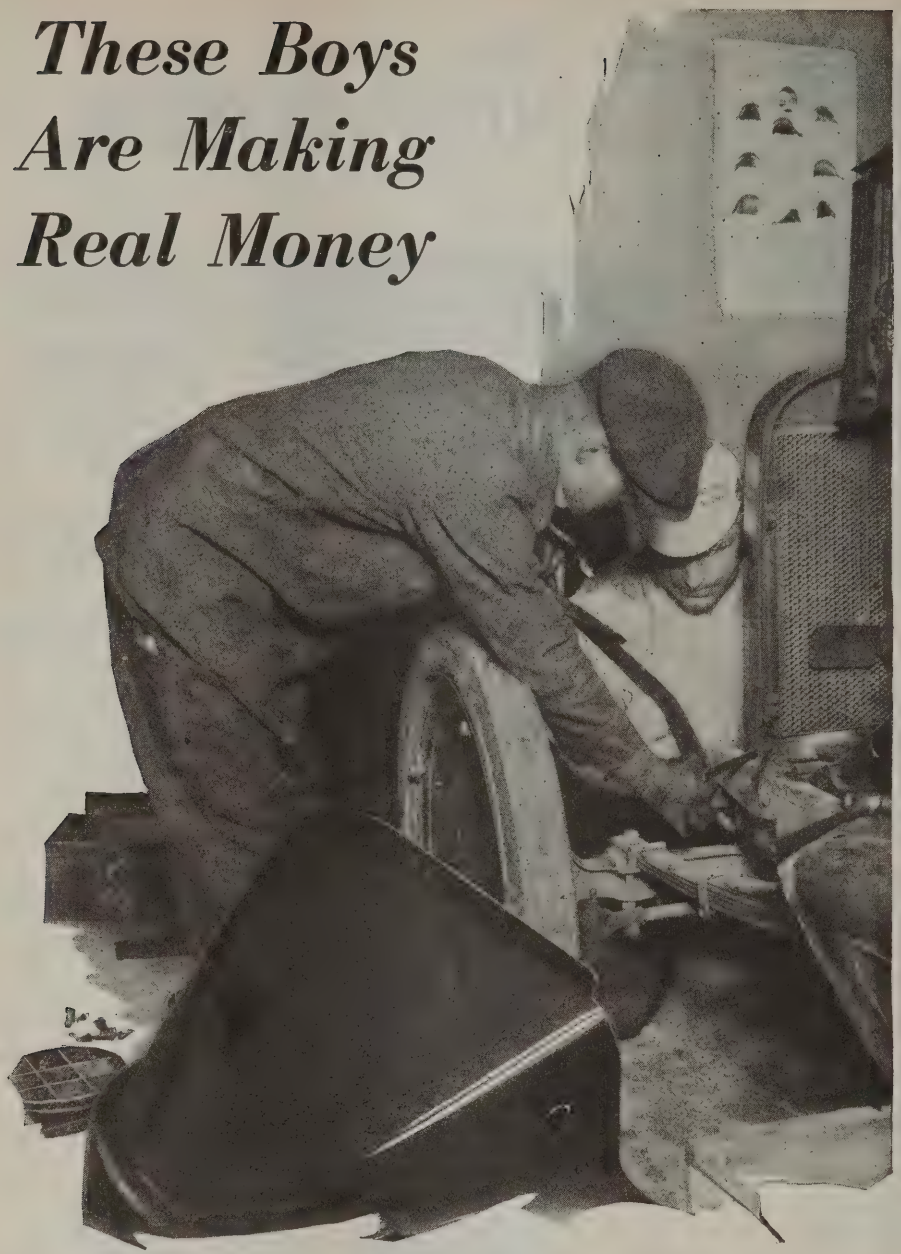
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MOTOR AGE

Vol. XLVIII | Chicago, September 17, 1925 | No. 12

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

NEW production record seen as result of increase in buying following introduction of new models. Output rate expected to reach peak when Ford attains volume. Page 32.

Boston engineer blames poor visibility, not glare for majority of motor car accidents at night. Page 43.

Overland reduces price on standard sedan to $595 from $655. Page 32.

Automobile industry only one that sells product at prewar level, says Durant president. Page 33.

Official warning is sounded in connection with methods employed by trade associations. Page 33.

N. A. D. A. urges that factories keep production schedules within bounds of dealer demand. Page 37.

St. Louis used car dealers will try auction plan for five weeks. Page 37.

Goodyear official sees little promise of drop in tire prices during the rest of 1925. Page 43.

Large increase in earnings of leading tire manufacturing companies is reported for first eight months of 1925. Page 39.

Average net dealer profits show slight increase in 1924, N. A. D. A. figures showing that 3.4 per cent is mean profit on sales volume. Page 38.

Hudson-Essex shows rapid advance in sales volume in Pacific Coast territory. Page 34.

Erskine declares Studebaker is now in strongest position in the history of the company. Page 34.

Mexican business men see their country as fertile field for the automobile salesman as result of new road system to be constructed at once. Page 35.

Southern automobile dealers work hard to supply demand for cars. Crops bringing big returns and building activity is on upgrade. Page 35.

Studebaker dealers from all over southern part of United States hold conference in Dallas, Tex. Page 34.

California registrations during first six months of 1925 aggregate more than all titles for 1924. Page 36.

Rickenbacker believes future automobile will be smaller, lower and that balloon tires will eventually take place of springs. Page 38.

Dealers all over United States show tendency to restrict their used car deals to lesser number of makes, N. A. D. A. figures show. Page 36.

Details of annual convention of Motor and Accessory Manufacturers' Association at Montreal October 7-10 are completed. Page 39.

In Next Week's Issue—Roads Are Needed for More Two-Car Families

Nearly Half of Cars on Road Need Brake Service

By CLARENCE PHILLIPS

SINCE 1923 there has been under way a most worthy movement the purpose of which is to reduce the number of motor vehicle accidents that result from deficient braking. The campaign is spoken of as the "National Brake Inspection Movement," having been launched by the National Safety Council and having among its indorsers progressive automotive trade organizations in quite a number of cities.

Although a great many automotive trade organizations have evidenced interest in the brake inspection campaign it is a regrettable fact that a still larger number apparently have failed to sense its importance.

One reason for this likely is a reflection of the general feeling that "campaigns" and "drives" of one kind or another have been much overdone since the exigencies of a world war got this country into a "campaigning" and "driving" habit. People have grown so used to hearing of movements to endow homes for blind cats or educate against the spread of dandruff that it often takes more than the ordinary thunder of the ordinary "drive" to get their serious attention.

There are two classes of "campaigns" as the word is understood in the sense of this article.

In one class are those which have no merit and which we would be better off without—and in the other are really good undertakings which the public should give full support.

The brake inspection movement falls into this last-described group.

And—why should the automotive trade support it? There are four very good reasons:

1—Because the automotive trade wants traffic accidents held to a minimum. It deplores personal misfortune of any sort.

2—Because the automotive trade wants to sell the public as thoroughly as possible on the thought that motor vehicle transportation is SAFE transportation.

3—Because the automotive trade has the good name of its chief product to defend.

4—Because—if for no other reason—the brake inspection movement brings business to the trade's own doors.

In a broad sense we will say that all four of the reasons just set forth are *business* reasons, although the fourth is the only one appearing as such in its phraseology.

It always is broad business for a group of merchants to support any movement that promises greater public confidence in the article which the group offers for sale.

An opportunity to help increase public confidence in the motor vehicle by lowering the now heavy traffic accident toll is what the automotive trade is offered in this invitation to get behind the brake inspection movement.

And as the public's confidence strengthens in that same measure will automobile driving increase. Only so long as an owner is driving his car is he continuing his consumption of the industry's products.

Percentages of Defective Brakes as Found In 18 Cities During Inspection Campaigns

City	P. C.
Denver, Colo.	41
Dayton, O.	50
Council Bluffs, Ia.	50
Quincy, Ill.	40
New York City	20
Syracuse, N. Y.	60
Wheeling, W. Va.	36
Hartford, Conn.	38
Kansas City, Mo.	50
Toledo, O.	75
Bridgeport, Conn.	10
Rome, N. Y.	50
Joliet, Ill.	45
Cedar Rapids, Ia.	45
Pueblo, Colo.	50
Springfield, Ill.	40
Elgin, Ill.	40
Richmond, Va.	22
Average	42

When the car is laid up in the family garage consumption stops.

It is consequently desirable that the prospect not only buys an automobile but that he drives it much. The more he drives it the better for the automotive business. What we all want are conditions that will make for maximum use of the motor vehicle.

When Cars Are Left At Home

To think that the public's confidence in automobile driving has risen to the highest possible point would be laboring under a delusion. True, it has risen to a good altitude but it will ascend higher and higher as the streets and highways are freed from the risk of accidents. Many of the more timid motorists prefer to leave their cars at home rather than take them out on the streets when traffic is especially heavy. Many, somewhat more bold but precautious, drive considerably less than they would were the hazards of driving in heavy traffic brought to a minimum.

When we discuss traffic safety we naturally turn our minds much to the question of brakes and there is no doubt but elimination of the braking hazard would mean a large reduction in the annual number of fatalities resulting from accidents in which the motor vehicle plays a part.

Our engineers have made remarkable progress in the perfection of dependable brakes. Great strides have been made in the past few years. But the industry's brake genius has not succeeded in accomplishing the feat of producing an *abuse-proof, inattention-proof or a non-deteriorating control arrangement.*

Like any other mechanical evolvement automobile brakes require frequent checking and occasional shop attention. The shop mechanic is more appreciative of this fact than the average automobile owner and in the interest of general traffic safety it is important to bring the owner to a full realization of the actual risk he runs by not having his brakes examined periodically by experts who are capable of pointing out any defects and making or recommending necessary corrections.

Regular Inspections, Besides Promoting Safety, Reveal Huge Market for Sale of Relining Material, Installations and Adjustments by Which the Automotive Dealer Can Increase His Business



The sign tells what this picture is. The scene was photographed during Richmond's brake inspection campaign

"Brake inspection weeks" have accomplished much in an educational way already and the national movement has produced results so satisfying that the campaign seems to have established itself as a fixture of the general effort to bring about a minimization of motor vehicle accidents and greater traffic safety. Whether or not the local trade association gets actively behind the brake inspection movement the project will continue to gather force and add to its growing list of boosters. Results of its influence are found in the increasing number of laws requiring brake inspection, the increasing number of "permanent" local organizations that will supervise "inspection weeks" one or more times each year and in the universal commendation of the movement by traffic authorities. The idea has even spread to Europe. Close to 300 cities and towns in the United States and abroad have taken it up.



This cut shows two sides of steering wheel tag that has been supplied by the Asbestos Brake Lining Association for use in inspection campaigns

It must be faced that safety in driving an automobile will have much to do with the future expansions of automotive sales. Even when the field for sales is broadened through relief of traffic congestion and a reduction of accidents on this account—we still will have brakes to deal with. All accidents resulting from deficient brakes are by no means met in congested streets. Poorly functioning brakes constitute a hazard at all times. The surest safeguard is to treat the braking system as something which demands frequent going over and frequent mechanical attention. Our motoring public must be aroused to this necessity.

From a Business Standpoint

Therefore, it is clear that from a broad business standpoint, aside from the primary humanitarian consideration, any support given the brake inspection movement by the automotive trade will yield positive returns in proportion to the campaign's success.

Looking at the proposition from this angle, of course, is to consider the future. However, the trade organization which gets behind a brake inspection campaign in its community need not wait for the future to return profitable business for efforts expended.

These brake inspections, themselves, logically bring considerable quick business to the automotive repair shop. It is to them that the owners must look for any necessary adjustments or corrections. It is through new contacts with owners who seek brake attention that the shop, also selling accessories, tires or other items of automotive

merchandise, finds opportunity to make profitable disposal of its wares.

It is admitted that a safety movement deserves support fundamentally because it is a safety movement, but the issue of safety is so interwoven with the business of merchandising automotive products that the commercial aspect is inescapably conspicuous.

Safety begins with what the motorist can buy from the engineer and the mechanic.

Safety is part of the automotive shop's stock in trade, just as providing medical attention is the doctor's and providing food is the grocer's.

When the brake inspection campaign was launched it sounded a call for the automotive trade to rise to an emergency in supplying the public with the different elements of safety in which it specializes. Without the assistance of the repair shop it would be impossible to carry such a movement to a high point of success—or get anywhere at all. Those in charge of the free inspections only point out defects and make recommendations. It follows that the actual work of brake correction must be accomplished by those who are equipped with the expert knowledge and mechanical appliances to do it.

So the automotive trade finds itself in the position of profiting through a good cause and through a movement, primarily humanitarian, which will yield its returns in safety for the motoring public in proportions commensurate with the service furnished by the trade.

Reports from localities where "brake inspections" have been held invariably have been followed by not only a big demand for brake corrections and repairs, but by increased volumes of general maintenance business. Not only that, but brake inspections have developed buyers for new automobiles.

Following a brake inspection campaign in Kansas City this summer George W. Arnold, president of the Kansas City Automotive Trades Association, issued the following statement to association members:

"BUSINESS PICKS UP AS A RESULT OF BETTER BRAKES WEEK

"My own shop shows an increase of over $50 per day over last month of which the most is brake work. I know absolutely of at least a dozen cars of my customers that were sold relined jobs as a direct result of the Brake Tests; also of a number of other jobs that were driven in for brake service. Our average relines per day now are from three to five where last month the average was about one a day. I have sold other work also as a resu of the contest."

One of the interesting and somewhat typical brake i spection campaigns of the present year was held in Ric mond, Va., under the auspices of the Richmond Safet Council. Automobile dealers and mechanics from the shops assisted in the examinations, checking the cond tions of brakes with respect to efficiency and giving th car owner a report on the finding. No adjustments of an kind were made at the inspection station.

It was found in the Richmond campaign that 33 pe cent of the cars examined had excellent brakes, 45 pe cent adequate brakes and 22 per cent seriously defectiv brakes.

That sounds like a dangerously high percentage an something which should cause the car owner to think abou his brakes, but the Richmond percentage of inefficien brakes was considerably lower than the percentag usually reported at the close of these campaigns.

75 Per Cent in Toledo

The campaign in Toledo, Ohio, revealed that 75 per cen of the cars examined had inefficient brakes, Syracuse re ported 60 per cent, a number of cities reported as high a 50 per cent while others reported from 40 to 50 per cen An outstanding case was that of Bridgeport, Conn., turn ing in a card of only 10 per cent. Bridgeport was a rar exception to the rule.

The round average for 18 specimen cities where brak inspections were held can be put at 42 per cent. In othe words, of the cars examined in these 18 cities 42 per cen were found to have inefficient brakes. The report that 7 per cent of 697,000 automobile accidents in this countr were due to inefficient brakes is not hard to believe whe one considers the conditions developed by these brak inspection campaigns. Greater attention to brakes n doubt will reduce traffic accidents. Encouragement o periodical inspections of brakes is an effective way t focus the motorists' attention upon this vital element o his personal safety.

Suggestions that could be incorporated into a brak inspection campaign will be furnished to the trade by th Asbestos Brake Lining Association which maintains head quarters at 17 West 42nd Street, New York. The ma terials offered are for general help. The association als will furnish, free of cost, such campaign devices as colore window posters, brake inspection certificates, gumme slogan stickers and safety tags to be affixed to the steerin wheels of automobiles.

Portable Oil Stand Boosts Sales

An enterprising garageman near San Francisco has built a portable lubricating oil stand (as an advertisement only, as no oil is sold from it), which he wheels out in front of his garage so that motorists stopping for gasoline will easily see the lubricating oil stand and therefore be reminded that this garage also sells lubricating oil. The owner states that this device has paid for itself many times over in increased business in lubricating oil. No oil is sold from the oil stand, although it contains oil tanks and valves.



Rental Battery Losses Reduced By Cooperative Action

LOSSES from unreturned rental batteries have long been a profit-eating problem with battery dealers throughout the country, but in many cities definite progress has been made of late in materially minimizing this evil. Notable among the successful plans to check these losses is that used in Los Angeles by the battery division of the Los Angeles Automobile Trade Association.

Some months ago James E. Granger, executive secretary of the association, made an exhaustive survey of the battery retail business in Southern California, and unearthed the startling information that of the 500,000 automobiles in operation in Los Angeles county, 80,000 were using rental batteries. Of this 80,000, 40,000 rental batteries had been out over thirty days. And of the 40,000, about 30,000 car owners had left batteries with dealers which were virtually worthless, and were deliberately defrauding the dealer.

"Here was a situation where there were 20,000 sales of new batteries that could and would be made if the rental batteries which had been withheld from the dealers were brought in to their rightful owners," Mr. Granger said. "Aside from the volume of potential business represented in this situation, there was the loss suffered by the dealers. We recognized that there had to be an organized plan of action if we were to get results, and we set out to develop a plan that would arouse the interest of the individual dealers."

A battery collection department was created by the association, and all battery dealers were advised that this department would regain possession of their rental batteries for a straight fee of $3.50 a month. In order to take advantage of the services of this department, however, it was necessary that the dealer should—

CENTRAL AVENUE BATTERY & IGNITION WORKS
1322 CENTRAL AVENUE

No. 124

License No. — Description of Vehicle in which Rent Battery is Placed — Engine No.

Date 3-20-25

Make Ford Type Tanper Year Built 21

Cust. Phone No.

Legal Owner Hunt & Spencer Address Western & Fountain

Cust. Order No.

Record of Customers Battery

Make Western Type 11 pt Marks 10-24

Deposit $

Record of Rent Battery

Number L.A. Fay Marks Value $ 15.00

Promised By

LEASE AGREEMENT

1. This lease made the above date, between the above named company, LESSOR, its heirs or assigns, and the party whose signature is written hereunder, legal possessor of the vehicle above described, LESSEE, his heirs or assigns, witnesseth

2. That the above named lessor has leased to the lessee, the above described battery, of the agreed value as set forth above, for the term of 5 days from above date at a daily rental of 35c, payment to be made promptly at the expiration of said period. Lessee agrees to pay said rent as above specified and to promptly return to Lessor the battery above described at the expiration of the said period in good condition, and, in the event said battery is not returned at the end of said period, Lessee agrees to pay Lessor the sum of 25c for each and every additional day said battery shall be out of the possession of said Lessor

3. In the event Lessee fails to return said battery in good condition, and pay said rentals as hereinbefore provided, Lessor may, at its option, (1) bring suit for the recovery of said battery, and rentals due, (2) bring suit for the agreed value of said battery and rentals due; (3) bring suit for rentals due and all costs incidental to such suit, and Lessee agrees to pay, in addition to the amounts due under either of the above options, the sum of $3.50 attorney's fees in the event suit is brought. Lessor is hereby authorized to take possession of said battery wherever same may be found without legal process or previous notice or demand on Lessee and Lessee hereby waives all claim for damage or trespass in the re-taking thereof.

Time is the essence of this agreement, and in the event lessor deems it necessary to re-possess said battery with or without suit the lessee agrees to pay lessor an additional sum of $10.00 as additional rental for the use of said battery. Payments to be made at place of business of lessor in the city of Los Angeles.

Executed in duplicate the day and year first above written

Repair Order — Amount

Recharge 1.00

New Pos. Plates

Reinsulation

Reseal

Tear Down

Adj. Acid

Above Conditions Accepted

Signed — Lessee — Signed S Burton

Order Received — Finished Job Received

Signed — Lessor — Address 1311 E 14 st

Rental as of one Day

Want one Week

Cust. Notified 1 Mail Phone 2 Mail Phone 3 Final Reg. Mail By

STANDARD FORM
LEASE AGREEMENT AND JOB CARD
OF THE
SOUTHERN CALIFORNIA AUTOMOTIVE DEALERS ASSOCIATION
COPYRIGHTED

A lease form, combined with job order ticket, which binds the user of a rental battery to either return it promptly or pay for the battery and all rental charges. This form was designed to stand the test of the courts

First, use a lease agreement printed by the Southern California Automotive Dealers Association; Second, brand his batteries with the brand of the association; Third, paint his batteries with the standard color (orange); Fourth, he positively must get his violated contracts into the office of the department within a period of 30 days from the date issued; Fifth, the registration number of the car in which the battery was placed, the name of the legal owner, the signature of the party getting the battery, the distinguishing marks upon the battery and its value must appear on the contract.

In order to make it easy for the dealers to turn in the contracts within the 3-day period, a representative of the battery collection department calls on every subscriber

(*Continued on page 20*)

NOTICE TO APPEAR

LEGAL DEPARTMENT
OF THE
Los Angeles Automobile Trade Association
AND THE
SOUTHERN CALIFORNIA AUTOMOTIVE
DEALERS ASSOCIATION
1363 SOUTH FIGUEROA STREET
ATLANTIC 3542

LOS ANGELES, CALIF. June 4

H.E. Smithson, 125 E. Street, Los Angeles, Cal.

MR.

NOTICE IS HEREBY GIVEN TO APPEAR AT 1363 SOUTH FIGUEROA STREET ON OR BEFORE June 7

IN ANSWER TO OUR CASE No. 1051 PENDING AGAINST YOU

BY E C Burt
INVESTIGATOR

BATTERY BRANDING IRON LEASE
of the
Los Angeles Automobile Trade Association

This Lease made and entered into by and between the Los Angeles Automobile Trade Association, as party of the first part, hereinafter called the Lessor, and..... as party of the second part, hereinafter called the Lessee,

WITNESSETH: That for and in consideration of the sum of Two ($2.00) Dollars, receipt of which is hereby acknowledged, the Lessor does rent and lease to the Lessee, one battery branding iron known and designated by the following letters and number, to-wit:.....

the Lessee further agrees that this lease can be terminated by the said Lessor, should its membership be terminated by the said Association, or should the said Lessee resign its membership in the Los Angeles Automobile Trade Association, or should the said Lessee for any reason whatsoever fail to keep said branding iron in good condition and pay the rent and lease as herein provided. In consideration of which the said Lessee agrees that upon demand made in writing from the aforesaid Lessor, and the said Association, should the Lessee further agrees that upon it become necessary for the said Lessor to employ attorneys at law to deliver the above described branding iron, the said Lessee will deliver the above pay any and all costs including attorneys' fees, waiving all trespass rights, should mentioned and above described branding iron. The Lessee further agrees to proceed legally in the recovery of the afore-

Signed.....
Lessee

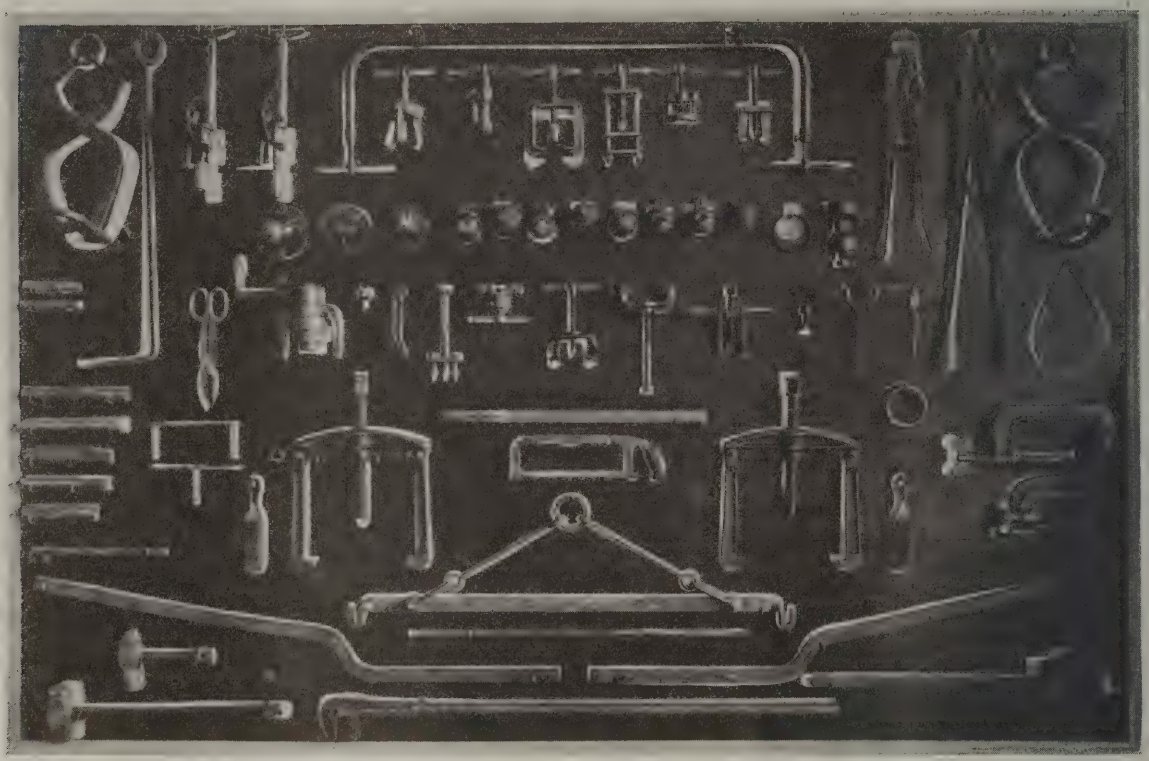
By.....

LOS ANGELES AUTOMOBILE TRADE ASSOCIATION, Lessor

By.....

Legal appearing notice to users of over-due rental battery which usually brings results; right: Agreement by which dealer or battery station leases association battery branding iron

A Clean Shop for Profitable Winter Business



Take a look at this tool board and note the neat arrangement. Then go out in your shop and see if your equipment is handled the same way. It will cost but a few dollars for lumber and paint to rig up a board like this enterprising shop has done

No Matter How Large or Small the Establishment, Better and More Work Can Be Done When Orderliness Is the Keynote. Benches Can Be Rearranged, Walls and Ceilings Painted, Tool Boards Built and So On. Here Are Six Things Which Will Put New Life Into Any Shop

By B. M. IKERT

THE other day I was in a shop where a new workbench had been installed and the fellow who built it had done a very good job. We were talking about the bench when a mechanic came in and looking at the bench remarked, "Well, no matter how big you build them, they're never big enough to hold all the stuff that a fellow collects."

That remark comes pretty close to describing what one sees in many automotive shops. And they are not all shops where repair work is done on the mechanical units of a motor vehicle. Some top and trim shops are offenders as well as battery service stations, and so on.

"Holding all the stuff that a fellow collects" is expressive of the condition found in so many shops and there is a decided need for a "slicking-up." No matter how large or small the shop we venture to say there is something such a shop can do right now to put a better atmosphere in the place and make it possible to turn out better and more work.

Rather than to go into a mass of generalities about making shops more efficient we are going to point out six things the shop can do to better conditions. Some shops may find they can do all six, while others perhaps already have done some of them but still can add to their previous efforts.

Here are the six things we suggest in a slicking up of the shop:

1. *Paint.*—We put this first because before anyone can apply paint and make a decent job of it, he must clean house. That means we are going to clean out the mess of junk under the workbenches, on the ceiling, walls and everywhere else the stuff has collected. The cobwebs are going along with it as well as the empty oil barrels and crates. A lye solution will cut the grease and oil from the floors and walls and then comes the paint.

Try this, if you want a neat looking shop. Paint the walls for a height of about 5 or 6 ft. a slate gray and from there on up to the ceiling (as well as the ceiling) a white color, using perhaps a preparation especially intended for that purpose, and then paint a 4-in. black stripe around the walls where the gray and white meet.

Paint the doors and window casings with the same gray and wherever the mechanics are likely to touch the wood work of the shop, around door knobs, etc., paint a small portion of it black.

Slick Up Now for Winter Business

Stick to the gray, white and black color combination in your shop and if you add tool cabinets, racks, etc., paint them the same way. There is no reason why we cannot have color harmony in the shop as well as the showroom. Mechanics are bound to do better work under such conditions.

2. *The Bench.*—First of all make a rule that the bench shall not be a catch all for tools, discarded parts, mechanics' lunch boxes, grease pails and a hundred other things.

Then remove all the broken and discarded parts from underneath the bench. It is always a temptation to sweep a lot of rubbish under the bench and before the latter can be made to appear well and more efficient for all around work everything not needed should be thrown out.

Since so many parts of an engine or car are placed on a bench it is but natural that grease and oil will be absorbed by the wood top and for that reason it is an excellent plan to cover the bench top with metal, preferably zinc. A metal covered bench is easy to keep clean and makes a much better surface upon which to work. If you build a bench do not make it too large, because if you do it is sure to be used as a storage space for which it is not intended.

How a St. Louis Dealer Does It

3. *Tool Rack.*—We have already said that the bench is no place for the tools to lie upon when not in use and to that end every shop should have a neat tool rack. We illustrate here a tool board on which all the tools necessary for the repair of a Chevrolet are hung. One St. Louis dealer has laid out his shop efficiently and cut his labor cost to a minimum by virtue of this tool board.

The board has been erected at one end of the tool room and on it are painted the outlines of the tools which are hung in their proper places. A check system is used and when a mechanic uses a tool, he must check it out, and check it in when he returns it. A glance at the board instantly denotes the absence of one or more of the tools.

In building of such a rack or board it can be painted a gray color with the outline of the tool in white or black if the gray is not too dark. This arrangement applies of course; only to the shop tools and does not include the tools owned by the mechanics. For the latter it is a good plan to equip the bench with tool drawers or the mechanics may have tool kits for them. But whatever you do keep the tools off the bench.

4. *Oil and Grease Containers.*—What gives most people the idea that a garage or automotive shop is at best a messy proposition is because almost invariably they see nothing but oil cans and grease buckets around. In the slicking-up of the shop lets build wood containers in order to hide these necessary fittings of the shop.

One way of doing this is to build a wood structure in about the shape of a piano box with a lid that lifts up and doors that swing out. Such a structure will accommodate oil drums, grease buckets and oil receptacles or measures of all capacities. Be sure to give it a coat of paint and if desired the words "Oils and Greases" or "Lubricants" can be neatly painted on the outside of the lid. It is surprising how much neater a shop looks when these things are all kept together as they should be.

5. *Drip Pans.*—There is one thing that is absolutely impossible to prevent in a shop, and that is the dripping of the oil from the cars which come in for repair. While we cannot help the oil getting on to the floor we can prevent its remaining there and for this there is probably nothing better than suitable drip pans.

We recall one excellently laid out shop which amongst other things has a hardwood floor in it rather than the usual cement floor. The owner's idea of this is to make it more comfortable for the men to work upon, and to keep the floor clean at all times a drip pan is placed under every car the moment it comes in for maintenance work.

Drip pans, of course, can be bought, but it is not much of a trick to make them. Galvanized iron of rather heavy gage is best for this purpose and if at all possible it is better to have a local tinsmith make them as he has the necessary brakes and apparatus for rolling the edges. As a general thing a drip pan should be about 18 in. wide by 5 ft. long. This will make it possible to make them out of a 24-in. width of sheet metal since enough metal must be allowed for turning up the edges and rolling them to eliminate raw edges.

6. *Reconditioning Equipment.*—In order to do the best work the equipment and tools of a shop must be in the best possible shape at all times. A drill will not drill an accurate hole nor will a reamer ream properly when the blades are nicked or dull. Most shops will find it to their advantage to put the equipment in shape during periods when work is comparatively slack.

The shop may have a lathe and while the bearings of a lathe last for a very long time, very often the lathe has been bought second-hand and it is a good thing to check it up as to its bearing condition. A lathe is of little use if the work turned out by it is sloppy and while the shop may not have the facilities for putting the lathe in shape, itself, the matter can be taken up with the manufacturer of the lathe, as it may be better to send certain parts of it to him for reconditioning. The same applies to other equipment such as drill presses, boring machines, etc.

Sharpen and Recondition Tools

We have already spoken of building a tool board for the shop tools, but much can also be done in the way of sharpening and reconditioning the smaller hand tools which are frequently used and which often become mixed up with other tools or fixtures having no common relation. Thus, drills and taps are often mixed up with reamers and small files and it becomes a difficult matter to find the one often wanted.

A good plan is to go through the entire equipment and pick out all the small drills, reamers, taps, punches and so forth and separate them into proper groups. Then the board can be drilled with a series of holes to correspond to the various sizes of the drill, for example and the latter placed in them. The size or number of the drill of course, should be placed alongside the hole for ready reference. Usually if taps and reamers are bought in an assorted lot a case of some kind is furnished for keeping them in proper order. But where the tools are bought separately some sort of a receptacle should be made and in this there is a chance for each shop to use its ingenuity. For example taps and dies can be kept in a shallow box, fitted with grooves and openings to fit the various tools and is infinitely much better than to jumble them all into a drawer in the bench.

It must be remembered that tools such as reamers, drills, chisels, files and so forth are cutting tools and it is necessary to protect the edges to keep them in order. We know, for example, that a carpenter generally lays his plane over on its side when not in use and he does this to protect the edge of the cutter. We don't always look upon reamers and files as cutting tools and consequently they

(*Continued on page* 20)

This Used Car Chart Helps Sell Them

THE Southwest Nash Motor Company of Oklahoma City has devised and placed in operation a system for handling used cars which, they claim, has proved very profitable and efficient.

There is no better way to describe the operation of this Used Car Board than to quote Earl S. Voorhis, president of the Southwest Nash Motor Company, who is the author of the system:

"I, like many other fellows, had tried to work out a solution of the so-called used car problem, and had watched, for two or three years, the unsuccessful attempts at a solution by co-operative methods.

"Then I began to watch, in our own place, to see just where used car losses were sustained and I quickly found the used car was treated as an orphan by every department.

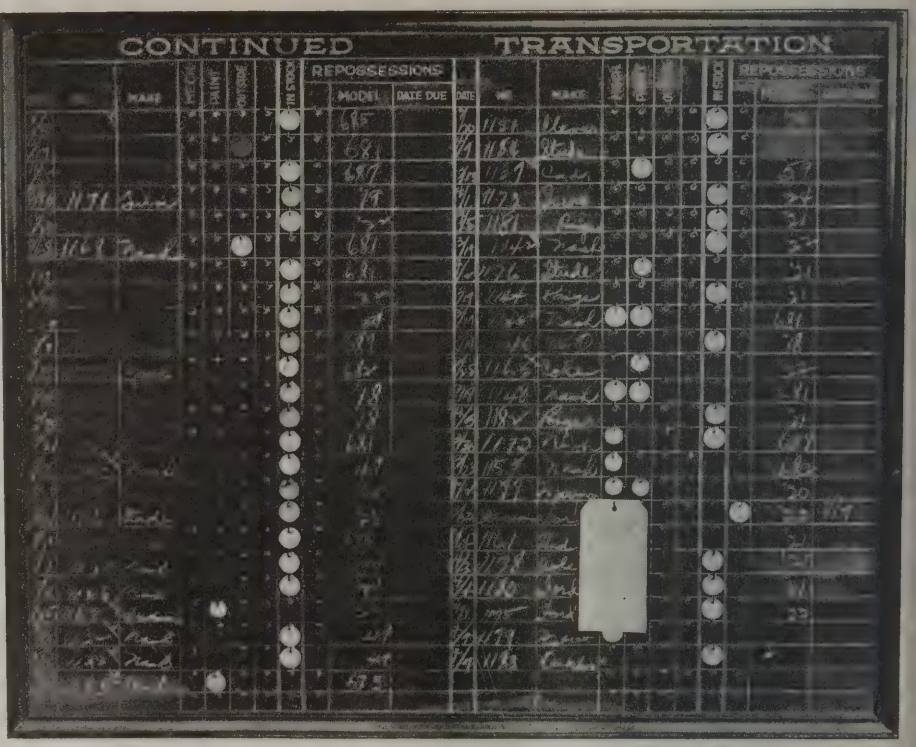
"The most noticeable thing I found and which I believe could be true of any dealer's business was the lack of co-operation among the different departments with regard to the handling of used cars. Therefore, I tried to work out some plan by which we could have a central clearing house where all the different heads could meet and co-operate in the proper handling of our used cars.

"Now, then, the board: You will note there are two divisions exactly alike, containing room for 25 cars each. The first column represents the date the used car was purchased by us. The second column gives the number of the used car, as carried on our records. The third column gives the name of the car. The fourth column, commencing with the hooks, belongs to the mechanical department. The fifth column to the paint department.

"The sixth column represents any work being done on the outside of our establishment. The seventh column is left blank for an emergency. The eighth column represents cars that are in stock either ready for sale or being worked on in the used car department. The ninth column is used by our accounting department to indicate repossessions being made. The tenth column gives the model or year of the various cars in our stock. The eleventh column represents the date on which any repossessions will be completed.

"We use two sizes of card board discs; one just the size of a nickel; the other just the size of a dime. The large discs are used by the manager of the used car department to picture on the board just what he desires done to each car in his stock. There are three colors used by him: white, yellow and red.

"The white disc in the 'in stock' column indicates this car is all ready for sale. A yellow disc in the 'in stock' column indicates the car is not ready but he is able to handle it in his own department. The yellow disc when used in 'mechanical,' 'paint' or 'outside' column indicates the kind of work he desires done but that he is in no hurry for. The red disc placed in any of the three above mentioned columns indicates the kind of work he desires done and also that he wishes the cars rushed out quickly.



Unique chart devised by Southwest Nash Motor Co. to keep track of number and condition of all used cars on hand

"After he has pictured his needs on the board, the heads of the other departments, by use of the small discs, indicate what they are doing or will be able to do in their departments. They use three colors, viz., white, green and blue. A white disc hung over one of the yellow or red discs indicates that they are actually working on this car. A green disc hung over either the large red or yellow disc indicates the car is in their department but is not being worked on. A blue disc hung over either the yellow or red disc indicates that they know nothing about this particular car. Therefore, the object of the board is to, as quickly as possible, get rid of all red discs and as quickly as possible, give proper explanation to the departments which will remove the blue discs.

Secures Departmental Interest

"There is a lot of psychology in this thing and it has been the means of, for the first time, securing not only co-operation but the interest of the different departments. The men all know this board is in my office and they are making every effort to keep the red and blue discs off the board.

"Also, this board is checked daily by our accounting department to know their daily report is correct and that they have not lost track of any car. The board is also invaluable to the accounting department in being able to watch cars in process of repossession.

"We even went a step farther than this to secure the interest of the sales department and have used three colors in handling the listing of the used cars on the board. These colors are white, yellow and red. Any car that has been in our stock more than ninety days appears on the board in red chalk. Any car that has been in our stock more than sixty days and less than ninety appears in yellow chalk. All cars that were taken in the previous month and current month appear in white chalk. Therefore, it is the definite aim of the used car sales force to, as quickly as possible, erase all of the red cars from the board.

"The keeping of the board is handled by our cashier and as used cars are billed out they are erased from the board. As they are purchased they are entered on the board wherever space provides. When a car is purchased and entered on the board a blue tag is immediately hung on the hook and the manager of the used car department takes this and hangs it on the car, placing his own discs where he desires work done.

"I recently asked our used car manager just what the used car board was meaning to him and his answer was whereas in the past he had wasted a great deal of time getting over the building to see what his stock looked like that he could spend just a few minutes at any time of the day glancing at this board and get a picture that it would take him hours to secure in any other way.

"Last but not least, this board is worth several hundred dollars to any executive in the way of satisfaction in just being able at a glance to picture his used car situation."

Two-Car Idea Means Selling Additional Transportation

Trading One Vehicle for Another Does Not Add to Motoring Facilities of the Public—Two-Car Garages Constitute 75 Per Cent of a Big Builder's Business

By SAM SHELTON

THE dealer who sells a new car and at the same time takes an old one in trade is not adding to the customer's transportation facilities. He may be giving the customer better, more efficient and more comfortable transportation, but the chances are the old car could carry just as many persons and go as far in a day as the new one.

The net result is:

The owner still has only one car.

His transportation facilities are not increased.

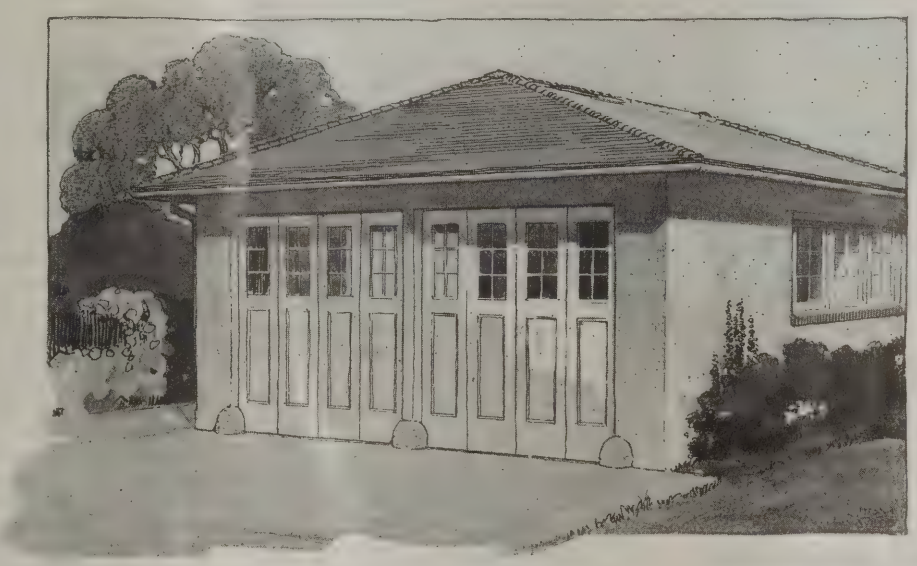
He has traded off for a song a vehicle whose reserve mileage is worth much more than the car's market value.

The dealer has sold one car by buying another.

He still has to sell a used car—maybe several—before he can liquidate his profit.

He has failed to sell additional transportation.

The time has come for the automotive trade to banish the assumption that one car is all any family needs. As a matter of fact there is hardly a family in the country that does not need two or more cars and a great many of them can easily afford additional transportation.



Sign of the Two-Car Family

The trade has gone along assuming that when a car owner buys a new car he has to get rid of his old one. Owners themselves have been encouraged in this idea by dealers who gave exorbitant allowances for the old vehicles. But now times are changing and the old car has ceased to be worth two for one as a medium of exchange to be applied as part payment on a new car. The car owner today is counting up the reserve mileage in his old car and figuring what it would be worth to him.

We need now some live, energetic two-car salesmen to go out and sell ADDITIONAL TRANSPORTATION instead of this business of just trading one vehicle for another. What would happen to the clothing and shoe industry if the retailers figured a man was fully equipped if he owned one suit and one pair of shoes? Suppose the clothing trade approached the customer with the idea that one suit and one pair of shoes are enough.

The public is waiting to be sold the two-car idea. Only an insignificant portion of the retail trade is working at the job. Those dealers who start now will profit.

It would not be wise to try to sell the owner an additional car of the exact type and model now possessed by him. The dealer or salesman should first ascertain what sort of car he has and then should survey the family's requirements. It will then be easy to suggest the type of ADDITIONAL transportation needed by this particular customer. For instance we probably will find that among the two-car families the preference will be for combinations of which the following are typical:

A utility car and a fine car.

An open car and an enclosed car.

A business car and a family car.

A 2-passenger car and a 5-passenger car.

A town car and a car for country touring.

A car for the old folks and one for the youngsters.

A six and an eight, or a four and and eight, or a four and a six.

In the smaller cities, towns, country and suburbs of large cities, where one or two family houses predominate it is almost invariably the custom to build a home garage. The cost is not great and the encouraging thing is that the cost of a two-car garage is only a little more than that of a one-car garage. One large construction company operating in Chicago and suburbs puts up a 12 by 20 one-car garage for $230 and a 20 by 20 two-car garage for $300. Thus for an outlay of only $70 additional, shelter is provided for an additional car. It is interesting to note that between 75 and 80 per cent of the garages erected by this company are of the two-car type.

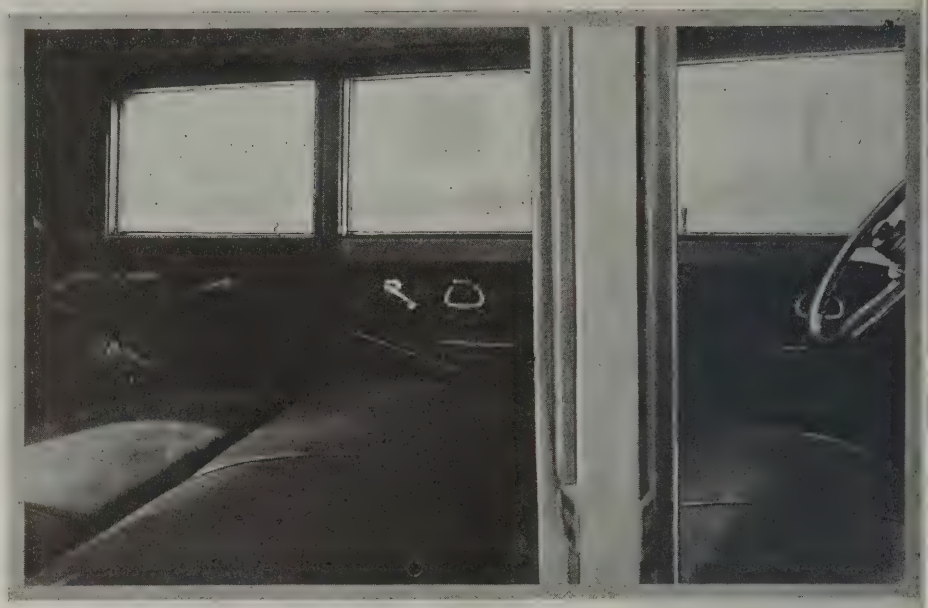
Another Chicago concern selling portable or sectional garages and operating over a wide territory does 45 per cent of its business in two-car garages. But in this case the additional cost for the two-car garage is more than in the other case. The cost of a two-car garage of the portable or sectional type averages about $100 more than that of the one-car garage.

Two-car garages are being built. It is up to the retail trade to fill them with ADDITIONAL transportation.

Auburn Sedan for Overnight Touring

FOR some time there seems to have been a growing demand on the part of the motoring public for a closed car offering the comforts of sleeping accommodations with a minimum effort in converting the car into a sleeping coach.

The Auburn Company, which has had its "Wanderer" model sedan out for some time, claims to have had considerable success thus far. The illustration shows how the car is converted. Two concealed catches are placed on the back of the front seat which drops into place along the floor when the catches are released. The rest of the seat cushions are re-arranged accordingly. This model is available in both the 6 and 8-cylinder chassis and lines of the new model correspond with those of the standard sedan.



Interior view of the Auburn "Wanderer" sedan showing how the seat cushions can be arranged for sleeping purposes.

ALTENBERG JOINS HOOF

CHICAGO, Sept. 12.—A. Altenberg, formerly chief engineer of Falls Motor Corporation, Sheboygan Falls, Wis., is now chief engineer for John C. Hoof & Company, 157 W. Illinois Street, Chicago.

Automatic Radiator Drain Announced

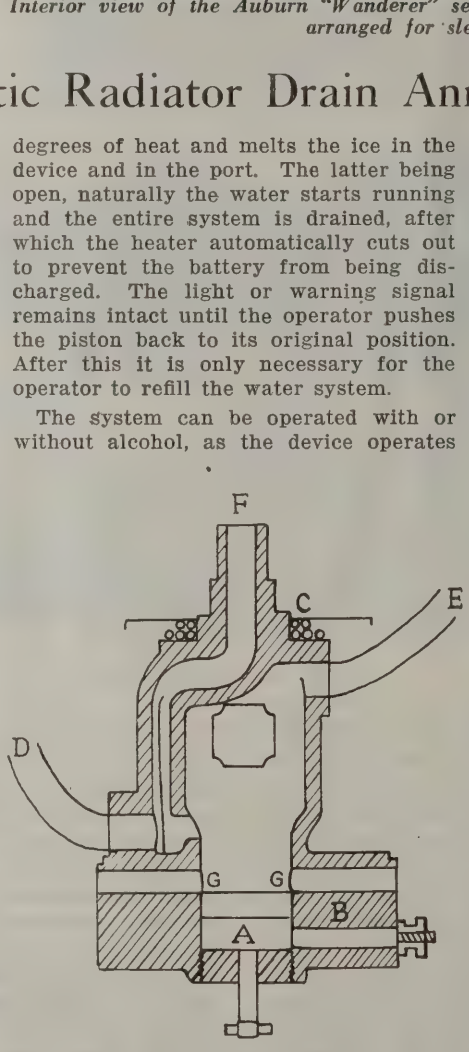
A RATHER novel device for automatically draining the cooling system of a motor vehicle to prevent freezing has been brought out by J. F. Kelley, 3154 Lake Park avenue, Chicago, Illinois. The device does not necessarily have to be confined to motor vehicles alone, since it can be adopted anywhere where water is used as a cooling medium and where it is desired to prevent its freezing.

In operation use is made of the expansive force of ice to automatically close an electric circuit going to a small heating coil, the heat of which melts the ice in the lower portion of the system and thereby automatically drains the latter. To better understand this, it is necessary to refer to the cross section in the illustration.

The apparatus, which is approximately 4 in. long, attaches to the radiator drain boss. A copper tube connects it to the top of the radiator and a second tube to the base of the engine at the water intake, thereby insuring circulation through the automatic valve to prevent its freezing while the car is in motion. When the engine stops it comes into action should the radiator start to freeze. The ice forms in the device causing a piston within the chamber to move downward until it passes the port which connects directly with the radiator through a passage in the device. At the same time the piston comes in contact with an electric connection attached to the battery of the car and lights a lamp on the dash or operates any other type of alarm mechanism. This is done to warn car owner of the freezing danger.

At the same time, however, an electric heating coil is cut in which generates 500 degrees of heat and melts the ice in the device and in the port. The latter being open, naturally the water starts running and the entire system is drained, after which the heater automatically cuts out to prevent the battery from being discharged. The light or warning signal remains intact until the operator pushes the piston back to its original position. After this it is only necessary for the operator to refill the water system.

The system can be operated with or without alcohol, as the device operates 1 deg. above the freezing point of water or anti-freeze solutions. This is about 30 minutes before damage can be done to the radiator or engine water jackets.



Cross sectional view of the Kelley Automatic Radiator Drain. A, piston, B, electric contact, C, heater coil, D, hot water intake, E, hot water outlet, F, Water from radiator and G, emptying port

Dash Type Gasoline Gage Now on Lincoln

Cars now being shipped from the factory of the Lincoln Motor Company are fitted with a dash type gasoline gage as standard equipment. This mechanical device is reliable and accurate and when properly installed and adjusted requires no attention, it is said.

The complete instrument consists of two major units, the tank unit and the dash unit. These two units are connected by a wire which passes through the indicator cable which in turn is protected by a metallic housing. In operation, as the gasoline level in the tank is lowered, the cork float falls and through a lever and cam arrangement pulls the wire through the cable against the tension of the spring in the indicator unit and thus revolves the dash dial in an opposite direction.

OVERLAND MODEL FOR EXPORT

TOLEDO, Sept. 12.—The Willys-Overland Co. is producing a Model 93 six-cylinder Overland with touring body for export shipment. The first cars have not yet been put on sale abroad, but they have already been in production for several weeks. The body is a two-tone finish, with leather upholstery and, in other respects, is the same as other six models. The Standard and de luxe types are both going into export. It was said that this new touring body would not affect the domestic market.

Rickenbacker Adds Coupe Roadster

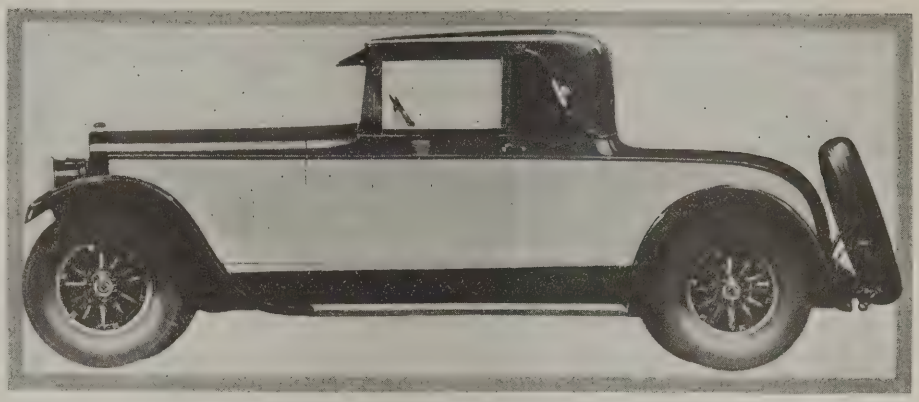
KNOWN as the Coupe-Roadster, a car combining a cosy three-seater coupe and a sporty 5-passenger roadster in one, the Rickenbacker Motor Company, is mounting this latest style of body on both its six and eight-cylinder chassis, the price complete on the former chassis being $1695 and on the latter $2095.

Finished in a two-tone color scheme of dust grey and desert brown, the body has low graceful lines and is upholstered in a velvet velour. The de-luxe models on the eight-cylinder chassis which are the same as the others except for additional equipment are finished with mohair instead of velour for the interior.

The range of usefulness for the new coupe-roadster model is almost unlimited, while its general appearance will reflect a sense of personal possession, since it is a car for personal use rather than for the family.

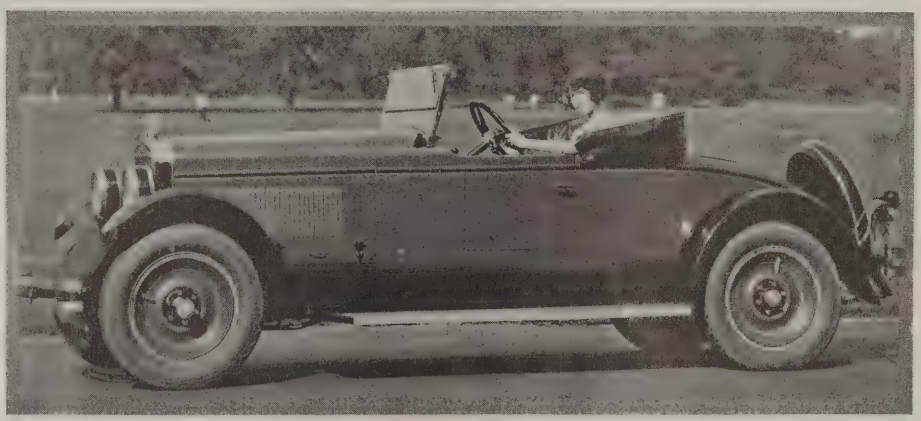
For those who like to get out of doors there is ample space in the cleverly concealed rumble seats in the rear deck to accommodate two passengers in addition to plenty of room for storing golf clubs and other luggage. For the woman or the professional man the car is in keeping with dignity and at the same time presents a distinctive appearance.

Equipment is the same as on other Rickenbacker closed cars and includes the following: "VV" windshield, automatic windshield cleaner, rear view mirror, coincidental lock and stop light. Deluxe models in addition have combination silver vanity case.



New Rickenbacker coupe roadster which combines a three-seater coupe and five-passenger roadster in one car

Gardner Adds Foursome Roadster on Eight-in-Line Chassis



Gardner Eight-in-Line Foursome Roadster which sells for $1995 f. o. b. factory

A new foursome roadster mounted on the Gardner eight-in-line chassis has just been added to its line of sixes and eights by the Gardner Motor Co., Inc., St. Louis. The roadster has a two-tone finish, nickeled radiator, large nickeled trimmed lamps, cowl lamps, and five Disteel wheels. The steering wheel can be adjusted to fit the individual driver. The top can be let down or completely removed if desired.

Both the main seat and the rumble seat are upholstered in machine buffed Spanish leather in a color to harmonize with the body finish. Just back of the main seat is a handy compartment for tools, golf balls and other paraphernalia needed on short trips. This new Gardner model lists at $1995, f. o. b. factory.

Explain Tire Situation and Make Sales

That the public might be aware of the reasons why tire prices are advancing, and why further tire price advances seem certain, a group of ten wholesale and retail tire distributors at Knoxville, Tenn., conducted a concerted co-operative advertising campaign. They used full page newspaper space to thoroughly explain the rubber and tire situation to the public. They wanted the automobile owner to understand just why tire dealers have been finding it necessary to advance prices, in order that the dealer, himself, may not have to shoulder the blame, as so often happens when prices go upward.

"BUY TIRES NOW," these dealers advised the public, and then they went on to explain that America faced a serious rubber shortage, and gave reasons to account for it.

"Many of the smaller rubber manufacturing companies have already suspended operations because of the shortage of raw rubber," these dealers explained to buyers in this series of ads. "Conditions are becoming acute with the very largest factories. Officials of these concerns declare that additional increases are certain to come. Standardization of sizes must be resorted to by manufacturers in order to conserve the visible amount of raw rubber. Tires and tubes in stock are becoming more valuable every day. No one is able to tell just where the price levels will stop. The rubber industry of America is at the mercy of the constrictions of the Stevenson Act. England controls the source of raw rubber—we must pay their price."

Distributors taking part in the campaign declared it accomplished genuinely worthwhile sales results because they dealt frankly with the public.

SOME TRACTOR HISTORY

A new catalog in which is given much of the interesting history of the tractor industry has been published by Hart-Parr Co., Charles City, Ia. This booklet relates how Hart-Parr tractor No. 1 was built in 1901 by C. W. Hart and C. H. Parr. This tractor, then called a gasoline traction engine, was sold in 1902 to an Iowa farmer who operated it for 17 years. In 1904 the Hart-Parr company conducted experiments which led them in 1905 to design all their engines to burn kerosene instead of gasoline. In 1907 the name "tractor" was first applied to this type of motor equipment by the Hart-Parr makers.

A Clean Shop for Profitable Winter Business

(Continued from page 15)

are jumbled together with a lot of precussion tools such as hammers and their cutting edges dulled.

Equipment which belongs to the shop such as wheel pullers, jacks, bending bars, vises and other things should be painted a uniform color in order that they may be readily distinguished as shop tools. No shop expects its mechanics to furnish other than a few hand tools and yet the mechanics must at times use equipment which strictly speaking belongs to the shop. One shop, for example, paints all its equipment a grayish blue color while another uses red. The color is immaterial just so long as there is sufficient contrast to instantly label the tool.

Some shops even go further than this. If, for example, they handle service work on say the Chevrolet, Buick and GM trucks, they will paint the Chevrolet tools yellow, Buick blue, and GM green. This means the work in the shop is greatly speeded up as the mechanics can instantly get the right tool for the right job.

There are a great many other things which can be done in a shop to give it a better appearance and add to its efficiency, and while some of them have no direct bearing on the work that is being done, they do cause a mechanic to take more pride in his work which after all means better satisfaction all around.

If, when a mechanic glances up from his work he sees a clean ceiling, neatly arranged furniture, fender and seat covers on cars being worked upon he unconsciously feels he is working for an organization striving to do good work.

For example, most every shop has one or more fire extinguishers on hand and very often these are just hung up by a nail driven into a post or wall. There is nothing particularly attractive about such an arrangement but it can be made attractive. A small shelf for example can be placed on a post for the extingusher and if the white, gray and black color scheme mentioned in the early part of this article is adhered to an added touch of color is given by painting a bright red round spot on each side of the post to indicate that that post holds the fire extinguisher.

Most dealers pride themselves on the looks of their showroom and while it is absolutely essential to have a good looking showroom, it is just as essential that the shop be attractive and so in the slick-up campaign let's not overlook the back door of the establishment.

Rental Battery Losses Reduced by Cooporation

(Continued from page 13)

to the service at least once in every fifteen days. His call is preceded at least three days by a mailed notice. The advance notice is given so the dealer will have prepared all contracts which he wishes to turn in.

Mr. Granger declares it is highly important, in any plan designed to recover rental batteries, that a legal lease agreement be signed by the customer. The form used in Los Angeles combines the lease agreement and job card on the one sheet. The description of the car in which the rental battery is placed, as given on the form, includes the following information:

License number, engine number, make of car, type, year built, legal owner and address, make of customer's battery, marks, number of customer's battery, number and marks of rental battery, also the value of the rental battery. In this latter connection, Mr. Granger declares that the value must be written in on the contract if it is to have standing in court.

When an account has been turned over to the battery collection department of the trade association, a letter is sent to the customer requesting the immediate return of the rental battery in question. If there is no response to this letter a "Notice to Appear" form which has all the phraseology and appearance of a court order is then mailed. This form reads as follows:

John Jones,
125 E Street,
Los Angeles, Cal.

Notice is here given to appear at 1363 South Figueroa street, on or before ....., 1925, in answer to our Case No. ....., pending against you.

"In 99 cases out of every 100 this 'legal' form brings the customer in," Mr. Granger said. "Their call in many cases is preceded by a telephone inquiry asking the details of the case. We refuse to give any information over the phone, and advise the inquirer that he must present himself in person. Once we get the customers at the office of the association, we either get the battery back, with full rental charges, or we get the equivalent in money.

"In the course of a few months we have brought about a substantial reduction in the losses from rental batteries"

Street Signs Aid Tourists

Solution of the problem of placing street name signs where motorists as well as pedestrians might see them conveniently is declared by the U. S. Mailevator company, 26 Dock street, Yonkers, N. Y., to be found in what is called the "Inner-Curb" system. The signs manufactured and distributed by this company are inserted in the curb directly in line with the automobile driver's line of vision. The motorist is thereby relieved of the necessity of hunting for a sign which often is found ten or twelve feet above the street level. At night the light from his headlights will fall on the curb as he is rounding a corner. It is pointed out that this system effects considerable saving by not having to procure stanchions and provide for their erection.



Mailevator street sign system

Many New Devices Exhibited at National Radio Show

Industry's Growth Shown

THE growth of the radio industry in the last year was amply demonstrated in the increased number of exhibits and the materially enlarged lines of the individual exhibitors who participated in the Fourth Annual National Radio Exposition which opened last Saturday at the Grand Central Palace, New York City.

So numerous and elaborate were the displays that the two huge floors of Grand Central Palace which were adequate for last year's show were found to be insufficient and it was necessary to throw open the third floor. Exhibitors include virtually all of the leading manufacturers of radio receiving sets, parts and accessories, together with many of the prominent radio magazines, newspapers and trade journals. Several of the larger New York broadcasting stations have installed remote control stations and will broadcast special programs and speeches of celebrities during the show which remains open until the evening of Sept. 19.

Large crowds were attracted to the show not alone by the numerous exhibits of apparatus, much of which was revealed to the public for the first time, but also by the spectacular entertainment which was arranged. Among the special features scheduled for the week was an exchange of radio programs with broadcasting stations in England, France and Germany; the appearance of national screen and stage celebrities whose speeches were to be broadcast and a demonstration of radio transmission of pictures. The latter will consist of radio-transmitted pictures of prominent officials, sent from Washington, D. C., which will be accompanied by simultaneous loud speaker reproduction of their voices.

Among the firms represented at the show are Radio Corp. of America, Atwater Kent Mfg. Co., National Carbon Co., Dubilier Condenser and Radio Corp., Bakelite Corp., Freed Eisemann Radio Corp., DeForrest Radio Co., E. I. du Pont De Nemours Co., Electric Storage Battery Co., Stewart Warner Speedometer Co., Splitdorf Electric Co., Thermiodyne Radio Co., Philadelphia Storage Battery Co., O. Brandes Inc., Brunswick-Balke-Collander Co., Chas. E. Freshman Co., Pathe Phonograph & Radio Corp., Sonora Phonograph Co., C. D. Tuska Co., Aluminum Co. of America, Manhattan Electrical Supply Co., American Bosch Magneto Co., Signal Electric Mfg. Co.

Radio World's Fair Opens

THE Second Annual Radio World's Fair, the official show of the Radio Manufacturers' Assn., opened Monday in the 258th Field Artillery Armory, New Work City, when Governor Alfred E. Smith presented a silver cup to Miss Rena Jane Frew of Beaver, Pa., who has been chosen as "Miss Radio" for 1925-26.

The formal opening revealed to the public many new and improved radio receiving sets and accessories exhibited by the more than 200 radio manufacturers who participated in the exposition.

In addition to the large number of exhibits, the public was attracted to the show by special broadcasting feats, in which most of the New York stations took part through remote control stations installed in the armory and through a chain of stations linked together throughout the country.

The World's Fair will close Saturday night, Sept. 19.

I THINK the sales field for the automotive merchant where radio is concerned is alluring. In this part of the world the automotive merchant is about the only one in a position to render service on radio apparatus, as there are practically no merchants catering entirely to electrical business. Car Dealer, Valdez, Alaska.

Indiana Sales Meeting

INDIANA distributors of the Atwater-Kent Manufacturing Co. were in a radio sales convention at Indianapolis last week. Virtually every county in Indiana is said to have been represented by dealers and the convention held afternoon and evening sessions in the Lincoln Hotel where a special display and exhibition of the radio sets was a feature.

Toledo Show in November

THE second annual radio show at Toledo, O., will be held at the Lucas County Armory on Nov. 2 to 7 and will be managed by Hugo V. Buelow, veteran automobile show manager.

The Toledo Radio Trades association, which includes in its membership most of the manufacturers, dealers and distributors of radio equipment, as well as many automotive equipment houses, will furnish a committee to co-operate with Mr. Buelow in staging the show.

Mr. Buelow was in charge of the first radio show at Toledo last year.

The armory will provide 30,000 square feet of show space without pillars. Decorations and show equipment will be entirely new.

One feature of the show which Mr. Buelow has already arranged is a portable broadcasting station to send out the programs and announcements.

Console Types Lead

ADVANCE showings of the new fall models in radio receivers reveal an increase in the quantity and quality of console types, the absence of any revolutionary changes in internal construction, increased popularity of tuned radio frequency—although the adherents of the neutrodyne principle are as strong as ever—and in many instances a considerable increase in the number of models comprising a particular line.

Virtually every manufacturer has included in his line this year at least one console, of more or less elaborate design, while some lines are dominated by this type. Prices of these upright models range all the way from the figure asked for plain cabinet models of the better grade last season—around $150—up to $2,000.

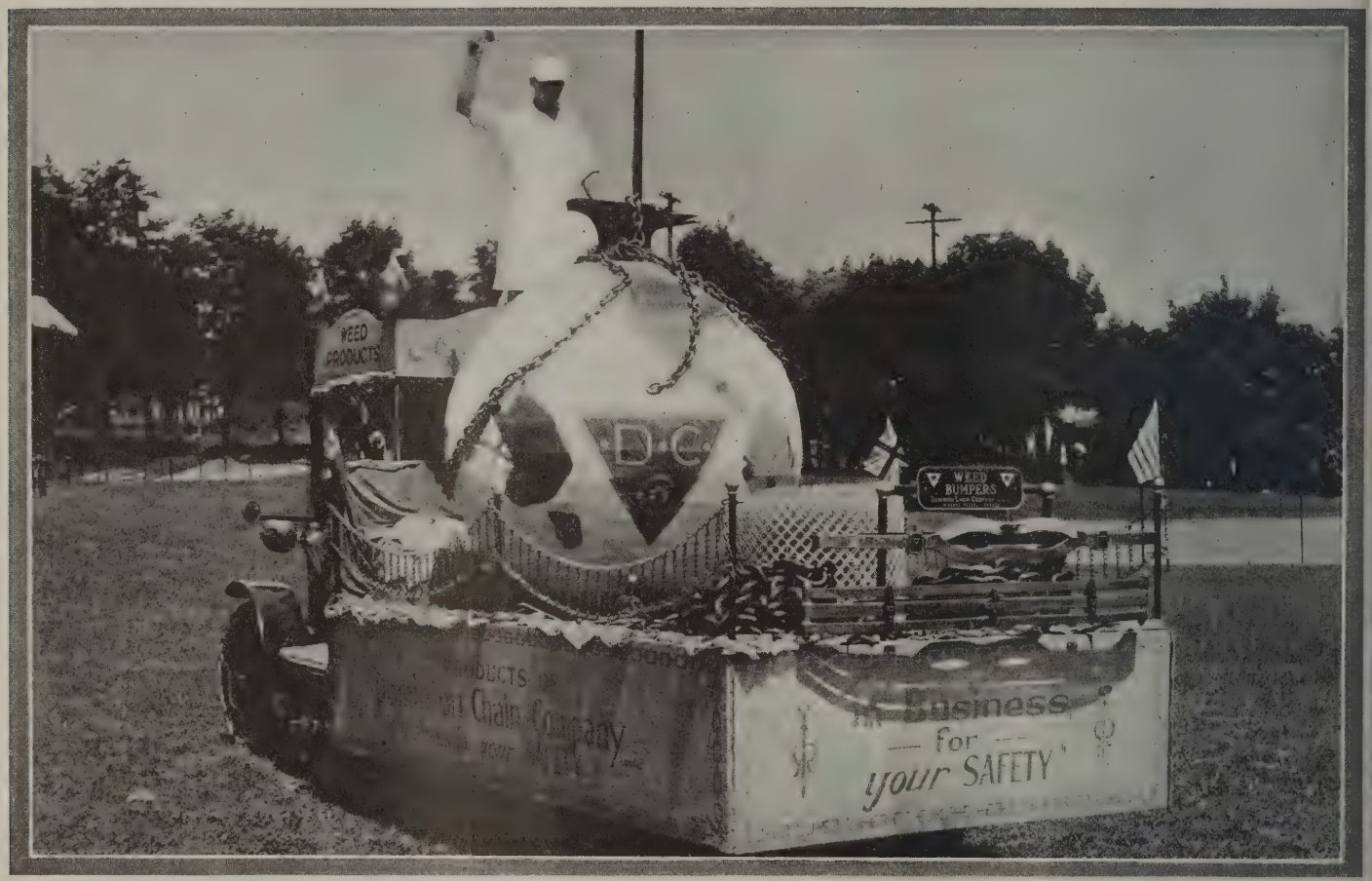
Most of the consoles have built-in loud speakers and are provided with compartments for both "A" and "B" batteries and in many cases there is room for the charger. All sorts of motifs are shown, from imitations of an "old Spanish treasure chest," as one manufacturer designates his product, to the "highboy" and the "davenport" end table design, a long, low model whose controlling dials are slightly more than knee-high.

The statement that there are no revolutionary changes in basic circuits is used advisedly, for in spite of such radical developments as the McCullough A. C. vacuum tube, there is evident on the part of most of the manufacturers who dominated the field last season, and the more prominent of this year's entries, to wait until the merits of such devices have been further demonstrated. The McCullough A. C. tube operates directly from the house lighting mains and requires no "A" battery. Mr. Arthur Lynch, editor of "Radio Broadcast," Doubleday-Page publication, after making a survey of the opinions of more than 600 tube and set manufacturers, concludes that the advent of the A. C. tube, while a desirable development, will not render prevailing types of receivers obsolete this season, at least, and probably will never entirely replace the latter.

Cincinnati Radio Show

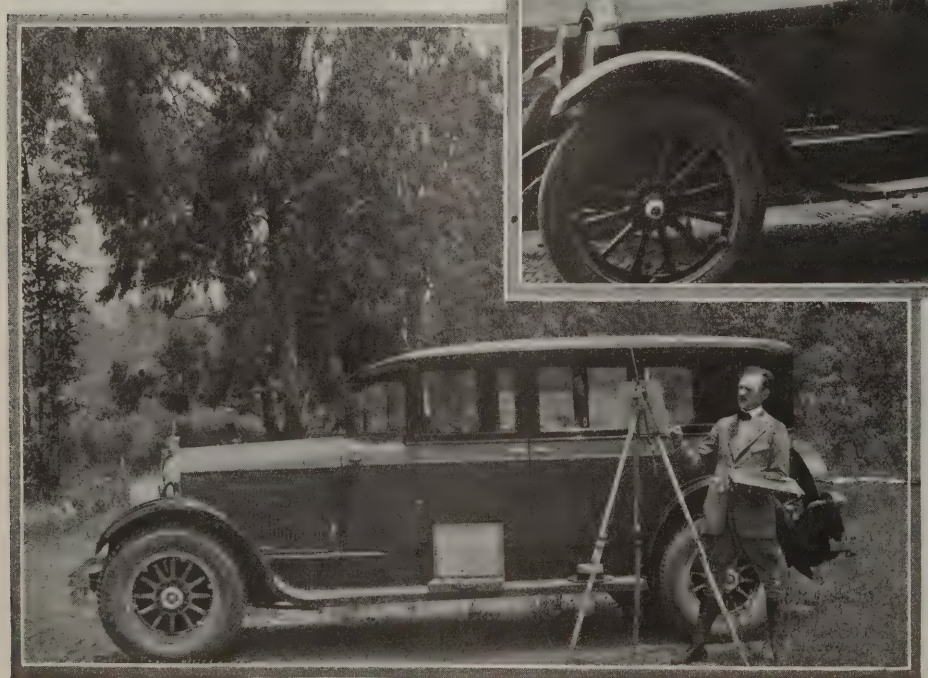
CINCINNATI, Sept. 12.—Features of unusual interest to radio fans and to the jobbing trade in radio will be embraced in the second annual radio show to be held at Cincinnati Music Hall October 19-25. Efforts are to be made to create the greatest display of radio apparatus ever shown, certainly the finest exhibition of radio ever given in the middle west states. Tentative plans for the big show were discussed recently at the meeting of the Radio section of the Cincinnati Electric Club, under whose auspices the show will be given this year,

MOTOR AGE'S PICTURE PAGES



SAFETY IN CHAINS. Float featuring Weed chains and bumpers entered by the Dominion Chain Co. in the Civic Holiday parade during Old Home Week in Niagara Falls, Canada, July 13-18.





A MULTIPLICITY OF USES. At the left is H. B. Waggoner, Pasadena, Cal., artist who uses his Marmon in going to and from the places he paints. At the right we have the celebrated Harry Lauder and Mrs. Lauder, snapped in Bombay, India. His automotive steed shown in the picture is an Oldsmobile.

OF AUTOMOTIVE INTEREST



A VISUAL REMINDER. In Ohio they plant a white cross to mark the spot of a fatal automobile accident, as a message of caution to passing motorists. This is to be done on all state highways by proclamation of the governor.



EFFICIENT HEADLIGHT TESTING STATION. The car is enclosed in curtains to secure perfect darkness. It is owned by the Howard Automobile Co., San Francisco, and is pronounced by state officials to be the most perfect testing station in California.



BUSINESS MUST BE GOOD. A large number of the first new Velie broughams were driven away from the factory recently and paraded through Moline, Rock Island and Davenport.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING - ELECTRICAL - FLAT RATES
SHOP - LEGAL - PAINT & TRIM - ACCOUNTING

Steering Gear and Tappets

Q—After putting in new eccentric bushings in Dodge Brothers steering gears they will make a dry or grating sound when turning the car short while standing still or moving slowly. I don't understand the cause as all the moving parts seem to have a free fit and have plenty of lubricant.—C. T. From Seattle.

We are inclined to believe that your trouble is due to unsuitable lubricant in the steering gear housing. As the pressures are very high on these parts it is necessary to have a lubricant that will stand up and with this in mind we would recommend that you use Dodge Brothers recommended lubricant or some special steering gear lubricant made by the large grease and oil companies.

Referring to Fig. 221 it is possible that you may have omitted the small washer that goes behind the worm wheel and in front of the flange at the end of the eccentric bushing. This thin washer is necessary in order to maintain the proper disposition of the worm wheel with regard to the worm back and forth. It is fairly possible that the worm wheel shaft thrust screw shown in the right hand side of Fig. 221 is too tightly adjusted causing the worm and wheel to bind at certain positions.

Check Size of Teeth

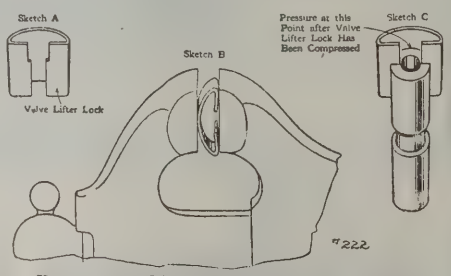
We would suggest that you fill the housing with a good lubricant and then try it and turn slowly until the point is reached where the noise occurs. Stop turning, remove the cover from the housing and note the position of the worm in regard to the worm wheel. It may be possible that there is difference in the size of the teeth due to wear on one or the other, of the pieces mentioned. In this case it may be corrected by turning the worm wheel ½ to ¼ revolution and in extreme cases it may be necessary to renew the worm wheel or the worm. Also make sure that the bushing at the lower end of the worm is a good fit on the steering gear vertical shaft.

Q—What is the best method of stopping that annoying tappet slap found in 1922 and earlier Chevrolets? The rocker arm clearance is not excessive, the trouble seems to be in the cage-like part at lower end of tappet rod.

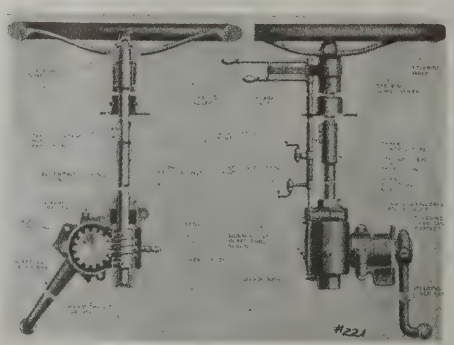
If after adjusting the valves to the proper clearance the lifters are noisy, examine the end of the lifter that comes in contact with the camshaft and see whether there is a groove worn in it. If so it should be replaced. The valve lifter lock, Fig. 222, may be loose on the valve lifter. If so squeeze the lock together in a vise so ends of valve lifter lock point inward as in sketch B. The backs of valve lifter lock will then press firmly against the valve lifter when installed, sketch C. If it is found that this does not eliminate the noise inspect the rocker arm to see whether or not the surface that rests on the push rod or valve stem is worn. If so grind the rocker arm in an oval shape at this point.

Q—When going around a right hand turn or driving on the left side of a crowned road the differential growls, does this mean that the master gear is allowed to move toward the pinion or away from it? If so which side of the differential housing should have shims to prevent side movement?

This would indicate that the ring gear moves to the right toward the pinion and that shims should be installed on the right hand side of the housing.



Reshaping Chevrolet valve lifter locks



Dodge Brothers steering gear

Q—Does the installation of silent timing gears work out satisfactorily on Chevrolets and if so which is the proper arrangement to use?

We have no information regarding this question and would suggest that you get the opinion of the Chevrolet dealer in your neighborhood and also from several Chevrolet owners. The Chevrolet engine is not fundamentally different from the average automobile engine and it is more than likely that well made gears that fit right will give satisfactory results.

Clutch Sticks in High Gear

Q. We have a Ford underslung speedster which sticks in high gear. Every adjustment is properly set and it has the correct number of plates in the transmission. It has been overhauled twice by authorized Ford dealers and mechanics and the transmission has all new parts. It is impossible to crank it without raising both rear wheels. If I get the engine started it runs perfectly until I let it stand about 30 minutes and then it is just as hard to start as ever. Charles M. Marvin, Elk Garage, 410 Pearl avenue, Joplin, Mo.

Ford speedsters are often made of Ford cars which have run for many miles, and while you say that all parts have been replaced, it is possible that you have overlooked one or two. When a clutch is operated for a long time the clutch plates tend to cut notches in the transmission brake drum assembly, part No. 3311 and in the transmission clutch drum part No. 3332. This means that the clutch plates do not slide readily and tend to cause the condition you describe. Another possibility is that at some time or other the car has been in a wreck and the crankcase has been distorted so that the transmission is cramped.

You state that it is necessary to jack up both rear wheels. This should not be necessary even if the emergency brake lever is left in the down position and the clutch is engaged, for the differential when operating properly will let one rear wheel turn if it is jacked up while the other remains stationary. If it is really necessary to jack up both rear wheels it shows trouble in the rear axle as well as in the clutch.

ADJUSTING THE PINION SHAFT BEARINGS

Q.—We have a four-cylinder series five Gardner car, 1923 model that has considerable end play in the pinion shaft at the rear axle. What is the proper way to proceed to take up this end play. Charles Tuckfield, North Branch, N. Y.

At the rear of the rear universal joint is a companion flange which carries the drive to the rear axle. Immediately behind this flange is a large nut approximately 1½ in. across which takes care of the adjustment of the pinion shaft bearing. To tighten the bearings it is necessary to loosen the lock ring and turn this nut so that it moves toward the axle. This will tighten both bearings. It is necessary to do this carefully and to tell by the feel when the adjustment is correct. It is then necessary to replace the lock ring. After the bearings have been adjusted it might be necessary to adjust the pinion shaft carrier so as to properly mesh the pinion. This is done by removing the cover plate from the propeller shaft housing, loosen the clamp bolt and turning the adjusting sleeve until proper mesh is otbained.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

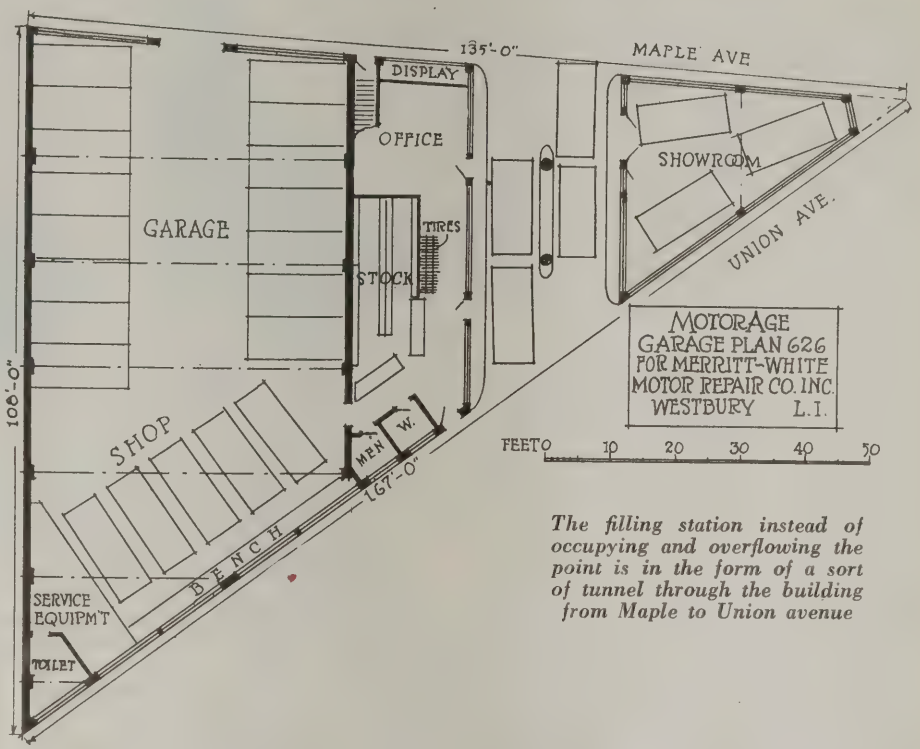
An Unusually Good Layout for a Flatiron Shaped Lot

Q.—Enclosed find plan of land on which we wish to put up a garage, showroom and general machine repair shop with rooms (5) over showroom and front drive. Same to be of brick or tile. If you can furnish sketch of best possible layout, will appreciate. Marett-White Motor Repair Co. Inc., Westbury, L. I., N. Y.

We cannot guarantee the "best possible layout" but we admit we always do the best we can and some of our customers think we are pretty good.

The difficulty in laying out a building on a flat iron shaped lot of this sort is in making use of the irregular corners that must be contended with here and there. It is always hard to make use of the point of such a lot, even for a filling station, since when the pumps are placed where they should be the cars will project out into the right-of-way and consequently it is necessary to place the pump back far enough so that there is ample room on either side. We have tried a new stunt here of making use of the tip of the lot for showroom purposes and believe that it would be quite a novel idea and one to which considerable attention would be attracted, which of course, is the primary intention in a showroom.

Of course, it is a disadvantage to have the office separated from the showroom and be obliged to cross the filling station to get from one to the other, but we believe there was never a garage designed which was absolutely perfect in every respect and considering the amount of wonderful display window space you have, this is not a serious item. Your upstairs rooms may be built over the office and accessory store and filling station, or if you desire they may be extended clear to the front of the lot, including the space over the showroom. The garage and shop section, we believe should be only one story with a trussed roof and provided with skylight since it has windows only at the ends.



The filling station instead of occupying and overflowing the point is in the form of a sort of tunnel through the building from Maple to Union avenue

WRITE SECRETARY OF STATE

Q. I understand that there is a new law in Ohio whereby a garageman can attach a car for any parts that are used on it, where heretofore it could only be attached for labor. Can you tell me anything about it or tell me where I can find out without paying a large attorney fee? Okeana Motor Sales, Okeana, Ohio.

A. An inquiry to the Secretary of State for Ohio for the new Ohio laws brings the reply that they are not published. You may secure the latest session acts from your Secretary of State as soon as they are out. Often the county clerk or recorder or the justice of the peace get advance copies of the newest laws on liens such as you are interested in, for they have to record such liens or otherwise deal with them.

Ammeter Carries no Starting Current

Q.—I would like to know whether the current used by the starting motor on a Ford or any other car goes through the ammeter. Why does the ammeter show 6-amperes discharge on some Ford cars even when the ignition and light switch are turned off when you step on the starter button? I have heard that the starting motor requires from 300 to 400 amperes to start and about 200 to 250 to keep on running. Is this correct?—John E. Feulner, High Lake, Box 23, West Chicago, Ill.

No cars today have the electrical system so laid out as to carry the starting current through the ammeter. At one time Hupmobile cars and also Franklin used what is known as the non-stalling system. In this system a machine was used which operated both as a motor and a generator and required a 12-volt battery. Instead of an ammeter an indicator was used on the dash and when the ignition switch was turned on current from the battery would flow through the indicator to the motor generator which operated to crank the engine.

The same machine then operated as a generator and would return current to the battery. The indicator was made with a very heavy strap connection in it which would carry the heavy current. However, the average ammeter is not capable of carrying the starter current. There is, however, one special type ammeter on the market which can be used for this purpose and is designed as a replacement unit for these older cars. On the Ford car, for example, there is no reason for the ammeter to indicate a 6 ampere discharge and if it does it would indicate either that there is a leakage of current in some of the circuits or that the ammeter has at one time or other carried a very heavy current which has thrown the needle off center.

If you will look at a Ford chassis you will see that the heavy cables carry current from the battery to the starter switch and then to the starting motor, where the current returns through the ground or frame of the car. You can accordingly see that the starting current does not go up to the instrument board. The starting current may be from 300 to 500 amperes when the switch is first operated but usually drops down lower than the figure you mention being in the neighborhood of 125 or 150 amperes while cranking the engine.

No Finance Company in This Credit Plan

What is said to be a revolutionary action in promoting motor car sales has been started by N. F. Veasey, president of the Gilbert-Chevrolet Co., 2131 Gilbert Avenue, Cincinnati, in a new time-payment sales plan. It eliminates the financing company and puts automobile credit transactions on the same basis as is maintained between dealer and customer in ordinary lines of business.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

8-Cylinder Engine Overheats

Q.—Would greatly appreciate your advice regarding the cause of overheating of a 53 Cadillac. The former owner at some time used what appears to be crude oil in the cooling system. This left a thick coating of grease on the cylinder walls and in the radiator. This however, has been removed by steaming out with high pressure steam and the cylinder walls sprayed with high air pressure and gasoline. The carbon has been removed, carbureter cleaned and all joints checked for air leaks, new radiator hose has been installed, pumps taken apart, cleaned and inspected. The pumps are apparently operating all right as seen by the action of the water through the filler cap.

Valve and ignition timing has been checked and found to be correct. The correct grade of oil is used and pump pressure is right. Engine hits evenly on both idle and speed, has plenty of power, does not use excessive amount of gasoline and brakes do not drag. Fan belt has proper tension, in fact the car throughout is in excellent condition with the exception of the heating trouble. It overheats in a run of about two miles at a fairly high rate of speed. After running this distance there seem to be pockets in the cylinder block which form steam which works through the radiator making a gurgling noise. Also, the cylinder blocks are hotter than the upper part of the radiator.

When the engine boils the lower radiator hose does not seem to be overly hot. The radiator and water system are free from all obstruction. Could the thermostat cause such a condition as I have described? I notice with the water pump shafts turned with the indicator pointing up, rendering the thermostst inoperative, that the vertical length of the "T" shaped hose gets much warmer than the upper part of the radiator when the engine is first started.

With the pump shaft indicators turned down there is no swirling action of the water in the radiator with engine running. Is this correct? If the thermostats were not functioning properly would they have a tendency to raise the level of the water in the radiator with engine running at good speed? I am under the impression that the overheating trouble is caused by the thermostats even though they appear to be right. This car operated all right last September on a trip and has not been used since. Also supply timing information on this motor. Kansas Service Station.

Thermostats May Be at Fault

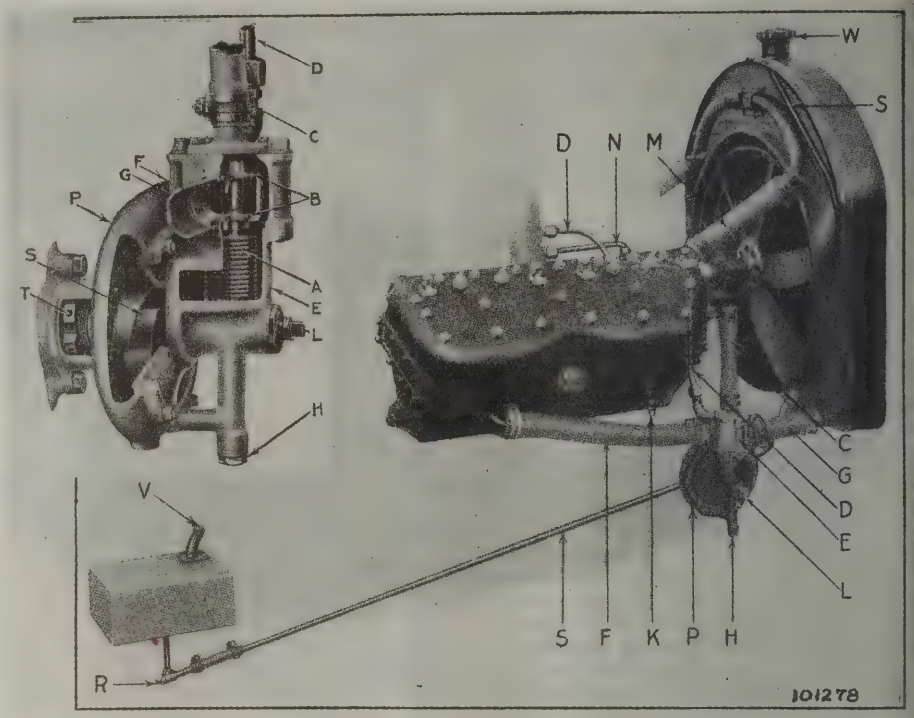
We also suspect the thermostats. To check these you could remove the pumps together with thermostats and pour boiling water on the Silphon device which operates the valves. This device is in the nature of an accordion which contains a liquid which vaporizes when the water gets hot and produces a pressure which expands the device and operates the valves. If there is a leak it will prevent the Silphon from operating. The valve should raise from its seat at least one-quarter inch.

You refer to the question of water swirling in the radiator when the pump is operating and the indicator is down. This would not happen with the engine cold but should happen with the engine hot the same as if the thermostats were held out of action.

You state that the radiator is not clogged up. To test this you should have the radiator off the car and run a heavy stream of water in the upper part of the radiator and see if a full stream comes out the bottom. The same test should be made with a cylinder block, as it is possible that the cleaning method that you used with steam and gasoline has not resulted in removing all the obstructions. It may have loosened it in certain places and allowed it to clog up at other places. This may account for the pocketing action you describe. If a full stream of water will flow through the cylinder block it indicates clear passages although of course it would be still possible for obstruction to exist in certain places, causing local heating.

One suggestion, we have to offer is that you remove the thermostatic mechanism entirely, if this is feasible, or if not that you eliminate the pump and use a hose connection of some sort so that the system operates as a thermo-syphon cooling system. Another test you might make on the radiator would be to dump all of the water out and then pour in boiling water. Hold one hand on the front of the radiator and see if the heat is felt instantaneously. If it takes an appreciable time for the heat to get through it would show that the water passages are coated and do not transmit the heat efficiently. The same test could be made on a car known to be operating all right to get a comparison. The illustration given shows the pump and thermostat detail as well as the path through which water flows in the cooling system. When the engine is cooled, water from the pump flows through hose connection "F" and up to the cylinder block and back through hose connection "C". Water also flows from the cylinder block through pipe "N" to the water jacket around the intake manifold and flows back to the thermostat through pipe "D."

We are sending you by separate letter photostatic copy of two pages of the Cadillac instruction book, giving the information you need on the setting of the valves.



Details of pump and thermostat in cooling system of Model 53 Cadillac

Aircraft Engine Power at Altitude

The Bureau of Standards tests being made at Washington confirm the belief that engine power of airplanes is cut in half between sea level and 20,000 feet. In a pamphlet just issued on "Aviation Engine Performance," it states:

"The well-known weakening of a mountain climber at high levels is a picture of what happens to an airplane motor in high flight. The Bureau tests confirm the belief that engine power is cut in half between sea level and 20,000 feet. Why and how much the power varies with changes in temperatures and pressures are questions vital to aviators and designers of airplane engines. Modern flying demands of every drop of gas its utmost in order to increase speed or cruising radius or mileage per gallon."

Clearing Up Electrical Troubles

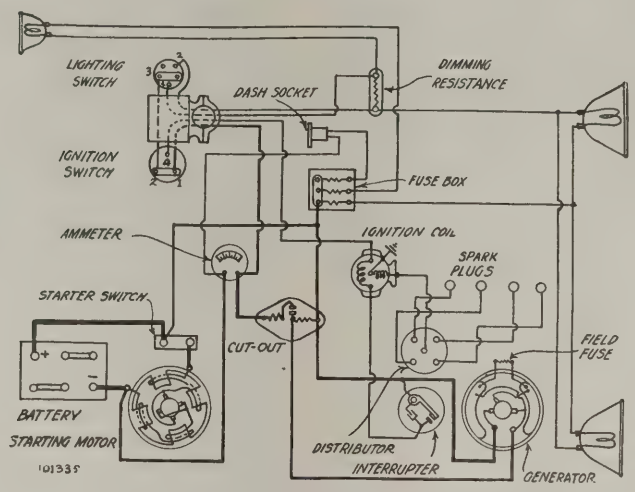
EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Time Saved by Careful Testing

Q. We had a Reo bus, serial No. 65703 in the shop last week on which the following work was done: reground cylinders, ground valves, cleaned and adjusted carbureter and timer but when engine was started it kept continually missing. We then disconnecteed vacuum tank and installed carbureter which we knew was O. K., rechecked valve and ignition timing and tappet clearance. The spark was O. K. as it would jump a 3/16 in. gap. We also installed a new set of plugs but the same action took place. Finally on a hunch I changed two wires coming from dash to timer and this eliminated the trouble. Can you let me have a wiring diagram of this car so that I can find the reason for this action?

A. We are publishing a wiring diagram of the 1921 Reo Speedwagon, model F, which is the one you need. You will notice that this is a two wire system and that the base of the cutout is not grounded. The trouble you experienced is apparently due to two accidental grounds in this system, one of which is intermittent. In reversing the wires in the interrupter or timer you apparently got both grounds on the same wire so that they caused no trouble. There seems to be the possibility of a ground in the heavy black wire shown running from the cutout past the timer to the generator or it might be even possible that one of the generator brushes is grounded accidentally. It is also possible that it is a ground in the wire from coil to interrupter. To make either of these grounds give trouble it would seem that there is also a ground in the interrupter itself or in the condenser which is mounted in the interrupter. If you had checked the spark for missing, you might have avoided some of the mechanical work.



Wiring of 1921 Reo Speedwagon

Q. Would like to have wiring diagram of an early 1925 8 cylinder Peerless sedan.

A. This diagram is shown in accordance with your request.

Q. Would like to have sectional view of engine and carbureter on the same Peerless car.—F. L. Tighe, Baltimore, Md.

A. We do not seem to have a sectional view of the engine available nor do we have a sectional view of the carbureter. We assume, however, that you need the carbureter adjustments, and we are mailing you a photostat which gives this information.

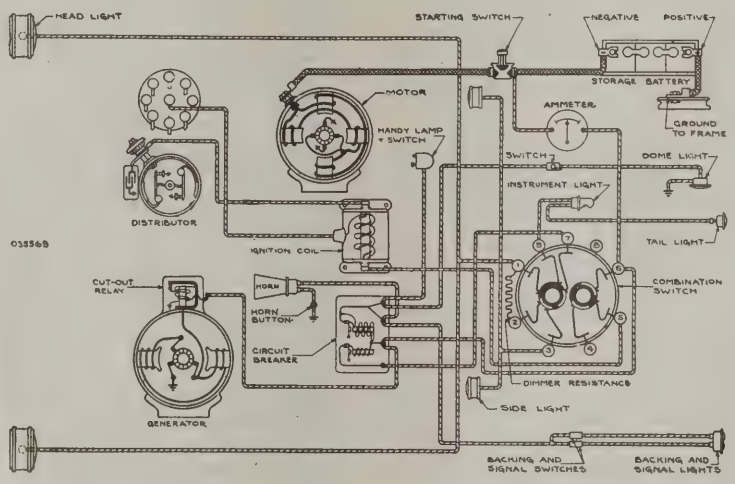


Figure 16. Circuit Diagram

Wiring of 1925 8-cylinder Peerless

CHARGING BATTERIES WITH SIMMS HUFF MOTOR GENERATOR

Q.—The best regardless of price, that's what I found it in two years. Your Reader's Clearing House is sure a treat to me, and now here is a problem for you. If it can be solved all right and if not all right. I have the following: A ¼-h.p. single phase motor directly driving an old type Simms Buff generator off of an old Maxwell. I use this for charging batteries. When all the resistance is cut out of the field it shoots about 25 amperes, but my voltage goes very nearly to nine. Can anything be done to hold the voltage to 7½ and still secure the 25 amperes? It drops amperes very low if the voltage is controlled at 7½.—William A. Lorenz, Golden West Garage, Cor. Florida avenue and San Jacinto street, Hemet, Calif.

You do not say whether you are measuring the voltage at the motor generator or at the battery. The difference will be due to the resistance of the wiring and the amount of current flowing, the resistance multiplied by the current giving the drop in volts. If you are checking up the voltage at the battery then there is nothing you can do about it and the trouble is due to the fact that the batteries you are charging are sulphated. This means that you should hold the voltage down to about 7½ until the low charging current has broken up the sulphate. You should also watch the temperature at the battery to see that it does not exceed 100 degrees or 110 degrees Fahrenheit. If, however, your battery voltage is 7.5 and the generator voltage goes up to 9 it shows that the wires are not big enough or else that the connections are not clean.

REPLACING BABBITT AT FORD REAR MAIN BEARING

We have noticed in MOTOR AGE several ways of taking up the end play in a Ford crankshaft. We do this by adding a little babbitt metal to the ends of the back main bearing cap with the lead burning torch and then scrape it down until the cap will just fit in.—D. C. Slick, Granite City, Ill.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Let All Your Employes Know the Prices For Maintenance Work

ABOUT eight years ago, when flat rate was talked about a good deal and a few concerns were brave enough to adopt the system in their shops, a dealer situated in the Rocky Mountains district used a rather clever means to promote the selling of service and maintenance at a fixed price.

He furnished everyone in his organization, even the watchman who took care of the place at night, a small book containing all the flat rate operations he had worked out for the particular car he handled and also the prices thereof. He did this so everyone in the organization "talked the same language," as he put it.

Before he adopted the flat rate system, a customer would ask a salesman how much he thought it would cost to take up a bearing, let us say. The salesman naturally made a guess at it. Then the customer probably asked the shop foreman and got another guess. A mechanic gave him still another figure and he finally concluded he could make a guess himself. Everyone "talked a different language."

So, in order to make sure that every car owner would get exactly the same figure when asked about the price of a certain operation, this dealer gave everyone employed by him a small flat rate book. This book they religiously carried around with them and whether you asked the stenographer, parts man, mechanic or general manager, you got the same figure for any job asked about.

We believe this idea could be more generally applied today. Then a mechanic would not have to say, "You better ask the boss about the price of the job." Let's all know the price.

Specialized Tool Equipment

Willimantic, Conn.

To the Editor of MOTOR AGE:

I am taking the liberty of asking you for some information. I am thinking of opening a specialty shop, to do carbon cleaning, valve grinding and brake lining on a flat rate basis on all makes of cars and would like to know what is the most modern tool equipment I can install for this class of work. I have a full line of speed wrenches.

Thanking you for past favors, I beg to remain.—Louis G. Zechiel.

In addition to the speed wrenches you will need other equipment.

Starting with the carbon removal job, we assume you are going to use a decarbonizing outfit and for this you will need a carbon burning torch, regulator, gauge, hose, connections, etc., costing about $15. There are several concerns making such outfits and we are sending to you a list of them under separate cover.

For grinding and reseating valves you ought to buy one of the small machines commonly known as a valve grinding machine. These usually are electrically driven with two motors, one to revolve the valve and the other the grinding wheel. They are great time savers and do a good job.

Also get a set of valve seat reamers for reconditioning the valve seats in the block. Reamers also should be provided for truing up the valve stem guides when valves with oversize stems are fitted. As long as you are going in strong for valve grinding jobs we suggest a valve grinder, that is, one of the electrically driven machines resembling an electric drill. With such a machine you can grind in a set of valves in much less time than is possible by the old screw driver method.



THINGS THAT HELP FLAT RATE

It used to be quite a job to reline the brakes of a car, but in the last few years machines for doing the work have been brought out and not only cut down the time required for the job, but do a better job of it. Here is shown a mechanic punching out the old rivets holding the lining to the band

Have on hand a number of valve lifters, because you will need them to get the valves out quickly and also to replace them quickly. If your shop is fitted with compressed air, an attachment for blowing out the cylinders and other parts of the engine comes in handy.

For the brake work make sure you have a variety of wheel pullers on hand. Then, as long as you have to take off the old lining and replace it with new we advise you to get one of the brake lining machines which the market now affords in several different makes. They are invaluable and do a much better job than is possible by hand and do it more quickly. They punch out the rivets of the old lining, punch the holes for the new lining, counter-sink them and set the rivets holding the new lining in place.

You also might get several sizes of brake drums to fit the more popular makes of cars and cut a portion of the drum away so you can make the proper adjustment of internal brakes. The dummy drum is slipped in place instead of the wheel of the car and by this procedure you readily can see much time is saved and you are insured a good job.

MOTOR AGE'S FLAT RATE FORUM

No. 31

FLAT RATES FOR BUICK STEERING GEAR OPERATIONS

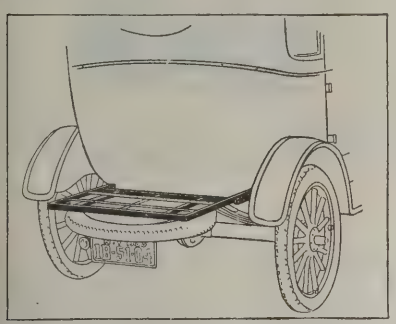
Manufacturer's Official Designation		Charge
1	Adjust—Adjust to remove play	$ .90
2	Bushing—Install new. Remove hand controls and steering wheel. Remove mast jacket, install new bushing and reassemble	3.35
3	Half Nuts—Install new. Remove steering gear assembly. Remove hand controls, steering wheel, mast jacket, adjusting nuts and housing. Install new half nuts and reassemble	5.30
3-A	Half Nuts—Install new. (Steering gear out of car)	2.40
4	Pitman Arm—Straighten. Remove, straighten, reassemble and equalize throw of wheels	3.10
6	Wheel—Install new. Remove hand controls, install new steering wheel	1.70
7	Wheel—Tighten. Tighten wheel on post. 1924-25 models	1.80
	Earlier models	.30
8	Steering—Free Up. Remove king bolts, clean, polish, oil and replace; free up and oil tie rod bolts, drag link and steering gear	3.90

THE MARKET'S NEW OFFERINGS

Accessories -- Equipment — Supplies

Reed Shock Absorbers

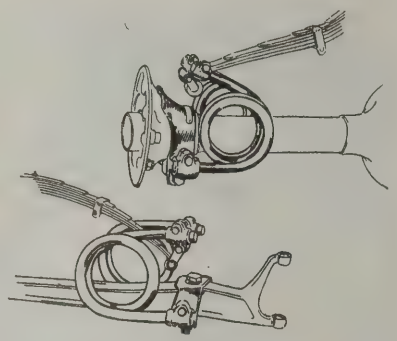
THE Reed shock absorbers for Fords is of the coil spring type and has no valves, strap or other devices requiring adjustment or maintenance. The makers state that due to the construction of the device it absorbs minor road shocks as well as those causing rebounds, thus relieving the main springs of the car of this work. In installing them the shackle and perch are removed from one side of axles and the shock absorber is attached to the main spring before putting the radius rod in place. This applies to the front end of the car. The rear sets can be installed without removing the wheels when it is possible to cut off the perches with a cutting torch. The outer end of the rear spring should be jacked up as high as possible for the installation. Since the main springs of the car are placed between the coil springs in such a way that the normal action of the main springs is not interferred with, the car handles well even at comparatively high rates of speed. The price of the Reed shock absorber is $20 per set and installation must be made by a shop or service station having facilities for cutting off the rear spring perches. It is made by the Reed Shock Absorbers Corporation, 2613 S. Michigan Ave., Chicago.



Buffalo Luggage Carrier designed for Ford Cars

Luggage Carrier for Fords

A LUGGAGE carrier for Ford cars guaranteed to handle a burden of 250 pounds and which can be folded up when not in use is offered the market by the Buffalo Automobile Spring Company, 146 Virginia Street, Buffalo, New York. The carrier attaches to the rear of the car and is so designed as to provide for attachment to it of a standard Ford tire carrier. One of the selling points advanced in connection with this product is that its large weight capacity makes it usually unnecessary to load luggage on the running boards, thus keeping the running boards clear for easy entrance and exit. The device measures 20 in. by 32 in. and bolts on to the car, no drilling being necessary. Price $15.



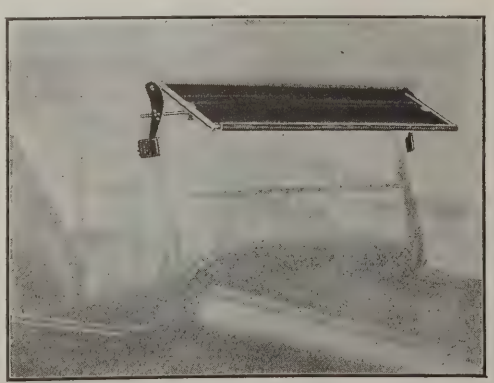
Reed Shock Absorber

Battery Terminal Treat

PREVENTION of corrosion of battery terminals, thus eliminating corrosion's resistance to the flow of electricity from the battery to the starter and ignition coil, is said to be accomplished through the use of Red Head Battery Terminal Treat which is being made and marketed by the B & W Sales Company, 4145 Broadway, Oakland, Cal. The company guarantees the product to stop corrosion. List prices: 2 oz. bottle, 25c., 8 oz. can, 60 c., 16 oz. can, $1, 1 gal. can, $5.

Elite Metal Visor

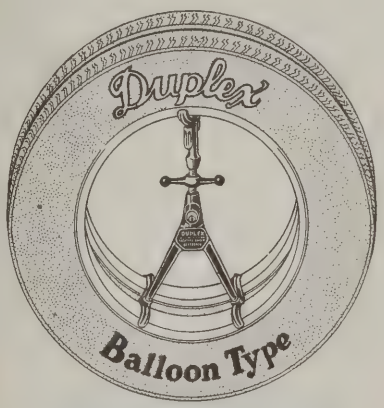
AN attractive visor, quickly attached, adjusted up or down by the turn of a wing nut and furnished with one style of adjustable brackets to fit open or closed cars is a product of the Automotive Specialty Corp., 47-29 West 63rd street, New York. It is known as the Elite Metal Visor. The visor is made of cold rolled sheet steel, ends being die cast in aluminum with a hole in back of an aluminum center strip through which a screw is fastened to the top of the car. It is equipped with a gutter to carry off rain at the sides. The color is dark green rust-resisting enamel on top and light green underneath. The visor will fit all cars with windshields up to 44 in. wide. List price with brackets $6.



Elite Metal Visor

Duplex Carrier and Rim Tool

TRIPP-SECORD & Co., Kerr Building, Detroit, are in production and distribution on its Balloon Type Duplex Carrier and Rim Tool which accessory is said to possess a variety of advantages for the motorist. This product combines the facilities of a second spare tire carrier, locking device and rim contractor and expander. Tires held by the carrier are kept apart, preventing chafing and permitting use of covers on both tires. The cylinder lock which also serves as a rim contractor or expander securely locks either tire separately or both tires. The device is attractively designed. List price is $10. Besides offering the Balloon Type Duplex the company produces a Standard Type Duplex.



Duplex Carrier and Rim Tool

Kokomo Mirror Display Cases

IN line with its campaign of more effective dealer helps the Kokomo Automotive Manufacturing Company, Kokomo, Ind., has announceed a new and attractive counter or window display box for its line of Kokomo Mirrors. The display box holds ten mirrors in individual boxes. The box is designed to occupy minimum space and at the same time show the products to best advantage. Each set of ten mirrors comes packed in one of the display cases.

Descriptions of additional acessory items will be found on the following page.

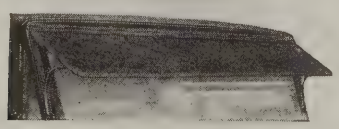
THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

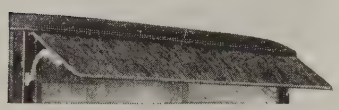
Two New Visors

TWO new visor types are being produced by the McKinnon Dash Co., of Buffalo, N. Y. One of these is designated as the Celotex Core Visor and the other as the Upholstered Visor. Both are of the fabric type. The company offers the Celotex type as being of simple and rigid construction, light in weight with smooth surfaces and no projecting parts; a core made of special fiber and a reinforcing steel molding so applied that the ordinary thickness of the body portion is not increased; improved and concealed means for attaching the two supporting brackets. The body portion of this visor is made of Celotex, the main ingredient of which is sugar cane fiber. This material is light in weight, waterproof and durable.

Lightness of weight also is said to characterize the upholstered Visor, with an absence of all panel markings and a general appearance of rich softness and pliability. Construction consists of a special steel frame, well trussed and padded to produce a core for the covering of high grade art leather, giving the impression of upholstery. The frame is oval in shape. Construction of these visors is said to prevent rattling caused by the car's vibration. Both types of visors are attractive in appearance.



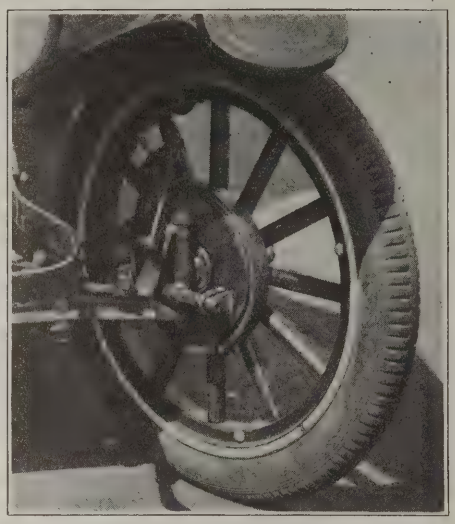
Celotex Core Visor



Upholstered Visor

New Turner Junior Timer

A NEW model Turner Junior Timer, an all Bakelite device for use on Ford cars, trucks and tractors has been announced by the Turner Manufacturing Company, of Kokomo, Ind. The new timer is built on the same principle as the Turner 2 in 1 Timer, also made by this company, with sliding contact, self-cleaning construction. It differs from other timers made by this concern, however, in that it connects directly with the regular Ford wiring assembly. The entire shell of the new timer is made of Bakelite while the keystone shaped contact inserts are of brass. List price $1.90.



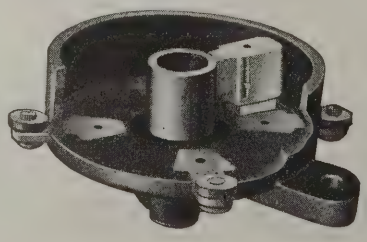
McNerny Four Wheel Brakes

(Cut Shown Above)

FOUR Wheel Brakes designed especially for Fords, Overlands and Chevrolets are manufactured by the McNerny Products Corporation, which has general offices in the Grant Building, San Francisco, and a plant in that city. It is said the attachment provides the small car with the same braking advantages as are found in larger cars similarly equipped. Installation requires no drilling or machining and can be accomplished by the average mechanic in an hour or two. The McNerny Four Wheel Brake is operated in the ordinary way from the regular brake pedal. All parts are easily accessible for lubricating. It is claimed that the device will not affect steering, on the contrary permitting absolute freedom of operation.

Engineering tests of the McNerny brake on a Ford stock car are reported by the makers to have shown a 100 per cent increase in tire mileage, 50 per cent increase in the life of transmission bands and brake linings and a 100 per cent increase in braking efficiency. The tests are also said to have developed a 50 per cent decrease in stopping time and stopping distance compared with the usual equipment.

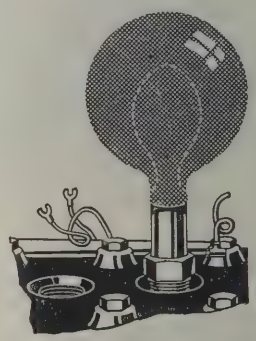
Price $37.50 f. o. b. San Francisco.



New Turner Junior Timer for Ford cars, trucks and tractors

Cylinder Compression Tester

CONSTRUCTED in a manner enabling simple operation by the car owner the Goodwin-Morgan Company, Akron, Ohio, has placed on the market a device for testing compression in automobile cylinders. The tester consists of a plug, similar to a spark plug, which screws into the spark plug hole. A small rubber balloon fits on the end of the plug. After screwing the tester into place the engine is turned over with the crank until the balloon is inflated. The speed of deflation indicates the rate of cylinder leakage. There also is a metal clip which can be screwed on to the tester and which holds an ordinary tire gage. By using the gage it is possible to compare compression the cylinders. This tester fits all cars except Hudson, Essex and Nash and retails at $1.50.



Goodwin-Morgan device for testing compression in cylinders

Crescent Long-Nose Pliers

(Cut Shown Below)

THE CRESCENT TOOL COMPANY, Jamestown, New York, is marketing a tool that should appeal to accessory dealers who stock equipment for the



radio owner. This tool is known as the new Crescent Long Nose Plier catalogued as No. M16. Besides being useful to the person working around a radio outfit the tool is recommended for general utility, especially for working with wire. With these pliers it is said wire can be bent to any shape desired. It has an especially strong wire cutter while its teeth take firm hold on a screw or a nut. The pliers list at 75 cents each. The company furnishes a display board for counter use at no extra cost which shows an assortment of six pliers.

EDITORIAL

Under One Roof

THE automobile merchant who fails to provide for all the service and automotive merchandise requirements of his customers is shifting a definite responsibility. The automobile that is used requires maintenance and to that end the owner almost from the day he buys the car is interested in mechanical repairs and adjustments, tires, batteries, lubrication, fuel and useful and ornamental accessories. Many of the best and most successful automobile merchants are providing a complete service under one roof for the car owner. Those who are doing so are developing the business to its full possibilities. Those who neglect to provide this complete service are falling short of their proper function as automotive merchants and also are overlooking a lot of highly profitable business that might just as well be theirs.

In the same way the independent shop which is not connected with any new car agency should make its service as complete as possible. There will always be room for good shops of this kind. They justify their existence by rendering a definite service to the car owning public and they have the whole range of the automotive market, except new cars, from which to draw business and profit.

SLICK UP now and CLEAN UP this winter.

It pays to be a two-car salesman rather than a used car buyer.

A Business Fit to Enter

A STUDENT who expects to complete his course at Harvard next year sought our advice the other day about the automobile business. It is his desire, upon the completion of his school education to start in some phase of the automobile business. He thinks he would like to sell, but he is ambitious to have a business of his own. He has considered the possibility of starting to work in a factory organization where he could learn something about distribution methods and lay the ground work that would qualify him, with experience and some capital, to undertake a retail business of his own.

He believes that the highest type of training in business and economics is desirable for one who expects to succeed on a large scale as an automotive merchant. He realizes that a great many dealers fail and that many others do not make an adequate profit, and he believes he sees the reason in the lack of understanding of fundamental business principles that marks so many men who have just drifted into this business.

To this young man we gave hearty encouragement. We hoped he is sufficiently imbued with enthusiasm, vision and determination to stick to his course until he has attained his goal. We see ahead of him many obstacles and discouragements, and we expect that many times he will be tempted to turn from his aim and compromise with his ambition.

But if he only sticks we believe that in time he will prove a credit to the automotive industry and pay enough income tax to get his name in the newspapers.

Easy sailing comes from sales at a profit.

Flat rate will make the flat pocketbook fat.

Lighter Cars in Prospect

NOW we are warned to look for the introduction of the very light European type of motor car in the United States next winter. This naturally takes us back to the cycle car craze of a few years ago, which faded so quickly. But since then the Europeans have made great progress in the design of small vehicles of very low horsepower and it would not be at all surprising if such cars should find a permanent place in this country within a limited market. Of course American design will continue to lead in the automotive affairs of the world, and the American product will continue to be demanded by the great majority of Americans. Even if the Europeans have produced a vehicle that might be economically used within certain limits in this country the chances are that American engineers will take hold of it and produce a modification that will be better adapted to our needs.

Cars won't run without tires. Why shouldn't every car dealer sell them?

It is never too late to SLICK UP; nor too early.

WE are glad we turned out to be wrong in our editorial last week in which we spoke of loss of life in connection with the disappearance of the naval plane, P-N 1. The successful riding of the high seas for nine days by this plane, with safety to its crew, is a wonderful tribute to the efficiency of this form of motor transportation.

New Production Records Are Expected

Deferred Purchases Are Now Showing Their Full Effect

Output Rate for Whole Industry to Be at Peak When Ford Attains Volume

NEW YORK, Sept. 16.—New production records are likely to be made this month by some of the automobile companies that introduced new models toward the end of the summer. These producers are now feeling the full effect of the deferred demand for their products from buyers who were awaiting the appearance of the new cars. All the factories, however, are benefited from the normal upturn in sales during the early fall, which is being felt with particular force this year, since demand held during the summer at an unusually high level.

When the Ford company attains full volume production on its new models, the production rate for the industry as a whole will be far ahead of any previous record for the season. This is unmistakably an "automobile year," and the generally prosperous state of industry coupled with sound agricultural conditions must be credited as the source of the demand for cars and trucks.

Forecasts made by representative parts makers indicate a continuation of good sales through the fourth quarter of the year. There will undoubtedly be recessions, but the level should be well above that of the corresponding period last year. Prospects for parts business are an excellent index of future conditions for the entire industry.

Interest is being focused on small cars of the European model, with shorter wheelbases and lower horsepower than any of the American makes. Cars of this type will be placed on sale abroad by several of the American producers, thus affording direct competition with the factories overseas. But beyond that, it is known that attempts will be made to popularize the small cars in the domestic market.

There is an initial prejudice to overcome, but many believe that traffic congestion in the centers of population, aside from motives of economy, will lead to the adoption of cars that can be parked and operated in small areas. Taxicabs will probably be the first to be brought out, and these may afford the entering wedge for general use.

GOODRICH PLANS MOVE

INDIANAPOLIS, Sept. 12.—The Goodrich Tire and Rubber Company yesterday sold its Indianapolis office and distributing plant at Capital Avenue and Walnut Street and leased the basement and four floors of the Spink Industrial Building at Washington and Liberty streets. This will give more room for service to tire dealers and distributors which now constitutes the bulk of the Goodrich branch business here, whereas when the original distributing plant was established 10 years ago it was mainly devoted to service to Indiana automobile plants. The change to the new location will be made November 1 according to H. C. Boyer, Indianapolis manager of the Goodrich Tire and Rubber Company. The old building was sold to the Indianapolis Paint and Color Company.

A. A. A. Standings

WASHINGTON, Sept. 12.—Standings of drivers with the A. A. A. contest board are as follows:

Driver	Points
1. DePaolo	2500
2. Milton	1070
3. Hartz	1040
4. McDonogh	905
5. Cooper	695
6. Lewis	465
7. Elliott	330
8. Comer	284
9. Shafer	270
10. Duray	185
11. Batten	145
12. Kreis	117
13. James Hill	55
14. Bordino	54
15. Bennett Hill	50
16. DePalma	46
17. Shattuck	35
18. Devore	21
19. Hepburn	16
20. Mourre	11

Cunningham Prices Are Increased $350 to $400

ROCHESTER, Sept. 11.—James Cunningham, Son & Co., have announced price increases of $350 on their open models and $400 on their closed models. This is the second price increase made by Cunningham inside of two months, their prices now being from $700 to $850 higher than they were in July.

Following are their latest prices and those in effect before the latest price increase:

Model	New Price	Old Price
Touring	$7000	$6650
Sport touring	6500	6150
Coupe	8000	7600
Limousine	8500	8100

BLACK & DECKER REDUCES

TOWSON, MD., Sept. 12.—The Black & Decker Manufacturing Company has announced to the trade a substantial price reduction on the Black & Decker Nos. 8 and 81 portable electric drills. The No. 8 Drill which previously listed for $205 for 110 volts and $200 for 220 or 250 volts, has been reduced to $175 for any voltage. The No. 81 has likewise been reduced so that the price for any voltage is now $195. A reversing switch for either of the above units is furnished at an additional cost of $20.

Overland Reduces Price of Standard Sedan to $595

New Features Added to Model Announced at Same Time as $60 Drop

TOLEDO, Sept. 13.—A price reduction on the Overland Standard sedan from $655 to $595 is announced by Willys-Overland which brings the price of this model to the lowest figure ever made on a full-sized sedan with sliding gear transmission.

The price reduction on the Standard sedan follows closely on the heels of a general price reduction announced last month which affected materially every model produced by Willys-Overland.

Willys-Overland officials point out that the tremendous success of the Overland Standard Sedan in conjunction with improved and increased production facilities for this model are responsible for the $60 drop in price.

In making the new announcement, Willys-Overland also announces that several important features have been added to the standard Sedan. The latest in one-piece windshields now comes as standard equipment on this car. Wider and deeper seats and cushions add to the comfort and riding ease of the car, while the radiator and head lamp rims are now available on all standard sedans in nickel finish.

Long narrow windows, giving the maximum of vision and ventilation, also provide safety facilities for the small family, while the arrangement of the specially folding front seat backs permit free and unencumbered access to the rear seat.

A. E. A. Offers Cash Prize for Best Christmas Sales Story

CHICAGO, Sept. 12.—A $50 cash prize is to be awarded by the Automotive Equipment Association for the best letter or story telling how it payed to "Ask 'Em to Buy Something for the Car for Christmas" last holiday season, Commissioner William M. Webster of the association has announced.

All accessory dealers, car dealers, garagemen, service station proprietors or any others engaged in the resale of automotive equipment and service anywhere in the United States or Canada are eligible to compete in the contest. There is no entry charge.

Pictures of displays, samples of advertising used last year, will add to the value of the story, according to the announcement to the trade. Any material should be sent now or as soon as possible to Arthur R. Mogge, merchandising director, Automotive Equipment Association, City Hall Square Building, Chicago.

Car Industry Only One That Cut Cost, Says Durant Head

Campbell Tells Carolina Tradesmen All Other Essential Businesses Have Raised Prices

WILMINGTON, N. C., Sept. 12.—The American automobile today is 29 per cent lower in price, quality and serviceability considered, than it was before the World War, the Summer convention of the North Carolina Automotive Trade Association was told by Colin Campbell, of New York, vice-president of Durant Motors, Inc., in his address, which marked the peak of interest for the two-day meeting. Mr. Campbell's address was delivered at a banquet attended by approximately 200 automobile distributors, dealers, salesmen and shop foremen.

While the American automobile industry is giving the riding public a better car for less money, Mr. Campbell pointed out, all other essential industries have increased the prices of their products, some of them as much as 250 per cent.

The automobile manufacturing industry must be careful now, however, Mr. Campbell asserted, for this consistent effort to give greater values for less money is threatening to bring about trade evils, the severity of which cannot be forecast. Shaving prices too much, he pointed out, even in the face of the tremendous competition of the present day, may bring a repetition of experiences of other industries in such circumstances, when sharp practices were undertaken both by the manufacturers and the distributors, to the hurt of themselves and the buying public as well.

Mr. Campbell asserted he knew of no worthwhile reason for the recent severe wave of price-cutting in the automobile manufacturing industry. "Maybe it was to 'crowd out' the so-called 'weak sisters'; maybe it was hoped to increase volume and cut overhead cost per unit; maybe it is to stimulate sales. Certainly it is not because there has been any reduction in manufacturing costs commensurate with the retail price reductions," he said.

Turning to the subject of financing retail sales, Mr. Campbell urged the dealers to patronize local bankers as much as may be found possible. He expressed the opinion that the "manufacturer should not go into the business of financing the dealer's paper. Many evils are attendant on the system and confusion always results," he added.

Thomas McP. Glasgow, of Charlotte, N. C., president of Southern Automotive Jobbers' Association, presided at the banquet.

Harry Clendenin, of Greensboro, president of the State association, addressing the opening session, told of plans to increase the membership of the association, which now numbers 177 dealers and distributors. Sales promotion, accessories sales, service policies and other subjects were discussed by leaders of round-table talks at several sessions.

Canada May Ban Tourist Bond

QUEBEC, Sept. 12.—A Dominion wide movement is now on foot to have the customs regulations with regard to the entry of motor tourists to Canada changed so that the tourists may enjoy a longer stay without being put to the trouble of furnishing a bond, as they must do under the present system. The movement is sponsored by the Automobile Club of British Columbia, and it has already enlisted the support of automobile clubs all over the Diminion of Canada. Under the new plan the deposit now enacted will not be necessary. A tourist who wishes to extend his permit over the 30 days will merely have to satisfy the officials that he is a legitimate tourist, and that he will return upon the expiration of the extension. The automobile clubs suggest that this extension be for 30 or 60 days at the option of the tourist.

EPSTEIN SALES MANAGER

CHICAGO, Sept. 12.—Samuel P. Epstein has been appointed general sales manager of the Garfield Motor Sales Co., Inc., Wabash avenue and Garfield boulevard, Chicago. J. P. Vandenorth has been promoted from the sales force to be assistant to Mr. Epstein. The Garfield Motor Sales Co., occupying a whole block, is dealer for Oldsmobile, Oakland and Flint.

PEORIA HEARS KROH

PEORIA, Ill., Sept. 12.—Motor car dealers from many points in central Illinois assembled here Sept. 10, to hear an address by A. R. Kroh, sales promotion advisor of the National Automobile Dealers Association, and Edward Payton, market analyst, a recognized economist who has made a special study of the automotive business. This conference is the only one of the kind allotted to Peoria and a general invitation was sent out to all members of the Illinois Automotive Trade Association to attend and several hundred responded. These and similar conferences, have been invaluable in aiding the dealers in the solution of three big problems: management, sales, and maintenance.

DEALERS SHOW AT FAIR

QUINCY, ILL., Sept. 12.—Seventy-five cars, representing the largest automobile show ever staged in connection with the Adams County fair, are displayed under an 80x280-foot top, at the grounds here this week. Eighteen dealers are represented in addition to several accessories and tire dealers. The automobile tent is drawing huge crowds and the auto men are finding renewed evidence of good auto trade this fall in the inquiries and prospects being indexed this week.

Official Warning Sounded in Trade Association Methods

Government Will Allow No Deviation From Cement and Maple Flooring Decisions

WASHINGTON, Sept. 12.—Warning that the government will act quickly to prevent any deviation from the principles laid down in the U. S. Supreme Court's "trade association decisions" was broadcast when William J. Donovan, assistant to the attorney general, addressed the National Association of Attorneys General.

Describing in detail the decision in the Maple Flooring Manufacturers' Association and Cement Manufacturers' association case Mr. Donovan said:

"The course has now been charted. Deviations from the course must meet with the natural consequence following upon conscious violation of the law."

The plea of uncertainty can no longer be taken advantage of by trade associations, according to Mr. Donovan, who showed how, in the past, no official definition existed limiting their legal activities.

"Properly read," Mr. Donovan continued, "these decisions emphasize that the misuse of information to effectuate contracts, agreements or understandings, or any concerted action through combinations which has the necessary tendency to destroy competition through price fixing, restriction of production, or other similar results, is unlawful."

OPENS FACTORY BRANCH

CHICAGO, Sept. 12.—A. A. Wester, president and general manager of the Cork-Sealed Piston Ring Corp. of Denver has announced the opening of a factory branch for this organization at 2332 S. Michigan avenue, Chicago. The corporation has maintained representation in Chicago for more than a year, developing a business justifying establishment of a factory branch here which will handle sales for the eastern half of the United States, according to Mr. Wester. G. A. Wester will be in charge of the Chicago branch.

PARTS FIRMS MERGE

ATLANTA, Sept. 12.—One of the most important mergers of recent years in automotive circles in the Southeast occurred the early part of September when officials of the Alexander-Seewald Co. announced the merging of this concern with the Ozburn-Abston Co. of Georgia. For years these two companies have been engaged in the wholesale accessory and parts business in Atlanta, and they were two of the largest firms of this kind in the whole South. The merger of the two companies thus makes the firm one of the largest distributors of accessories and parts in the United States. The company will henceforth be known as the Alexander-Seewald Co., all of the stock of the Ozburn-Abston Co. having been taken over by stockholders of the former concern.

Hudson-Essex Advancing Rapidly on West Coast

Ford Now Outdistanced in Dealer Representation—Several Executive Changes Announced

LOS ANGELES, Sept. 12.—Continuation of the sales expansion program of the Walter M. Murphy Company, Hudson and Essex distributors, in the Los Angeles metropolitan territory, by the appointment of new dealers, is the principal subject of discussion along Automobile Row here. There are now sixty different sales rooms from which Hudson and Essex cars are being merchandised in and immediately adjacent to Los Angeles—a situation without precedent in automotive merchandising in the West. And with few exceptions, these sixty sales rooms are operated by as many different dealers.

The Hudson and Essex now far outdistances Ford in dealer representation in this territory, and the tremendous sales force behind this car is being reflected markedly in new car registrations. For several months the combined Hudson and Essex sales in Los Angeles and throughout Southern California have been exceeded only by Ford.

Other news developments in distributing circles include several new dealer appointments and executive changes. Slaughter Motors, Inc., Southern California distributors for the Rollin, have taken an associate dealership in Flint cars. The Los Angeles branch of the Durant Motor Company of California announces the appointment of the Coast Motor Company, at Ventura, the J. L. Rawding Company at Oxnard and D. W. Roberts at Long Beach as new Star dealers.

Fred T. Johnson, who has been identified with California automobile selling for many years has been appointed sales manager of the Auburn passenger car division of the White Auto Company.

Ed Burnett, sales manager for Lynn C. Buxton, Southern California distributors of the Stearns-Knight for the past three years, has resigned to take a subagency of another line of cars.

Erskine Says Studebaker in Best Position in History

NEW YORK, Sept. 12.—A. B. Erskine, president of the Studebaker Corp., commenting on the policy and condition of the company, said:

"We are building solidly for the future, both in the quality we are maintaining for our product and the strength of the company behind that product.

"Our cash holdings have been increased this year and now stand at upward of $17,000,000, after deducting about $2,000,000 in dividends paid September 1. Viewed from any angle, the corporation is in the strongest position in its history.

"The automobile business continues at a surprising rate and I look for a big third quarter. Our sales in July and August amounted to 25,000 cars, and September's business will probably bring the total to more than 35,000 for the third quarter. We have been operating close to capacity since March 1, and there are at present no signs of any severe letup. About 85 per cent of our production is now in closed models."

Milton Visits Ascari's Monument



Tommy Milton, passing through Paris on his way to compete in the Italian Grand Prix and World's Championship Race at Monza, visits the Montlhery Track near Paris and stops in front of the monument erected on the spot where Antonio Ascari, famous Italian race driver, was killed during the French Grand Prix. At Milton's right is W. F. Bradley, MOTOR AGE'S Paris correspondent. In the oval, left to right, are M. Virioz of the French Hartford Shock Absorber Co., Tommy Milton, Albert Guyot, French race driver, and W. F. Bradley.

Maas & Sonneborn Is New Automotive Export Concern

NEW YORK, Sept. 12.—The new export selling organization of Maas & Sonneborn, Inc., located at the Fisk Building, Broadway at Fifty-seventh, has been organized and will be managed by men with years of experience in the automotive export field.

Peter Maas has been traveling and selling in the overseas market for a number of years. He was associated with several prominent motor and cycle firms of Great Britain and the Continent. For the last ten years he has been connected with the export selling business in the United States.

Herman Sonneborn has been connected with the foreign trade department of the Chilton Class Journal Co. since 1916. He was special representative of *El Automovil Americano* and the overseas edition of *The American Automobile*. He has had long experience in the planning and organizing of export departments and has aided some of the most prominent automobile manufacturers in solving their foreign sales and advertising problems.

The efforts of the new firm will be confined entirely to the automotive trade, acting in the capacity as export sales managers for a limited number of high-grade, non-competitive automotive accounts.

Studebaker Dealers of South Meet in Dallas

DALLAS, Tex., Sept. 12.—More than 100 Studebaker dealers from seections of Texas, Oklahoma and Louisiana were in Dallas last week for a discussion of business plans and to hear the plans of the Studebaker Corporation. The speakers, a half dozen of them, considered the used car problem one of the biggest confronting the dealers today.

They were unanimous in the opinion that the used cars should be, and could be bought and sold at figures which would represent a profit to the dealer. They all favored thoroughly re-conditioning cars and placing service guarantees behind them. The majority of the dealers declared the automobile retailer is meeting too few people who buy cars. They decided next season the Studebaker dealers would mix and mingle more with the people, take more interest in community affairs, and in fact become part or the people rather than purely automobile dealers.

H. S. Vance of the factory discussed the plants of the company for the coming year with the dealers. George Keller of Dallas, and C. R. Helm, used car expert, were among those addressing the dealers.

Mexicans See Their Country As Fertile Field for Cars

New Road Building Program Expected to Double Sales Within a Year

DALLAS, Tex., Sept. 12.—There is going to be a wonderful increase in the automotive business in Mexico and a very attractive field for investments in those lines in the republic below the Rio Grande in the next twelve months according to Mexican officials and business men who have been in Texas recently.

The drawback to the automobile business in Mexico all along has been the lack of roads, these men said. That is to be remedied.

Mexico is now launching a $40,000,000 road building program. The machinery is moving to the border from Chicago and other points now and actual construction of highways will begin immediately.

In the United States a $40,000,000 road program would mean little, Mexican business men said, but in Mexico it is different. Labor there is cheap. Material is at hand everywhere. The $40,000,000 will provide some 3,000 miles of paved roads and 2,000 miles of graveled or surfaced highways.

It is planned to connect Laredo, Tex., or Brownsville, with Mexico City by a paved highway through Monterey, Saltillo and San Luis Potosi. The work on this road will begin immediately. Highways will be built from the cities mentioned some 40 miles in all directions. Another highway is planned from Mexico City to Vera Cruz and a branch to Tampico. These are to begin at once. Still another is planned from Mexico City to Guadalajara on the Pacific Coast and one from Mexico City to Juarez opposite El Paso.

This would give two good highways from Texas or American points to Mexico City. The one from Laredo would be 600 miles while that from Juarez would be about 900. Graveled roads from various cities on the main highways would lead to points of interest in the Republic.

The highway, the Mexican business men said, would mean the coming of thousands of tourists next year, but at the same time would mean the automobile will supplant the horse and the cart as means of transportation in Mexico. They predicted the number of automobiles in Mexico will be doubled in the next twelve months.

NEW CLEVELAND DEALERS

CLEVELAND, Sept. 12.—New dealers added to the organization of the Cleveland Automobile Company include:

W. G. Crosby and Sons Garage, Nashua, N. H.; Bronaugh & Pendergrass Inc., Portland, Ore.; Yorton Kratzer Motors Inc., Syracuse, N. Y.; Chandler Cleveland Auto Co., Madison, Wis.; Frank E. Guptill, Boston, Mass.; Madison Hilliard Garage, Lakewood, O.; United Motor Sales Co., Somerville, Mass.; Knox Motors Association, Tuscaloosa, Ala.

Motors Are Making England Drier

NEW YORK, Sept. 12.—Voluntary prohibition is coming to pass in England as a result of the automobile. said Sir Henry Maybury, director general of roads of Great Britain, speaking at a dinner in his honor at the Ritz-Carlton Hotel. The dinner was in the joint honor of the director general and of the U. S. official delegation to the Pan-American Road Congress in Buenos Aires Oct. 30. It was tendered by Roy D. Chapin, chairman of the highways committee of the National Automobile Chamber of Commerce.

"The motor industry in England is prospering," said the speaker, "while general business is quiet; and this motor trade is developing at the expense of liquor. There is a rapidly growing interest in motor travel and the money of the public instead of going for beer is being used in the purchase of automobiles."

The director general is visiting this country to study the traffic methods here and made a number of observations concerning the differences between this country and England.

HOFFMAN MAGNETO SOLD

ST. LOUIS, Sept. 12.—James R. Medart has purchased the S. G. Hoffman Magneto Company, which has been in the automotive electrical field in St. Louis for fourteen years, with Sam G. Hoffman at its head. Medart was formerly foreman and superintendent of the Hoffman Company and lately has operated the J. R. Medart Ignition Company. The Medart and Hoffman companies will be merged and incorporated as the S. G. Hoffman Magneto Company. Medart says the contract of sale stipulates that Hoffman shall not re-enter the automotive electrical field in St. Louis for ten years.

NEW KELLY BRANCH

CHARLOTTE, N. C., Sept. 12—Establishment of a branch of the Kelly-Springfield Tire Company in Charlotte, with the expectation that the company's sales in the territory will be increased 100 per cent, was announced by W. C. Blake, representing the general sales office, at New York, who closed a lease for the building.

C. H. Luebbert, recently of the company's branch at Richmond, Va., was named manager of the branch here. Four salesmen will travel the territory which this branch will serve, including Western North Carolina and all of South Carolina. The North Carolina territory has been served by the Richmond branch and the South Carolina territory by the branch at Atlanta, Ga.

Southern Dealers Working Hard to Supply Car Demand

Cotton and Sugar Crops Bring Big Returns—Building Activity Gains

NEW ORLEANS, Sept. 12.—With an estimate of a crop of 1,550,000 bales, the Mississippi cotton situation is rosy with promise. Cotton is opening rapidly on account of the hot days, and the good price paid for picking is having a salutary effect on the automobile business in general. As the pickers get their money, many of them are investing in used cars. This demand relieves the dealers of their used car supply and makes it possible for them to go after new car business zestfully. Since the cotton is also placing money into the hands of cotton growers, it is not a hard thing for the automobile dealers to place new cars and take in used ones to have to dispose to the pickers.

Distributors, located in New Orleans, report that it is difficult to obtain cars in large enough quantities to supply the demand in the Mississippi cotton belt. They also report that the same satisfactory conditions are seen in a lesser degree in the cotton districts of north Louisiana.

The sugar cane crop in Louisiana is reported in good condition as about 78 to 85 per cent of normal. Rice is also said to be in a satisfactory state although some was salt water damaged.

Building and industrial activities are in a very healthy state in New Orleans and other cities of the two states. Mississippi Coast is bidding heavily for a big slice of the winter tourist crop this season with good prospects of getting it. Real estate is not booming in Mississippi or Louisiana as it is in Flordia, but values are high enough in the country on account of good results from truck crops throughout the trucking sections and anticipated returns from cotton, sugar cane, rice and pecans, the trees of which are breaking under a record crop.

The summer has been unusual on account of the great number of new automobile dealer buildings going up in the different towns. These buildings are more pretentious and better equipped for display and service facilities than the older buildings are. Practically all dealers have "slicked up" their places during the summer.

FEDERAL NAMES GRIFFIN

OAKLAND, CAL., Sept. 12—George O. Griffin, of Oakland, has been appointed branch manager for the Federal truck sales and service plant in San Francisco, according to announcement by the Federal company, which also announced plans for the enlargement and expansion of the San Francsico plant. Griffin has been in the truck business in Oakland for the last ten years.

Dealers Restricting Used Car Deals to Fewer Makes

N. A. D. A. Believes Less Than 15 Kinds Will Be in Stock by End of 1926

ST. LOUIS, Sept. 12.—By the end of 1926, used car stocks of the majority of automobile dealers will include less than 15 different makes of automobiles. This is a belief voiced by officials of the National Automobile Dealers Association, which arises from surveys conducted this year, in which it was found that many dealers already are restricting their purchases of used cars to a very few lines of cars. Dealers generally will not go outside of their own and popular and handled lines.

Careful restriction of the makes of cars that will be accepted by an automobile dealer's used car stock is one of the prime essentials of building a successful used car business, according to National Association authorities. It will have the effect of causing the dealer to refuse some deals in which he would deliver a new car, but it also will enable the dealer thereby to refuse new car business that he would obtain only at the expense of a large loss on the used car accepted.

One reason for the enormous reduction in used car losses from $126,000,000 in 1922 to less than $40,000,000 in 1924 was the determination on the part of dealers generally to refuse to take unprofitable deals. One big reason why stocks are lower, sales greater and losses more largely reduced in 1925, is that the dealer has restricted his used car deals to a certain list of makes which he knows have a resale popularity in his particular territory. The trend toward applying good business principles to used cars, has been aided by the public acceptance of the principles.

C. G. ABBOTT PROMOTED

BOSTON, Sept. 12.—Chester G. Abbott, who had been in charge of the Maine territory for the Henley-Kimball Company of Boston, New England distributors of Hudson and Essex cars since 1915 when Fred A. Ordway left there to purchase an interest in the Boston company, is now in Boston where he has been promoted to sales manager of the entire organization. He had done so well in Maine that when there was need of a man to take charge of the expansion through the distributors signing up for 22,500 cars in the 1926 season, Mr. Abbott seemed the logical choice.

USED CAR SHOW TRIED

COLUMBUS, Sept. 12.—The Winfield S. Jewell Co., central Ohio agents for the Studebaker, has tried an innovation at the Ohio State Fair, held the first week in September at Columbus, in the form of a display of used automobiles. This is the first time that used cars have been displayed in that manner and it was expected not only to sell a number of cars but to educate the farmers on the value of reconditioned used cars. A tent to accommodate about a dozen high class used cars was erected and the display was in charge of A. E. Miller, manager of the used car department of the company. The same company had a display of new cars in the regular show building.

GRANT HEADS CAMPAIGN

CINCINNATI, Sept. 12.—R. H. Grant, vice president and general sales manager of the Chevrolet Motor Company, has come to Cincinnati to take charge of the Chevrolet campaign to sell 35,000 more automobiles in September, October and November than in the same months in 1924. Assisting Mr. Grant in the Cincinnati zone will be R. K. White, general manager of sales promotion; M. D. Douglas, regional manager, and J. H. Irwin, sales manager of the Cincinnati plant. The campaign begins officially September 1. At the sales conference to be held here there is to be an attendance of about 500 retail salesmen. The leaders in the contest are to be given a banquet by Sales Manager Irwin at which the first Chevrolet car ever built will be exhibited beside the two millionth Chevrolet car.

California Titles More Cars in First Half Than All 1924

Total Registration of Last Year Exceeded by 150,000—Los Angeles County Leads

SAN FRANCISCO, Sept. 12.—Exceeding the total registration for all of last year by approximately 150,000, a total of 1,283,821 automotive vehicles were registered in California during the first half of 1925, according to announcement at the end of August by Will H. Marsh, chief of the state motor vehicle department. This registration resulted in the collection and setting aside of $2,728,158.52 in fees during the same period for apportionment to the counties of the state, of which $2,351,821.97 will be devoted to highway work. Of the remainder so collected, $171,187.06 represents salaries paid traffic officers in the first six months of 1925, and $205,149.49 was the amount with-held to meet similar salaries coming due in the last six months of the year.

In this distribution of funds, as well as proportionately in registration, Los Angeles led the counties of the state, receiving $1,082,175.44 to be applied to its highway funds. San Francisco county came second, but a long ways behind Los Angeles, receiving $212,460.36. Alameda county was third, getting $195,788.84; Fresno, fourth, receiving $95,304.84, with San Diego almost tying the raisin belt with $95,084.50 Mono county received the smallest appropriation, only $497.30.

Total registrations for the state, as announced by Marsh, for the half year ending June 30, 1925, are: Passenger cars, $1,120,017; pneumatic-tired trucks, $158,784; solid-tired trucks, $39,974; motorcycles, $9,782.

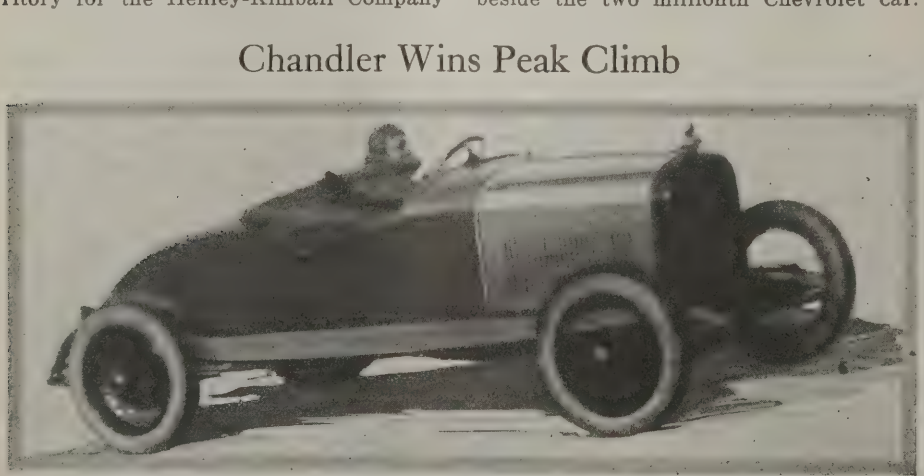
Sales reported by members of the San Francisco Motor Car Dealers' Association, the California Automotive Trades Association, and the San Francisco Automobile Trade Association indicate that total registration by the end of December, 1925, will reach well over 1,500,000 automotive vehicles of all kinds.

Passenger car sales showed a tendency to improve the last week in August, after remaining quiet throughout the month. Truck sales are slow, and will remain so, if the experience of other years persists this year, with the end of September.

STUDEBAKER DEALERS MEET

PORTLAND, Ore., Sept. 12.—To formulate plans for taking care of the deluge of Studebaker business in the Northwest and to initiate policies of far-reaching significance to the motor buying public was the purpose of a conference of Studebaker dealers and sales managers called by J. A. Snoddy here. The representatives from the Studebaker corporation who attended the conference were H. S. Vance, general sales manager; F. W. LaPierre, accountant; J. W. Helm, used car merchandising adviser; George Nicodemus, service expert, and George L. Williams of the sales department.

Chandler Wins Peak Climb



Charlie Myers in Chandler car that won annual Pike's Peak climb Labor Day

N. A. D. A. Urges Production Be Kept Within Demand

Analysis Shows Dealer Mortality Increases Directly With Unnecessary Output

St. LOUIS, Sept. 12—"Dealer profits have been more satisfactory than for several years," declares C. A. Vane, general manager of N. A. D. A. reviewing the progress of the first six months of 1925. "But they will be kept so only by manufacturers keeping production within legitimate demand.

"In 1922 when there was a 50,000 overproduction of motor cars and trucks, there was a dealer mortality of 25 per cent. In 1923 when there was an overproduction of approximately 350,000 cars and trucks the mortality rate rose to nearly 35 per cent. Last year when production was kept within bounds of sales, this mortality rate was checked being reduced to approximately 21 per cent. If the last six months of 1925 are sanely watched by all this mortality rate should be further reduced. There is no question but that over-production and dealer mortality go hand in hand."

Analysis of production and sales during the first six months of the year by N. A. D. A. shows that the United States came closer to an automobile shortage on July 1, than ever before. On that date there were approximately 10,000 new automobiles in the hands of 45,000 dealers throughout the nation, indicating that there were a greater number of dealers without new cars of any kind. At the same time there were approximately 200,000 used cars in the hands of the same dealers. In 1924 there were about 20,000 new cars in dealers' hands and approximately 300,000 used automobiles. In 1923 there were 60,000 new cars in dealers' hands and 400,000 used cars and in 1922 about 175,000 new and 400,000 used cars in dealers hands.

The period in addition to being good for the dealer was also advantageous to the manufacturers, as is shown by the tremendous increases in the net earnings of the leading producers, the gain in the stock market quotations of their shares and by the extra dividends declared by many and the swelled cash reserves with which they will go into the fall and winter months.

A. E. A. to Give Prizes for Best Window Display Photos

CHICAGO, Sept. 14.—For the third consecutive time the Automotive Equipment Association will award cash prizes again this year for the best photographs of Christmas window displays made by retail automotive merchants. In last year's contest $500 was distributed to dealers who entered the contest.

The contest this year will be conducted along the same lines as that last year. The merchandising department of the A. E. A., under the management of Arthur R. Mogge, merchandising director, will prepare literature and decorative material which will be distributed to dealers by the A. E. A. jobbers.

Details of the contest will be announced shortly and full information may be obtained by dealers from the A. E. A. or from jobbers and their salesmen.

Tourings Hold Lead Survey Shows

WASHINGTON, Sept. 12.—How many automobiles of various types are in use in the average American city?

This question has been answered here by the report of McClellan and Junkersfeld, New York engineers, conducting a comprehensive survey of the transportation facilities of the National Capital.

Touring cars predominate in Washington, there being 37,542 of this style in use. The next type in popularity is the sedan with 14,447 driven by Washingtonians. The number of other types in use is: coupes, 9,245; roadsters, 6,235 and coaches 2,693.

There are also 10,631 motor trucks in service here.

PAIGE PLANS NEW CAR

DETROIT, Sept. 12.—Distributors and dealers of Paige and Jewett lines have received information that a new car which may round out the existing lines may be expected about show time. It is thought that the new car will fit into an unoccupied place in the price scale below the present Jewett. No statement of verification is forthcoming from the home office at this time although officials stated that considerable attention is being devoted to such a move. Several experimental jobs have been on the road but the status of policies and plans for the moment does not warrant any direct statement of either denial or confirmation.

JORDAN MAKING READY

CLEVELAND, Sept. 14.—In preparation for a new car to be announced in these columns next week, the plant of the Jordan Motor Car Co. is busily engaged in tooling up for quantity production of the new model. It is understood on reliable authority that the new Jordan car will be a smaller brother of the present eight-in-line Jordan and that it probably will be the lowest priced eight on the market.

EXTRA REO DIVIDEND

LANSING, Sept. 12.—The board of directors of the Reo Motor Car Company at their recent meeting here, voted to declare an extra dividend of 3 per cent cash and a regular dividend of 2 per cent to be paid October 1 to holders of Reo stock as of September 15.

St. Louis Dealers to Try Auction Plan on Used Cars

If Venture Is Successful Firms Plan to Continue Scheme Throughout Winter

ST. LOUIS, Sept. 12.—Six members of the St. Louis Automobile Dealers' Association will hold a used car auction on each of five Saturdays starting Sept. 12 at the St. Louis County Farmers' Cooperative market, Sarah street and Laclede avenue. Should the venture prove successful it will be continued through the winter.

The names of the firms who have entered into the arrangement will not be made public in connection with the auction. It will be held under the direction of A. A. Selkirk, auctioneer. The automobile dealers will consign 10 automobiles to him each Saturday morning and if there are any left they will be driven back each Saturday night. The certificates of title will accompany each car to the auction ground and there will be representatives of two finance companies on the ground to take care of any purchasers who desire extended payment.

While the used car stocks in dealers' hands here at this time are low, lower than any time during the last five years, according to Robert E. Lee, manager of the Association, the dealers feel that they would like to go into the winter with as few used cars on hand as possible. That is the reason why the auction plan is to be tried. The dealers feel that they will be able to reach many prospects at the market who otherwise would not visit the automobile establishments.

A. E. A. Plans Resumption of "Ask 'Em to Buy" Campaign

CHICAGO, Sept. 14.—Revival and expansion of the "Ask 'Em to Buy" campaign of the Automotive Equipment Association is under consideration by the merchandising committee of the A. E. A. The success that attended this campaign when it was first introduced about three years ago leads the committee to believe that it could very profitably be made the central activity of the merchandising department for an indefinite period.

Concentration on this campaign probably would include a revision of the motion picture, "Ask 'Em to Buy," and other material used in the original effort. The campaign could be expanded to include the whole realm of automotive merchandise as well as accessories.

This subject probably will be one of the major considerations at the convention of the A. E. A. in Chicago in November.

OVERLAND DIVIDEND

TOLEDO, Sept. 12.—Directors of the Willys-Overland Co., at a meeting here yesterday, declared the regular dividend of $1.75 on the preferred stock, payable Oct. 1 to holders of record Sept. 21.

Rickenbacker Sees Smaller, Lower Automobile in Future

Manufacturer Believes Balloon Tires Eventually Will Take Place of Springs

ST. LOUIS, Sept. 12.—What of the motor car of the future? Capt. E. V. Rickenbacker, vice-president of the Rickenbacker Automobile Co., was asked this on his visit to St. Louis last week to help launch the Rickenbacker St. Louis Co., new distributors of the Rickenbacker car in St. Louis territory.

"Well," said Rickenbacker, "first you must bear in mind how rapidly we are building more and better smooth roads, and how congestion and traffic problems are multiplying. There is no longer any reason why an automobile should take up the space used by 20 people to carry an average of three. Therefore, it is obvious that cars must grow smaller, shorter, lighter and more economical of gasoline and oil. Engines must become steadily smaller and more efficient.

"What I am now going to say is in no sense a foreshadowing of the Rickenbacker factory plans. It is merely an attempt to visualize the car that is to come in the next five or ten years.

"I believe that springs will be eliminated, as also will be the overhang of a car front and rear.

"There are two sources of riding comfort—natural and mechanical. The natural source is air, the mechanical is springs. Air is the proper cushion for an automobile, not springs. We have good roads that are growing better, and balloon tires. Why not center our efforts for comfort in the balloon tire? Why not make it bigger in cross section and smaller in diameter? This would mean doing away with wheels, which would become drums for the brakes. With the roads we will have in five or ten years, road clearance of four inches or so will be sufficient, making the small thick balloons practicable. Then the frame can be hung directly from the axles.

"The body can be built out so as to overhang these small tires, and the tread can be narrowed to, say, 40 to 46 inches, and still the car can carry as many passengers as the large cars of today.

"The trend toward such cars, it seems to me, is natural, being forced by the logic of events. The number of cars operating over our roads is rapidly increasing. It is entirely possible that some day we may have as many as 30,000,000 of them. This will mean more roads, increased property values, greater congestion in population centers, larger consumption of gasoline and oil. Space and expense must be economized.

"The demand for small, compact, economically operated cars is beginning to be felt. It will be felt with increasing strength until it has resulted in a complete change in automobiles."

GRAHAM OUTPUT HEAVY

DETROIT, Mich., Sept. 12.—Official figures have been released showing that 10,800 Graham Bros. trucks have been shipped for the first half of 1925. This equals their entire 1924 output. The daily production of Graham Bros. trucks is 40 per cent higher at present than in January and according to factory officials is being further increased to supply the demand. Retail deliveries during June and July have held up to the record deliveries established during March and April.

RADIO DEALERS BANQUET

BOSTON, Sept. 12.—Frank Murray, general manager for the Post & Lester Company's Boston headquarters, was host here at a dinner held at the Hotel Brunswick, attended by the sales department of the organization and 137 distributors of radio operating under the company.

While primarily a radio dinner with Alex Eisemann, treasurer, and Paul Connel, advertising manager, of the Freed-Eisemann Radio Corporation of New York as the special guests, merchandising topics came up regarding motor sales in a general way, and the adaptation of radio to the motor accessory dealer's line. Vice President J. D. Tarcher, of Homans, Tarcher & Connell, and Sales Manager W. C. Chandler, of Post & Lester, were also present. Mr. Eisemann gave the principal address.

Old Ford Dealer Firm Gives Up Franchise for Chevrolet

CHARLOTTE, N. C., Sept. 12.—One of the most surprising announcements in the history of the automotive industry of this section was that in which the Pyramid Motor Company, oldest Ford dealer in this city and one of the oldest in the Carolinas, announced it had surrendered its contract with the Ford Motor Company and had closed a contract for the Chevrolet dealership for Mecklenburg county. This company moved a few months ago into its $250,000 building here. Fred Anderson is president of this company.

The Chevrolet line has not been represented in this county by a dealer during the last year or more and representatives of the Chevrolet factory at the branch here explained this was due to the large investment required to meet the terms of the Mecklenburg county dealer contract.

Whether the branch of the Ford Motor Company here will name a dealer to succeed the Pyramid Motor Company remained speculative, as no announcement was forthcoming from Ford officials. Two Ford-Lincoln dealers are now in business here.

GAS TAX EXCEEDS ESTIMATE

LOUISVILLE, Sept. 12.—Kentucky motorists have paid a total of $3,003,100.08 as gasoline tax in Kentucky for the year ending June 30, 1925. The tax is three cents. This amount exceeded the original estimate by $500,000. The biggest month of the year was June, 1925, when collections totaled $295,918.76.

Dealer Net Profits Show Slight Increase in 1924

N. A. D. A. Figures Reveal Average Profit is 3.4 Per Cent of Sales Volume

ST. LOUIS, Sept. 12.—Automobile dealer net profits showed an increase of four-tenths of 1 per cent, as a national average for 1924, in an announcement of the National Automobile Dealers Association. This increase in net profit, was due almost entirely to the reduction in used car losses in 1924. In affecting this increase in the total net profit, it was noticeable that the cost of doing business had risen over the level of 1923.

Closer buying of used cars, a greater knowledge of the used car market, a longer time and greater expense in selling new cars, an increase in advertising costs, all were a part of the increased cost of making car sales. The consequent reduction in used car losses had the substantial result of increasing net profits.

The average net profit actually recorded for all automobile dealers in 1924 was 3.4 per cent on the total sales volume. This is compared with 3 per cent recorded in 1923 which was an increase over 1922. The amount of net profit which the automobile dealer earns on his total sales volume has been very much inflated in the public mind, national association executives assert. For more than three years the national association has been carrying on a consistent effort to arouse the automobile business to the necessity for the automobile dealer to realize a 5 per cent net profit on his sales volume, in order to justify good business men remaining in the automobile retail business.

In one certain line of automobiles, at which the public looked as one of immense profit for the dealers, only 10 dealers made a net profit equal to 5 per cent in 1923. In 1924 that line had 41 dealers with a net profit up to the 5 per cent goal. That line of cars has more than 1,000 dealers.

Used car losses in 1923 were equal to 9 cents per dollar of car sales volume. This was reduced to 8.2 cents per dollar of car sales volume for 1924.

VELIE WORKING NIGHTS

MOLINE, Sept. 12.—Working two nights a week until 9 and Saturday afternoons until 4 the Velie Motors Corporation is endeavoring to catch up on its back orders. Output continues at better than 50 cars daily and September shipments will surpass those of the same month a year ago, when more than 700 cars were sent out. The E. H. Wilson Manufacturing Company, formerly the Moline Body Corporation, continues turning out about 50 bodies daily for the Velie Motors Corporation besides supplying several other automobile shops in the east. Several departments are working nights.

Leading Tire Firms Show Big Increases in Earnings

First Eight Months of 1925 Better Than All of 1924, Figures Reveal

AKRON, O., Sept. 12.—Earnings of the leading tire and rubber companies during the first eight months of the year already have exceeded those of the entire year of 1924. For this reason, business in the last four months of 1925 could fall off 50 per cent or more and still run far ahead of the previous year.

Authorities in the industry such as E. G. Wilmer, chairman of the board of the Goodyear Tire & Rubber Co., and B. G. Work, president of the B. F. Goodrich Co., express the opinion that business of the rubber companies in the last half of the year will be less than it was in the first half.

There is certain to be a sufficient return, however, to bring this year's total income of the well established concerns well above that of 1924, which means that 1925 will be the best year the industry has enjoyed since the depression of 1920. 1920.

Goodyear's net income in the first half year was $9,011,407, compared with $4,173,120 for the first six months of 1924. Net profits of Goodrich were $7,710,000 for the first half year, against $2,755,617 in the same period of 1924. A gain of $1,000,000 was reported in sales volume.

Net earnings of the United States Rubber Co. for the six months ended June 30, 1925, were $5,875,204, against $4,422,487 reported in the first half of 1924. This report did not include income from the plantation companies operated by United States, which made large earnings, due to the rise in crude rubber prices.

A recent report of the Miller Rubber Co. for the first half year shows net earnings of $2,048,343, after taxes and interest, compared with $2,216,878 for the entire year of 1924.

Profits available for the common stock were $32.81 a share, against $29.52 for all of 1924, $25.37 for 1923 and $32.63 for 1922.

On the basis of business in July and August, the majority of rubber and tire companies probably will report sales and earnings during the third quarter almost as large, if not equal to the record breaking second quarter.

Original equipment business, which declined somewhat during July and the first part of August, is showing an increase, due to greater sales of new automobiles, following announcement of price cuts and the bringing out of new models.

NEW LOCOMOBILE DEALERS

BRIDGEPORT, Conn., Sept. 12.—The Locomobile Company of America, Inc., announces the appointment of the following dealers to handle the new Junior Eight car, deliveries of which are now being made by the factory at the rate of 25 daily:

Ernest W. Taylor, Auburn, Me.; North Shore Locomobile Company, Huntington, Long Island, N. Y.; Union Square Locomobile Company, Cleveland, O.; Hoffman Motor Company, Bethlehem, Pa.; Victor H. Pontiere, Inc., Ocean City, N. J.; Anderson Motor Company, Malden, Mass.; Peabody Garage, Peabody, Mass.; Walter B. Reichardt, Yonkers, N. Y.; Morris Motor Car Co., Jersey City, N. J.; Santa Rosa Locomobile Sales Co., Santa Rosa, Cal.; The Ocean County Locomobile Co., Seaside Park, N. J.; Wagner and Bertrand Company, Springfield, Mass.; Central Florida Motor Co., Arcadia, Fla.; Palatka Nash Motor Co., Palatka, Fla.

New Stutz Vice President



Col. Edgar S. Gorrell, who has resigned as vice president of Marmon to accept vice presidency of Stutz Motor Car Co. of America

Nash Sales Inc. Is New Northern Distributing Co.

MILWAUKEE, Sept. 12.—One of the most important changes in the automotive distributing field of the Middle West in several years is represented by the incorporation of Nash Sales, Inc., Milwaukee, with a capital stock of $500,000, to take over the distribution of the Nash and Ajax in Wisconsin, upper Michigan and a part of Minnesota. Rudolf Hokanson, vice president and general manager of the same territory for the Nash Sales Co., the largest distributing organization connected with the Nash Motors Co., is president of the new company.

M. W. Libhart, who has been serving under Mr. Hokanson in the old organization as wholesale sales manager, becomes vice president and general sales manager, and E. J. Thelen, retail sales manager, has been elected secretary of the new corporation, and will continue in charge of Milwaukee retail sales. The sales organization for the entire territory embraces eighteen dealers in the Milwaukee metropolitan district and more than 150 dealers in Wisconsin, upper Michigan and that part of Minnesota included in the territory.

Details of Big M. & A. M. A. Montreal Meeting Arranged

Many Prominent Industrialists to Speak at Session Oct. 7-10

NEW YORK, Sept. 12.—Additional details of the plans for the convention of the Motor and Accessory Manufacturers Association at Montreal, Oct. 7-10, were made known this week by the program committee.

Francis H. Sisson, vice-president of the Guaranty Trust Co., will talk on "The World Outlook for Business," R. W. Procter, sales manager of the Black & Decker Manufacturing Co., will discuss "Making the Jobber a Partner in the Selling Enterprise," and J. H. Barber, Walworth Manufacturing Co., will speak on "Maintaining Turnover on a 20,000 Item Line."

Chairman of the various sessions include E. P. Chalfant, Gill Manufacturing Co., president of the association; L. A. Safford, vice president of the McQuay-Norris Manufacturing Co.; E. V. Hennecke, vice president of the Moto-Meter Co.; R. E. Hayslett, treasurer of the Hydraulic Steel Co.; J. F. Hennessey, general manager of the Phinney-Walker Co.

The program committee has voted to waive the usual $10 registration fee and is urging executives to bring as many of their department heads as possible. The sessions will be held at the Mount Royal Hotel, where the delegates will be welcomed by Mayor Charles Duquette of Montreal. Local tours and entertainments will be given with the co-operation of the Montreal Automotive Jobbers' Association, headed by M. W. Drayton of the Canadian Fairbanks-Morse Co.

Chrysler Transfers Parts Factory to Dayton, Ohio

DETROIT, Sept. 12.—Transfer of the parts plant of the Chrysler Corporation from Newcastle, Ind., to Dayton, O., has been announced by the company through J. E. Fields, vice-president in charge of sales. In the future all replacement parts for the Chrysler four and six, the Maxwell and Chalmers will be marketed from the Dayton plant, all the service parts manufacturing equipment having been transferred.

The change was made possible through placing the closed body work with the Fisher Body Corporation, releasing the buildings at Dayton in which this work was formerly done. The buildings at Newcastle have been turned over to the production department, adding 150,000 more square feet to that department. Approximately 300,000 square feet has been acquired at Dayton.

The transfer of the parts and service activities to Dayton were accomplished under the direction of John Squires, director of service of the Chrysler Corporation.

Along Automobile Row

CHARLOTTE, N. C.—Purchase of the McGlamery Auto Company, of Greensboro, N. C., by the Wiggins Motor Company, also of that city, for $100,000 was reported in press dispatches received here. The McGlamery Company is a dealer in Ford and Lincoln motor cars. J. M. Wiggins will be manager of the company hereafter. He formerly was connected with the City Motor Company, of Winston Salem, N. C., and recently was a Ford dealer at Apex N. C.

ROCKFORD, Ill.—Work is under way on J. Frank Deuel's new garage which is to be occupied early in November by Paul Thinker, who has secured the Pierce-Arrow agency here. Mr. Thinker was formerly with the Rockford Packard agency.

ASHLAND, Ore.—Harrison Brothers, who for several years past have had the Ford agency, have announced that they have cancelled their contract with that firm. Their future plans have as yet not been announced.

POPLAR BLUFF, Mo.—Charles F. Rickman, and Lawrence Cornell have accepted the agency for the Cleveland automobile and will open their garage and salesroom in the Berryman-Kennedy building. The company will be known as the Rickman Motor Sales.

SIOUX CITY, Ia.—Roy S. Potter, service manager for the Overland and Willys-Knight Motor Company several years, has succeeded W. L. Sloan as retail sales manager. Mr. Sloan will engage in business in Florida. Harry Spring, shop foreman, has been advanced to service department head.

PEORIA, Ill.—The Nelson-Wood Company, one of the best known automobile concerns in this section of the state, has taken the Peoria territory for the Marmon cars and is showing a line of late models.

LOS ANGELES.—The Locomobile Company of California announces the appointment of Roberts Motors to represent the Locomobile in Long Beach. D. W. Roberts, the Long Beach dealer, has been engaged in automotive selling here and in the Middle West for many years.

MILWAUKEE.—J. Frank Mitchell, Inc., is a new Milwaukee concern with headquarters at 636-640 Lincoln avenue, which has been granted an Overland and Willys-Knight franchise as a community dealer operating under the factory branch of Willys-Overland, Inc., Milwaukee.

ST. LOUIS.—St. Louis County Auto Co., 7915-19 Forsyth boulevard has been appointed a Nash dealer by Southwest Nash Co., St. Louis distributors. Harry V. S. Grover is president of the St. Louis County Auto Co.

COLUMBUS, O.—The Ohio Motors Co., central Ohio distributors for the Overland and Willys-Knight lines will soon move into a new building on Fifth street near Broad street, which will contain the salesrooms and service station.

BATON ROUGE, La.—The Reeds-Watson Motor Company, dealers in Essex and Hudson cars, is the newest automobile agency in Baton Rouge, opening recently on Laurel street. The members of the firm are E. C. and C. E. Reeds of Fulton, Ky., and J. S. Watson, who for fourteen months was in charge of sales at the Nash Motor Company in New Orleans.

DETROIT.—As part of an expansion program being conducted by George E. Clarks, Willys-Overland manager in Detroit, the company has announced the opening of another retail store at the corner of Jefferson and Gray avenues. Harold Perkins is manager of the new store and will have twelve salesmen working under his direction.

SIDNEY, O.—The W. P. Murray Sales Co. is the name of a new concern of this city incorporated for $50,000 by H. P. Murray, W. P. Anderson, Ward Cartright, Harry McClelland and Royon G. Hess to deal in new and used motor vehicles and operates a garage for service and storage.

ST. LOUIS.—J. M. Lederer & Co., Willys-Knight and Overland dealer will move into new quarters at 3128 Locust street, formerly occupied by the De Luxe Automobile Co., Oldsmobile distributors here now located across the street.

MILWAUKEE.—The White Co., Cleveland, has established a direct factory branch in Milwaukee at 671 Kinnickinnic avenue, in the sales and service building until now occupied by the Wisconsin White Co., pending erection of a new headquarters. T. C. Phillips has been appointed branch manager.

AURORA, Ill.—The Nash-Ajax Motor Car Company has been organized here and has opened a garage and sales agency. It is proposed to distribute several lines of motor cars, handle accessories and also do a general repair and storage business.

ST. LOUIS.—C. A. Welling Co. has been organized and authorized by the Moon Motor Car Co. to handle Moon and Diana cars at its establishment in Webster Groves, Mo. Conrad A. Welling who is head of the Welling Company has been in the automobile field in St. Louis, since 1910.

GREENSBORO, N. C.—Gate City Motor Company has taken on local distribution of Chrysler motor cars.

TOLEDO.—The United Automobile Service League, Inc., 955 Spitzer Building, has been incorporated with an authorized capital of $10,000 to render service to motorists. Incorporators are Louis and Howard H. Jacobson, Phillips E. Cramer, Louis C. Wassmus and Charles F. Redle.

NEW ORLEANS.—The New Orleans Buick, Inc., has established a new downtown showroom and service branch at 635 North Rampart street.

FOND DU LAC, Wis.—Robert Phinney, formerly engaged in the tire and equipment business in Milwaukee, but for the last year a city motorcycle policeman in Fond du Lac, has purchased the E. Eugene Raymer Sales & Service Station and takes over the Chandler and Cleveland franchise. Mr. Raymer retires from the trade after eleven years to give his entire time to new duties as president and general manager of the White House Crooker Co., Fond du Lac.

OAKLAND, Cal.—Increase in business since the end of June has compelled the Howard Automobile Company, Buick dealer here, to add four salesmen to their staff, according to announcement by William Kearns, manager of the Oakland store. The new men are W. J. Bondy, J. M. French, William Wood and P. L. Reppert.

TOLEDO.—The Bliss Motor Sales Co., Hudson-Essex distributors in the Toledo territory, have announced the opening of a new branch dealer at 1936 Broadway under control of the Leydorf-Barrata Co., which also operated a branch in West Toledo. E. H. Leydorf and A. C. Barrata are members of the firm. They will continue their former branch as a service station.

NEW ORLEANS.—The Coci Motor Co. Inc., Star and Durant dealers, has opened at 619-621 North Rampart street, New Orleans, with Joseph Coci, president.

ST. LOUIS.—St. Louis Auto Sales Co., Oakland dealer, has purchased a two-story brick building at 4036-38 Easton avenue, which it will occupy when it is remodeled. William Schrieber is president of the company.

DETROIT.—H. A. Schmid Company has taken over new Nash quarters at the corner of Gratiot avenue and Glenfield, Detroit. H. A. Schmid, president of the company is one of the veterans among Detroit automobile men having been connected with the industry for the past 18 years.

AURORA, Ill.—The Nash-Ajax company of Plano, Ill., incorporated with $15,000 capital will establish an agency in this city, succeeding the Coats garage. Howard Dewey is president; Paul Cornell and Louis C. Oleson members of the firm.

MADISON, Wis.—The Smart Motor Car 601 University avenue, Madison, Wis., has been appointed Paige and Jewett dealer.

CLEVELAND, O.—Sam's Auto Accessories, Inc., is the name of a new Cleveland concern, recently capitalized at $10,000 to deal in auto tires and accessories.

PORTLAND, Ore.—J. O. Fisher with the Braley & Graham Company, Dodge dealers has left for Marshfield, Ore., where he has taken over the Dodge franchise, which was formerly handled by L. H. Pierce. Mr. Fisher is the third salesman to get a franchise after serving with Bradley & Graham. H. C. Braley went to Centralia, Wash., and C. S. Eakin to Medford, Ore.

CHICAGO.—J. Toman, Auburn dealer of Oak Park, has opened an Auburn salesroom at 6037 Cottage Grove avenue. He will retain his Auburn account in the west side suburb, however.

ST. LOUIS.—R. J. Smith who has been connected with the distribution of the products of the Durant Motors Inc., has been appointed manager of the St. Louis Durant Co., the factory branch handling the Durant and Star lines here. The Company is located at 3205 Locust street.

COLUMBUS, O.—George Linge, formerly salesmanager of the H. B. Tait Auto Co., has been made manager of Flint branch in Columbus, 184 East Long street.

SHREVEPORT.—The Overland-Louisiana Company, formerly of 213 Travis street, Shreveport, has moved into its new home in Agurs, across the Market street bridge.

CHARLOTTE, N. C.—The Upchurch Motor Company of Greenville, S. C., has taken over the Studebaker agency here. The concern will be located in the West Trade Street Building formerly occupied by C. C. Coddington, Inc. The Rust Motor Company was formerly distributor for this company here.

AURORA, Ill.—Charles Leek has taken over the management of the Aurora Buick Motor Car Company, succeeding R. K. Hitchens who enters the service of the Northwest Buick Company of Chicago. Leek plans to enlarge the Buick service station and sales agency quarters here and will make a number of improvements during the fall.

MADISON, Wis.—H. E. Klein and W. H. Koch, formerly salesmen for the Madison Nash Co., have formed a partnership to become Chandler and Cleveland dealers in Madison, with sales and service headquarters at 515 University avenue.

CLEVELAND, O.—The Gates Ignition and Battery Service Co., has been incorporated with a capital of five shares, no par value designated, to repair ignition and storage batteries.

NEW ORLEANS.—New Orleans first big storage garage, Clark's Strand Garage at the corner of Gravier and Dryades streets, has opened. It is six stories in height and modern in every way.

AKRON.—The General Tire & Rubber Co., has been chartered with a $10,000 capital to do a general agency and commission business in automobile tires.

ST. LOUIS.—The Lambert-Graves Motor Company, Ford and Lincoln dealer, has broken ground for the erection of the company's third large building, to be erected directly behind the present Ford building.

MOLINE.—Agency for the Hudson and Essex automobiles has been taken by William M. McMullen of the McMullen Sales & Service Co.

DETROIT.—Leo A. Kelly one of the "oldtimers" on Detroit's automobile row has returned and is now connected with the Detroit branch of the Studebaker Corporation of America, C. A. Whittaker, retail manager has announced.

COLUMBUS, O.—The Lostro Auto Sales Co., Columbus, has taken the central Ohio agency for the Marmon.

With the Associations

Oregon Dealers Act

MARSHFIELD, Ore., Sept. 12.—The following resolution on the used car question has been adopted by the Automobile Dealers' Association of Coos and Curry County:

Whereas, the problem of trade-ins of used cars is becoming more and more serious with the seller of new cars, and,

Whereas, no satisfactory solution has yet been devised for meeting this economic problem, and,

Whereas, the dealer in new cars is at the mercy of unscrupulous competition; the prospect with a trade-in; overstocking of used cars; inflated appraisals of trade-ins by competitors; additional overhead necessary to handle trade-ins.

Whereas, the forced creation of used car markets would result from an ironclad policy on the part of manufacturers forbidding the barter and sale of used cars by dealers in new cars, be it therefore

Resolved, that the Automobile Dealers Association of Coos and Curry Counties in the State of Oregon go on record as favoring the formation of such a policy by the manufacturers, that a copy of this resolution be sent to the Automobile Chamber of Commerce, the Portland Automobile Dealers' Association, the National Automobile Dealers' Association, *Motor* and MOTOR AGE, and a copy spread upon the minutes of this meeting.

The president of the Association is Walter A. Guyer and the secretary is Robert C. Dillard. Other members of the Resolutions Committee are C. E. Smith and E. W. Barnum.

Faeh Heads Ohio Council

COLUMBUS, O., Sept. 12.—A. C. Faeh, who has been selected secretary of the Ohio Council, National Automobile Dealers' Association, which supercedes the Ohio Automotive Trade Association has established his office in the Majestic Theater Building. He has had extensive experience in organization circles, having been in charge of several large automobile shows. He is also an expert advertising man in automobile matters.

Sioux City to Have Show

SIOUX CITY, IA., Sept. 12.—The Motor Trade bureau of the Sioux City Chamber of Commerce is planning one of the largest automobile shows it has ever handled in connection with the Interstate Fair here Sept. 20-25. Already 25 dealers have applied for space in the newly decorated automobile building and many of them are negotiating with their factory chiefs for the display of the newest and most exclusive models. It is expected that at least 65 cars will be shown. Ryal Miller, president of the bureau, is handling the preliminary arrangements.

Tire Dealers Plan Details

NEW YORK, Sept. 12.—New arrangements have been made in connection with the annual meeting of the National Tire Dealers' Association at St. Louis, Nov. 17-19, it is announced by George J. Burger, president of the association.

The official meeting place and the official hotel will be the Hotel Chase in St. Louis. On the morning of November 17, registration will be at the Southeast Lounge of the hotel. The same day in the ball room, there will be a meeting of the board of directors and convention committee. In the Palm Room, there will be a general session.

On November 18, there will be a general meeting in the Palm Room and a banquet in the same place at 7:30 p. m. The general session and banquet will again be held Thursday, November 18 in the same room.

Cincinnati Plans Show

CINCINNATI, Sept. 12.—The 1926 automobile show will be January 16-23 at the Cincinnati Music Hall according to the announcement made today by Harry T. Gardner, manager of the Cincinnati Auto Dealers' Association. Many new features will be introduced and the display of cars will be larger and better than at any previous show.

Ask Excise Repeal

CHARLOTTE, N. C., Sept. 12.—Passage of a resolution, urging removal by Congress of the wartime excise tax on automotive parts and units featured a weekly meeting of the Charlotte Automotive Service Association. Tom McP. Glasgow, member of this association and president of the Southern Automotive Jobbers' Association, presented the resolution.

Memphis Exhibit Planned

MEMPHIS, Sept. 12. — The Memphis Automobile Dealers' Association, of which Ray R. Price is president, will conduct a show in connection with the Tri-State Fair, Memphis, Sept. 26 to Oct. 3. All of the Memphis dealers and distributors are now busy with plans for special displays. Closed cars will dominate the exhibit this season. Mechanical betterment will have an important part in the exhibit. Several displays of mechanical units will be made.

Des Moines Tradesmen Picnic

DES MOINES, Ia., Sept. 12.—The annual picnic of the motor trades bureau of the Chamber of Commerce, was held at Coney Island Park. All automotive establishments of the city were closed during the afternoon of the picnic. A well planned program of amusement was arranged by C. E. Van Vliet, secretary of the bureau.

Southern N. A. D. A. Meetings

MOBILE, ALA., Sept. 12.—The automotive committee of the Mobile Chamber of Commerce has sent invitations to dealers representing all branches of the automotive industry in South Alabama and adjacent territory to attend the Automobile Congress of the National Automobile Dealers' Association to be held in the city of Nov. 5, and indications are that the congress will bring together several hundred dealers from this territory.

On Nov. 4 the association will have a similar congress at Birmingham, Ala., and the Chamber of Commerce of that city also is sending invitations to all dealers and distributors in the Birmingham territory to attend. After the meeting at Mobile Nov. 5 the congress will move on to New Orleans where a similar meeting will be held Nov. 6.

The plans of the congress for all three of the above cities call for a thorough discussion of management, sales, maintenance, and similar subjects, particular attention to be given to the used car problem and the successful and profitable marketing of used car merchandise. Expert speakers will be heard at all of the meetings.

New Denver Association

DENVER, Sept. 12.—The Denver Automobile Dealers' Association, Tom Brader, secretary-treasurer, is located in the B. K. Sweeney Block on Broadway, and is limited to a membership of 30, with a present membership of 28. Besides looking after the general interests of the trade in this city, it publishes a monthly bulletin of factory and Denver prices of all cars handled in Denver, holds luncheons every two weeks at the Brown Palace Hotel and furnishes its members with what is in effect a local Blue Book on used cars each month.

All agencies report their used car sales, with data on model, year, price, and condition of car. These reports are condensed into one bulletin which goes back to the members.

In addition to the above service, the association has a secret advertising committee, which passes on all classes of advertising for its members, and either approve or leaves the soliciting medium "unapproved," in which case the members are not allowed to use the "unapproved medium," and are relieved of the responsibility of explanations.

Membership in this association is by invitation only, and names of candidates must pass through a membership committee before coming before the association.

The Secretary, in addition to his duties in the association is traffic manager for fourteen of the largest dealers in this city.

Coming Motor Events

Automobile Shows

Dallas, Tex.—Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

Fresno, Cal.—Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Oklahoma City, Okla.—Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Shreveport, La.—Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York—Nov. 15-21
Twenty-first Annual Automobile Salon.

Chicago—Oct. 10-17
Seventh annual Used Automobile Show under auspices of Chicago Automobile Trade Association, at Coliseum.

Chicago—Nov. 5-7
Annual show in connection with convention of National Standard Parts Association, Coliseum.

Chicago—Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Boston—Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Danbury, Conn.—Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Chicago—Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City—Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Boston—Oct. 12-17
Annual radio show in Mechanics' Building. Shelton Fairbanks, manager.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Louisville, Ky.—Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Races

Charlotte, N. C.—Nov. 11
Fresno, Cal.—Oct. 3
Los Angeles, Cal.—Nov. 26
Rockingham (Salem, N. H.)—Oct. 17
Baltimore—Oct. 24

Conventions

Buenos Aires, Argentine—Oct. 3-13
Pan-American Road Congress.

Des Moines, Ia.—Nov. 12-13
Automotive Merchants' Association Convention.

Montreal, Que.—Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Pittsburgh, Pa.—Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis—Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Montreal—Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Foreign Shows

Berlin, Germany—Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina—Oct. 3-13
Pan-American Road Congress.

London, England—Oct. 8-17
Olympia Passenger Car Show.

London, England—Oct. 29-Nov. 7
Annual Truck Show.

Goodyear Official Sees No Tire Price Drop in 1925

AKRON, O., Sept. 12.—There is little hope of a decline in tire prices during 1925, despite a drop of about 40 cents in the crude rubber market since July, according to the statement issued today by L. C. Rockhill, sales manager of the Goodyear Tire & Rubber Co.

The reason is, that tire prices have never gone up in proportion to the spectacular rise in the cost of crude rubber, he points out, and present tire prices are based on rubber values considerably under the present market.

"Although rubber reached $1.21 a pound in July, this had practically nothing to do with present tire prices, because very little rubber was bought by important manufacturers at this price," he states. "If rubber at this cost had entered into porduction of tires, tire prices would be a lot higher than they are now."

Detroit to Be Placed on Air Mail Line, Says New

DETROIT, Sept. 12.—Detroit is to be included in the itinerary of the air mail service planes, Postmaster General Harry S. New has assured local post-office officials after a conference with Henry Ford in which the subject of the airmail was thoroughly discussed.

But as for Mr. Ford building the planes that would carry the mail or the Ford planes now operating between Cleveland, Chicago and Detroit, Mr. New said that no agreement had been reached. Under the law Mr. New said that Mr. Ford would have to engage in competitive bidding before his planes could carry the mail. In the past it has been against the policy of the Ford company to sell air transportation under any consideration.

"In my conference with Mr. Ford and other officials of the Ford Motor Company, we discussed the need of an airmail service for Detroit," said Mr. New. "Mr. Ford was enthusiastic over the project and I am convinced that he will lend his aid to our plans for this city a reality."

Swearingen Joins Staff of Motor World Wholesale

NEW YORK, Sept. 12.—Charles C. Swearingen, for 15 years a contributor to Motor World has joined the Motor World Wholesale staff as managing editor. His activities in the automotive industry date back to 1910 when he organized the automobile department of the Louisville Courier-Journal and became the Louisville correspondent for the Class Journal papers.

His automobile section created much favorable comment in trade circles not only in the Blue Grass State, but throughout the country. He has been a familiar visitor at many of the larger automobile shows and other automotive gatherings for many years through which he has accumulated a wide acquaintance with automobile men and a broad understanding of their interests and problems.

Mr. Swearingen's appointment fills the vacancy on Motor World Wholesale headquarters staff caused by the resignation of Ralph Schrenkeisen, who has joined the Commerical Investment Trust Co., at New York headquarters, in an educational and merchandising capacity. Mr. Schrenkeisen's articles for distributors and distributor salesmen will continue to appear from time to time in Motor World Wholesale.

NEW CADILLAC DEALERS

DETROIT, Sept. 12.—New dealers added to the organization of the Cadillac Motor Car Co. include:

B. & C. Auto Co., Athens, Ga.; O. L. Darwin, Eau Claire, Wis.; McDermoth Motor Co., Inc., Brownsville, Tex.; Greenville Buick Co., Greenville, Miss.; Hammond Jones, Lakeland, Fla.; Oakland-Perrin Company, Mankato, Minn.; Roodhouse Motor Company, Okmulgee, Okla.; Edward J. Lawrence, Prescott, Ariz.

BRITISH SUBSIDIZE CABS

WASHINGTON, Sept. 12.—The English House of Commons, under the Trade Facilities Act, has decided to grant an advance or guarantee of £365,000 to the Beardmore people to enable them to construct and place on the streets of London approximately 750 new taxicabs, the automotive division of the Department of Commerce is informed. The taxicabs are to meet the annual normal wastage of about 500 cabs per year, and it is stated this aid was granted because, without it, the orders for the cabs, which are urgently needed, would have gone to French, Italian and American firms.

Engineer Blames Poor Light, Not Glare, for Most Mishaps

Three Times as Many Accidents Result From Insufficient Illumination, DeVine Says

DETROIT, Sept. 15. — Insufficient illumination ahead of the driver is the cause of three automobile accidents at night for every one caused by glare, according to Alfred W. DeVine, Boston, engineer for the Massachusetts Registry of Motor Vehicles. Mr. DeVine addressed the opening session of the nineteenth annual convention of the Illuminating Engineering Society, at Hotel Statler here. The first meeting was devoted entirely to the problems of automobile lighting and the place of light in controlling traffic.

"Glare cannot be entirely eliminated," Mr. DeVine said, "but the need for controlling glare should not be overlooked.

"A survey made in Massachusetts of several hundred fatal accidents with automobiles showed that insufficient illumination ahead was the cause of three times as many night accidents as was glare. These results have been confirmed by the experiences of many seasoned observers.

"Glare is not often unusually dangerous if the operator adjusts his head lamps to secure relatively concentrated beam directed below the horizontal, keeps his windshield clean and uses a curtain in the back of the car to prevent reflection of light into his eye from other cars approaching from the rear. If these precautions are taken, and the operator is careful to refrain from looking directly into the headlamps of approaching cars, he will, except in a few extreme cases, be able to see any object on the roadway ahead in time to avoid it."

Good illumination and glare are interlinked, DeVine pointed out, and may not be separated from each other in any consideration of the subject because good illumination may result in glare and glare may render good illumination almost useless.

An ideal beam of light, as described by Mr. DeVine, "should be properly directed so as to strike the road surface where wanted under average conditions." The light, he emphasized should be uniform in intensity.

Many Sales Mark Show Held With Indiana Fair

INDIANAPOLIS, Sept. 12. — Good wholesale and retail business marks the automobile show held as a part of the Indiana State Fair which began Sept. 7, and ran to the end of the week. Eighteen distributors and branches exhibited about 100 new models at the show and several truck and body makers and a score of accessory and supply houses were represented in the affair.

There is a big demand not only from the public but from dealers of the state for more of the popular lines than the makers seem able to send into Indiana right now. A large number of distributors and branches report orders and sales far ahead of deliveries and a prospect for a continued good business through the entire fall.

Nearly all exhibitors report that a large number of dealers from out the state have visited the show and many of them have already started negotiations for new and added lines for the fall and next season. Some newer distributors whose state organizations are not yet complete report much better dealer interest than they had anticipated.

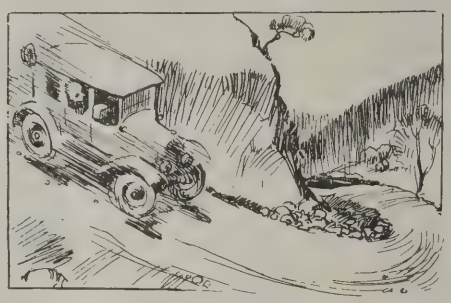
Indiana automotive dealers over the state are going into radio more generally than last year, according to three accessory and equipment jobbers who have devoted their entire show space to radio. Many new dealers have been signed up by each firm, it is reported and an unusual business in this department is expected.

FEDERAL NAMES ELLIS

OAKLAND, CAL., Sept. 12.—E. E. Ellis has been appointed manager of the Oakland branch of the Federal Motor Truck Company, according to announcement of that corporation.

SQUEEKS and RATTLES

EXPECTED



Passenger: "Driver! Driver! Have you lost your senses?"

Taxi Driver: "Not yet, but I reckon I will at the next turn—my brakes have gone flooie."

—Passing Show

"The new Dodge coupe has been approved by the Y. W. C. A. The stop light is inside."

—Greenwich Village Follies.

A boy has made a radio set from a peanut. It no doubt reproduces political speeches with pitiless accuracy.

—San Diego Union.

The Cry Today

"Is this Stratford?"

"Yes, sir. And Shakespeare's home—"

"I'm looking for a service station."

—Louisville Courier Journal.

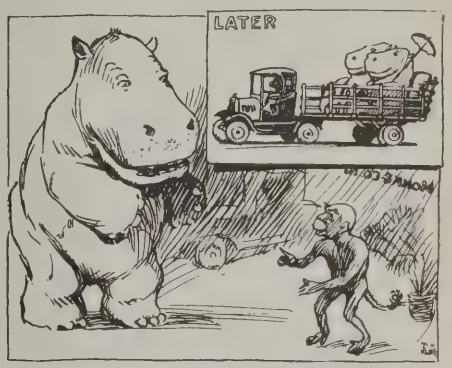
Why Police Leave Home

"What are you doing there?" asked a policeman of a woman who had stopped her automobile near a corner, and was preparing to alight.

"Parking my car," she replied. "I thought this would be a good place. The sign there reads 'Safety Zone.'"

—Golden Circle

SALES DIFFICULTIES



Hippo: I'm looking for a smart little two-seater.

Salesman Monk: I have just the thing —Classy little limousine with chauffeur's box.

A Western plane traveled ninety miles on a cargo of vegetable fuel. At that rate it won't be long before the soft drink joints can qualify as aerial filling stations.

—Buffalo Express.

Exhibitors at Iowa Fair Report Number of Sales

DES MOINES, IA., Sept. 12. — Many sales were reported by automobile exhibitors showing at the Iowa State Fair which closed here last week. According to C. E. Van Vliet, manager of the automobile section, thirty-one different makes of car and trucks were exhibited at Machinery Hall.

This year's attendance at the fair was greater than at any previous fair, exceeding the attendance in 1919, when a record was set. The better financial condition of the state was responsible for the increased number of visitors, according to fair officials.

The exhibit of the Ford Motor Co. and 60 manufacturers of accessories and equipment for Ford products was one of the features of the fair, 280,000 square feet of space being occupied by the Ford exhibit. Demonstrations of Ford and Fordson appliances were conducted on a plot in the center, a set schedule being maintained each day. New models of Ford cars were shown. W. G. Arnold, manager of the tractor department, was in charge of the Ford display.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
		"8-88"	
.....	4-p	Sport Roadster	1,975
.....	6-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	7-p	Sedan	2,550
.....	.....	Wanderer	2,400
BUICK		"Standard"	
.....	2-p	Roadster	$1,125
.....	5-p	Touring	1,150
.....	2-p	Coupe	1,195
.....	4-p	Coupe	1,275
.....	5-p	4d. Sedan	1,295
.....	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
.....	2-p	Roadster	1,250
.....	5-p	Touring	1,295
.....	5-p	Sedan	1,495
.....	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
.....	3-p	Sp. Roadster	1,495
.....	5-p	Sp. Touring	1,525
.....	4-p	Country Club	1,765
.....	4-p	Coupe	1,795
.....	5-p	Brougham Sedan	1,925
.....	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
.....	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
.....	7-p	Sedan	3,295
.....	5-p	Brougham	2,995
.....	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
.....	7-p	Touring	3,250
.....	.....	Phaeton	3,250
4400	5-p	Coupe	4,000
4490	5-p	Sedan	4,150
4590	7-p	Suburban	4,285
4655	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3223	7-p	Touring	1,735
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3128	5-p	Sedan 4d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2435	5-p	Touring DeLuxe	1,025
2580	5-p	Sedan	1,195
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,295
3000	5-p	Coach	1,295
3190	5-p	Sedan De Luxe	1,695
3190	5-p	Sport Sedan	1,725
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DORRIS		"6-80"	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
.....	2-p	Sp. Roadster	900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	795
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER			
		"6"	
3070	5-p	Touring	1,395
.....	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3290	5-p	Sport Sedan	1,895
3300	.....	DeLuxe Sedan	1,895
		"8"	
3350	5-p	Touring	1,995
3360	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ		D-1	
3360	5-p	Sedan	$1,695
HUDSON		"Super Six"	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,195
3425	4-p	Brougham 4 d.	1,495
3675	7-p	Sedan	1,695
HUPMOBILE		"R"	
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		"23-25"	
3025	4-p	DeLuxe Road.	$1,500
3015	5-p	DeLuxe Touring	1,320
3000	5-p	Coach 2d.	1,245
3150	5-p	DeL. Coach 2d.	1,400
3305	5-p	DeLuxe Sedan	1,680
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,275
3340	5-p	Touring	2,275
3450	3-p	Friendly "9"	2,575
3625	5-p	Brougham	2,575
3520	4-p	Victoria	2,475
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
3800	7-p	Suburban Sedan	3,375
KISSEL		"55"	
3130	2-p	Speedster	$1,895
.....	2-p	Sp'dster De Luxe	2,185
.....	4-p	Speedster	1,995
.....	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
.....	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
.....	4-p	Tourster DeL.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton DeL.	1,885
.....	7-p	Touring	1,785
.....	7-p	Touring De L.	1,985
3430	4-?p	Coupe	2,185
.....	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,685
.....	5-p	Brougham 2 d.	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
.....	5-p	Victoria De Luxe	2,685
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster De L.	2,585
.....	2-p	Speedster De L.	2,585
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Tourster De L.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Luxe	2,885
.....	5-p	Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,195
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,985
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
.....	.....	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

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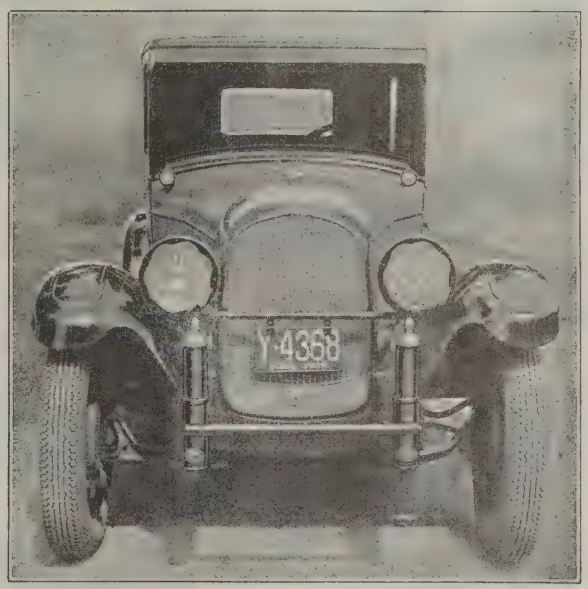
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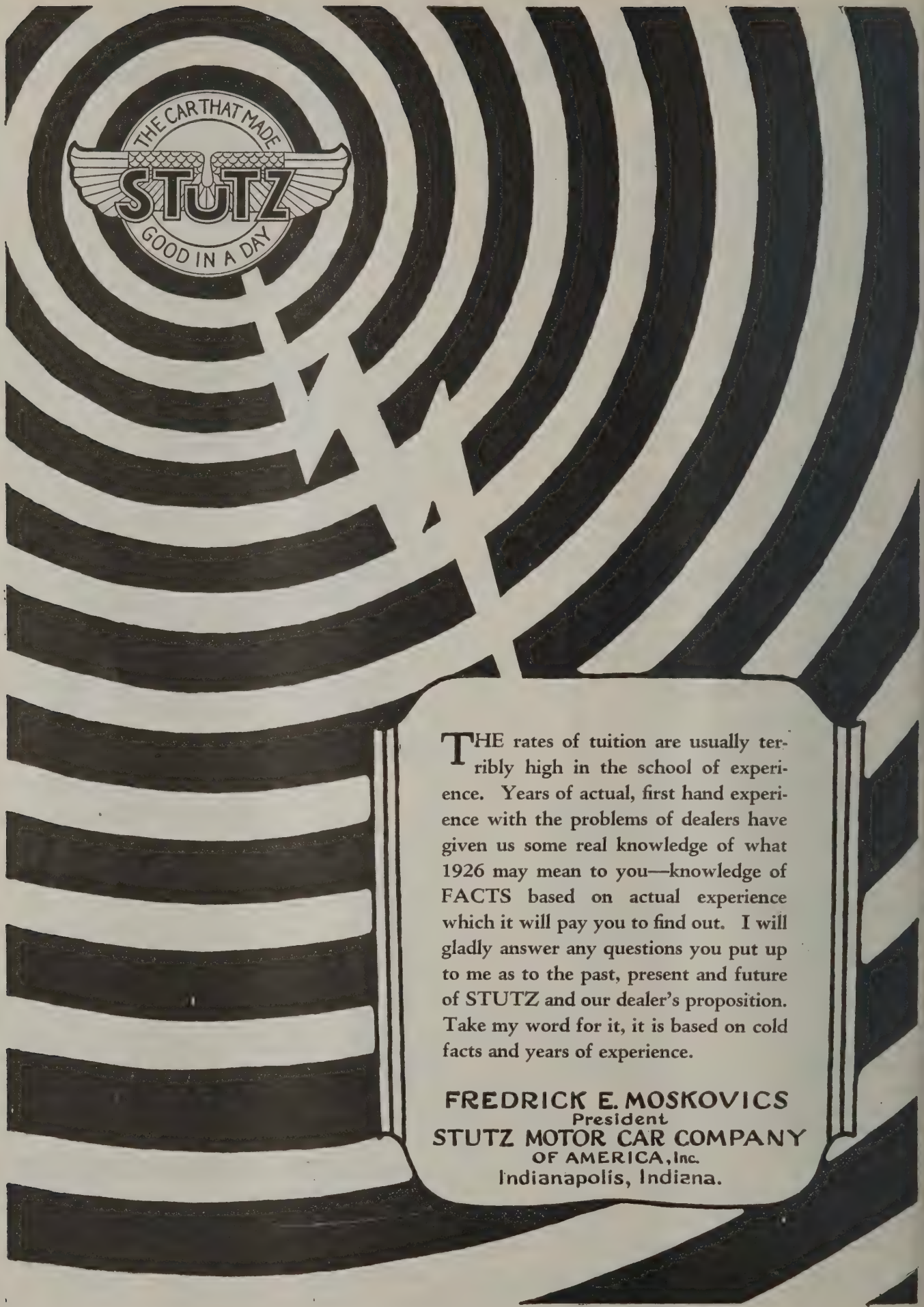
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President
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MOTOR AGE

Vol. XLVIII | Chicago, September 24, 1925 | No. 13

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

GENERAL business in automotive industry continues well ahead of same period last year, despite decrease in production during August. Page 32.

Department of Commerce reports 221,756 automobiles manufactured in U. S. and Canada during August. Page 32.

Details of Christmas window photo contest are announced by A. E. A. officials. Page 43.

Used car auction opens in St. Louis with spirited bidding. Page 33.

Claude S. Klugh takes place of R. C. Duffus as manager of Pennsylvania Automotive Association. Page 33.

Directory of technical books and libraries, covering almost 50 collections, is published. Page 34.

Motor Truck Industries, Inc., holds meeting in Buchanan, Mich., and sets date of next session as Nov. 8 at Washington. Page 33.

Revenue collections from automotive industry steadily decreasing. Page 33.

Automotive Electrical Association studies motorbus equipment at convention. Page 34.

Hupp production surpasses estimates every month. Demand for eight model unabated. Page 36.

Personnel and training are feature discussions at meeting of Society of Automotive Engineers. Page 38.

Sales by General Motors divisions to ultimate consumers are 21,705 greater than August, 1924, figures show. Page 37.

Chenard-Walcker car, driven by A. Lagache, wins Georges Boillot handicap race at Boulogne, France. Page 38.

Indianapolis Chamber of Commerce plans extensive survey of air development to determine what support would be given an Indianapolis airport. Page 42.

Cleveland Automobile Company announces four new models with price reductions up to $200 on various types now manufactured. Page 35.

Chromium called perfect substance for headlight reflectors at convention of the Illuminating Engineering Society. Page 35.

Plans of smaller, safer and less costly dirigible are given to Navy Department by Ford Motor Co. engineers. Page 35.

Canadian National Motor Show is declared best ever held in the Dominion. Attendance sets new record. Page 39.

New Federal 2-ton truck will sell for $500 less than model which it replaces. Page 39.

Sales of automobiles during August in Cleveland are ahead of all former records for that month. Page 39.

In Next Week's Issue—A $300 Letter to a Dealer

Putting More Cars *on the* ROAD

By M. WARREN BAKER



To make room for more motor traffic the new Wacker Drive in Chicago is being constructed with two levels. This view shows a section of the drive with the upper level almost completed. This vast undertaking required the wrecking of millions of dollars worth of buildings that were erected before automobiles were dreamed of

FEVERISH activity has taken the place of lethargy in highway development in the last year, almost in the last few months. This would appear at first glance to have been the direct result of the unprecedented production volume in the automobile industry in the same period.

This has been one cause, but it has been secondary to the prime reasons underlying the present energetic development. The increase in automotive production has served to awaken city planners to a full realization of the heavy responsibility that is theirs as the result of the search for means to facilitate traffic movement.

Every city in the United States is confronted by the same problem. Where will the increasing number of automobiles be parked? How can narrow city streets, built for the ancient horse-drawn vehicle, bear the tremendous load of traffic that increases every day?

These are only some of the questions that city planners and highway engineers are being called upon to solve and the difficulties of their solution are increasing at a rate proportional to the rapid advance in the number of passenger cars, trucks and buses being built and delivered.

Underground garages, double-decked and even triple-decked streets, parking spaces on the tops of buildings, so-called "super-highways" and countless other devices which have been brought forth in very recent times are first answers to the bogey of highway saturation.

For years, dealers and automobile men in general have feared the time when the power of the public to buy motor cars would be reduced to such small proportion of its present strength as to be almost infinitesimal. There have been many statements and declarations that such a time is not far distant, but such would appear now to be only more of the announcements that would-be prophets have been famous throughout the years for making incorrectly.

On the basis of one car for each average family, only two states of the forty-eight are what could be called saturated. These are California and Iowa. Sales in California thus far in 1925 have not been up to the records of other states, but the dealers there are still in business and are optimistic enough to believe in better times ahead.

Now that energetic dealers are seeing the possibilities of two-car families, a new vista of sales opportunity is opened up and the fallacy of buying-power saturation is removed entirely from the horizon.

There is danger, however, of a condition of highway saturation, especially in and near the great cities of the country. All have been aware of it, and although very little has been said about the matter, at least from the viewpoint of the automobile industry itself, the fear has long been in the minds of automobile men.

Traffic Congestion Is Serious

City officials have become aware that the time has come when something must be done about the congested condition of the traffic arteries. State bodies have been putting forth great efforts to supply sufficient facilities for the flood of traffic that has surged upon them. But these efforts are not yet sufficient. In Wisconsin, for instance, it has been estimated by the state highway department that tourists alone spend $80,000,000 annually in the state. The profit on this amount of business is more than the state spends on its road system.

City planners have been lying awake nights to find some way out of the dilemma with a modicum of expense. Some of these sleepless nights have resulted in plans for street widening which may possibly care for the traffic for the next five years. Others have caused double- and triple-deck street projects, with heavy traffic on the lower levels, automobiles in the middle and pedestrian movement on the top.

Super-highways, through or around a city, are another

Street and Highway Builders Show Signs of Catching Up With Traffic Demands as Two-Car Families Increase—Double Deck Streets, Skyscraper Parking Garages and Superhighways Help

comparatively recent development. In some cases, high speed roads are being planned to connect two or more cities. Such super-highways around a town will serve fairly well the car owner who wants to go straight through a city without stopping, but these are few compared to those who want to shop, or see what makes the big city big.

Some relief within the city is being gained by the rapid replacement of the street car by the bus. The bus is able to squirm in and out of tight traffic holes. The street car must stick to the rail and if a nervous pedestrian blocks the way for a moment, there the trolley must stand, holding back all the straining traffic that is so unfortunate as to be behind.

Everyone has long known that country highways are a nice thing to have. Chambers of Commerce and Rotary Clubs have been told time and again that business is given a material boost if the town is on a trunk highway. How much the average tourist spends in each town on the highway has been a favorite subject of assignment by city editors for years.

These same dignitaries are now coming to a realization of the political power of the automobile. Political, because every automobile owner, whether he rides in a Ford or a Rolls Royce, is a brother under the skin when questions affecting his welfare or pleasure are brought forth.

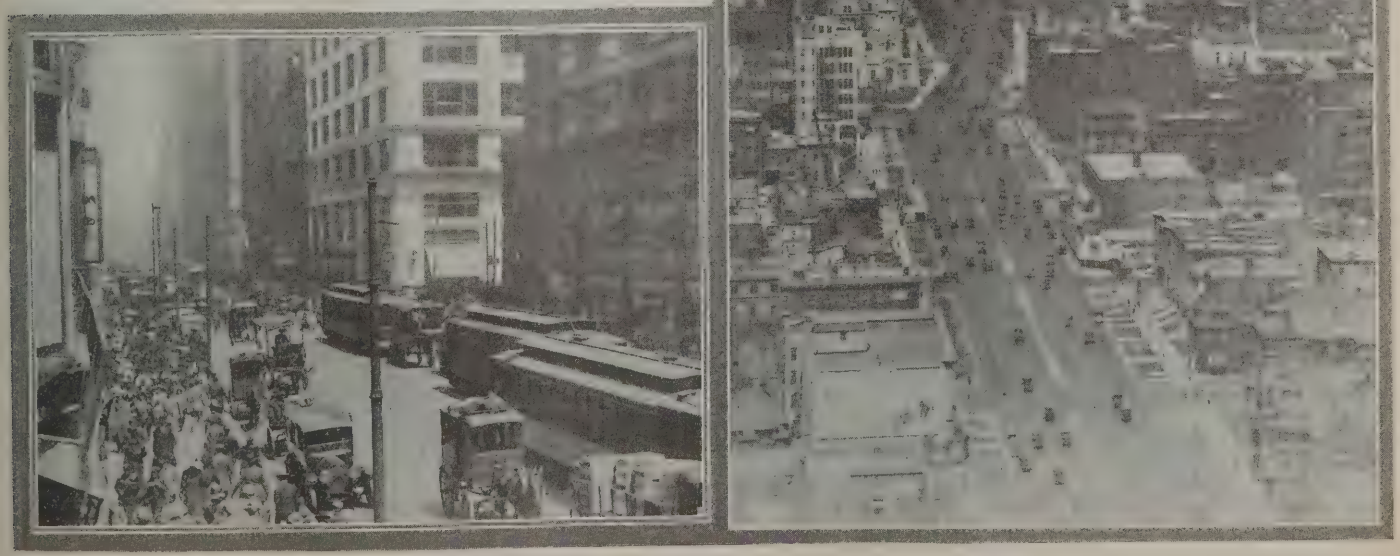
Legislatures have learned to their cost that automobile owner and dealer associations are a potent factor when it comes to defeating proposed legislation inimical to the good of the industry. How long will it be before these same associations demand more and better traffic facilities and back up their demands with their organized might?

In Chicago alone there are now about 345,000 automobiles, trucks and buses. Chicago has 1,941 miles of pavement, which allows but 30 feet for every vehicle. A great many drivers need that much room to stop in, or park with the least damage to bumpers and fenders.

This figure does not take into account the number of cars registered in the suburbs, which daily drive into the downtown district and return. If all these were included, automobiles in Chicago probably would show less than twenty feet of space "per capita" and that is being cut down with every boatload of cars brought on the river docks.

If Chicago had one car for every average family the number of automobiles on the streets would be about 697,000, or more than twice the number at present. By 1950 the city officials expect there will be 4,500,000 persons resident in Chicago, and on that basis there then would be 1,046,000 motor cars on its streets. The metropolitan area of Chicago, taking a radius 35 miles from the Loop, then would have about 6,600,000 population, and 1,534,000 cars.

A large part of this population will have to live outside the present limits of the metropolis. Many will work in the downtown district as at present, and they will have to have cars to carry them to and from their businesses. Or they will ride elevated, surface or subway trains. They will either have to be given a place to park their cars downtown, or they will not buy them in such proportionate volume as at present. It is much more pleasant and restful to drive to work than to hang on a train strap,



The old and the new traffic. At right is a section of Michigan Boulevard, Chicago, looking north toward Drake Hotel, photographed from airplane. The double stream of motor traffic is shown. Below is State Street, Chicago, in the days when that street carried the kind of traffic for which it was planned

and the owners will demand parking space if the automotive industry fails to do so.

In either event it is foregone that parking facilities are absolutely essential both to the dealer and owner and the dealer might as well take the first step to obtain them. His organization is less unwieldy than is the owner's to perform such a service. Every day that brings good parking facilities closer, is a day of additional business for the dealer, because it will create more two-car families.

Newspapers are taking up the fight in Chicago. In a recent editorial on highways radiating from Chicago, the *Chicago Tribune* said:

"The Dunes road furnishes only one example of the congestion to be found on all the highways radiating from Chicago. All of them should be widened without delay; and it is our opinion that even 40-foot roads in this region will be inadequate to handle the traffic with safety."

A plan whereby Boston's narrow streets will have less of a traffic burden to bear has been put forward by the Boston elevated and street railway officials. The companies have begun purchasing land in the suburbs adjoining their terminals, for use as parking grounds.

Boston expects that about 400,000 cars will be operating on its streets by 1930. Immense sums would be necessary to increase the streets to the width necessary to handle this traffic. The officials are studying the possibilities of removing street cars from the thoroughfares and substituting buses.

Boston's Problem

It is estimated that about 140,000 cars enter and leave Boston every day. Tourists materially increase this number during the summer months. All the other New England cities are facing the same difficulty and the jam of traffic by 1930 is certain to be tremendous.

The street and elevated railway companies are of the opinion that the time to take steps toward the prevention of an unendurable situation is the present. Planning commissions have been attempting to correct existing evils and prevent future ones, but they are still confronted by the fact that any drastic impositions will keep a great many persons out of Boston who may wish to transact business there.

Indianapolis has just passed an edict called the "Thoroughfare Ordinance" which is expected to simplify the traffic situation there. The ultimate expenditure of $30,000,000 is planned for widening streets, building new



Type of skyscraper parking garage springing up in large cities. This is the new Auto Centre at Los Angeles, all the floors of which are devoted to parking and storage of automobiles, day and night

ones and making general improvements in traffic conditions. The ordinance also ratifies a plan whereby the city and the Belt Line railroad will co-operate in elevating the railroad tracks and eliminating grade crossings. The latter have not only been dangerous, but have held back extensive development in certain business sections of the city.

Possible fore-runners of the time when every motorist will be able to park within something like walking distance of his destination are to be seen in the tendency to build garages exclusively for parking and service. Such garages can be and are being built as high as office buildings, and are equipped with ramps so that the motorist can drive from ground floor to roof, or with high speed elevators.

Underground parking garages are another recent development. Still another is the widening of little-used streets to allow parking in the center.

Such means give some relief, but if the motoring popu-

(*Continued on page* 43)



The rush of motor traffic at Fifth Avenue and Forty-second Street, New York

Fresh Merchandise in a Clean Store

Slick Up Includes a Complete Overhauling of Stock to Make It Complete With Seasonal Goods and Articles in Demand



An example of how to slick up and display accessories

SLICK up is not merely for the floors and walls and shop of the automotive establishment. We have already discussed the importance of going over the salesroom to give it an inviting and attractive appearance. If the sales room is slicked up, redecorated, equipment rearranged, displays changed and brightened, much has been done to mark the store as a progressive business institution that does not shut up shop with the coming of cold weather. The proper overhauling of the shop, as outlined in last week's MOTOR AGE, will do still more to put the place in shape for profitable business this winter.

But the stock of merchandise itself requires attention. A busy summer has its effect on stocks. New cars have been coming in and going out and accessories and supplies have been sold in unusual quantities. The result is likely to be a somewhat unbalanced stock. Time probably has not been available for a complete and regular checking of the stock on hand in order to keep it up to date.

The result is likely to be a shortage of certain popular items, an accumulation of slow moving goods and lack of seasonal goods that have not been much in demand this summer, but will be from now on.

The first step in the slicking up of the stock should be an inventory to determine just what goods are on hand. The car dealer won't have much trouble listing his new cars. They are usually right out in front where he sees them every day and this summer sales have been so good that in most establishments the cars have moved right on to buyers. It would be well, however, to check up to see how long the cars have been on hand. If open cars are on the floor and have been there for some time a special effort should be made to move them at once. In fact any cars that have been hanging around long enough to begin to feel at home should be sent out to look for a new boarding house.

The used car stock should be given the same sort of treatment and a little more of it. A large used car stock at this season should be viewed with alarm and about the slickest thing any dealer can do is to send a lot of the old-timers away indefinitely.

The right sort of slick up activity will help move both new and used cars. For instance, if the dealer has on hand one or more open cars that have been standing in a corner and collecting dust because nobody wanted them his first step in slicking up will be to wipe them off and give the paint a chance to shine. Then he will put the cars out where people will see them and then probably he will put on winter enclosures, install a heater and otherwise make the open vehicle into a comfortable enclosed car.

Paint will help to slick up the used cars and the open ones among them can also be made more salable by the installation of winter enclosures and heaters, or the fitting of new side curtains.

Probably the greatest need for slicking up will be found among the stocks of accessories, equipment and supplies. There are vacant spots in the shelves, worn and disfigured packages and merchandise bearing the marks of dust, rust and corrosion. The vacant spots indicate a healthy business, for sales have been good, especially in some lines. The worn and disfigured packages indicate merchandise that was overstocked or for which there is no demand. This sort of merchandise should be moved as soon as possible, by the bargain sale method if in no other way.

New merchandise to fill out depleted lines and the elimination of shop worn stuff are essential steps in slicking up a store. Customers do not like an untidy store, and disorderly shelves and dirty or damaged merchandise give the aspect of untidiness even more than actual disarrangement and dirt. A clean, fresh and complete stock of merchandise is a distinct asset and a valuable attraction for the dealer at this season.

The check up of merchandise should take into account the seasonal needs of customers. Colder weather is approaching and the automobile needs winter accessories just as its driver needs winter clothing.

It is merchandise of this nature that the dealer, in his slick up activity, should make certain to stock in ample quantity.

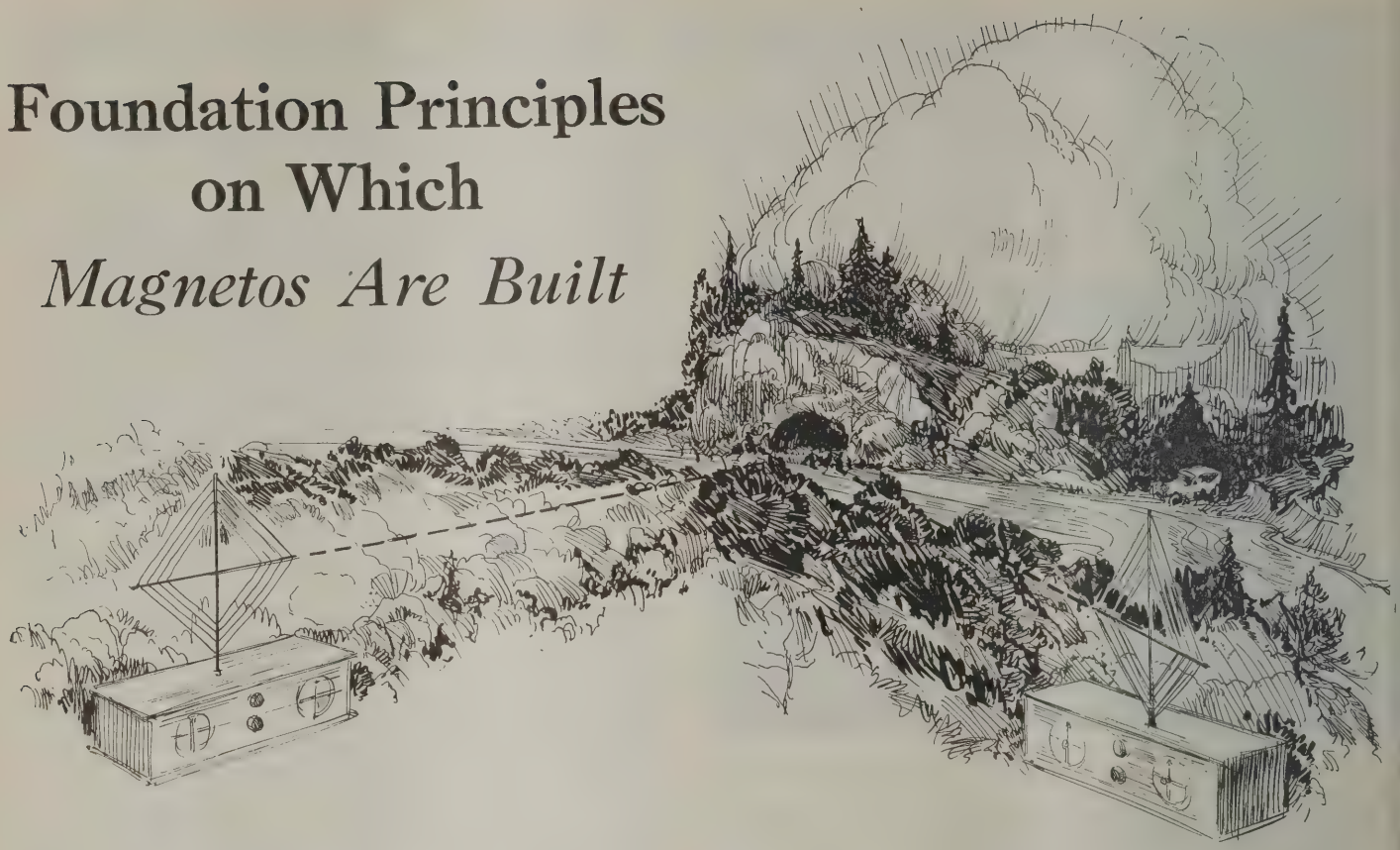
There is another seasonal appeal that the merchant cannot afford to overlook. Successful campaigns in the past

(*Continued on page* 34)



In need of slick up. This was arranged by Ford Motor Co. of Milwaukee as a lesson to dealers. This photograph and the one at top of page by courtesy of David Lupton's Sons Co.

Foundation Principles on Which *Magnetos Are Built*



The Red Head and Valvy Tow a Stalled Race Car Back Home and Show Its Owner a Few Things About Ignition

By A. H. PACKER

OVER the rim of Coal City rose the sun, its fiery eye gleaming with a mischievous grin. Peering into the upper windows of Jake Pender's garage it saw, through the grimy pane, two sleepy lads, the Red Head and the Valve Grinding Fiend.

The Red Head could sleep through anything, but Valvy stirred uneasily under the sun's piercing glance. Then to his half awakened senses came the sound of a bell. "The clock," thought Valvy and groped to shut it off. But the ringing continued.

Valvy sat up. "What in the dickens is the phone ringing for, this time o' day," thought Valvy as he slid into some clothes and ran down stairs to answer.

Five minutes later, Valvy came tearing back, through the shop and up the stairs yelling as he came.

"What the Sam hill's bitin' yuh?" Red wanted to know, angered at being disturbed.

"P-p-p-plenty," Valvy gasped. "They g-g-got 'em."

"Got what, fleas?" said Red. "You certainly act as if you had 'em and no mistake."

"That gang that got you," panted Valvy, still puffing.

"Sit down and speel it," said Red. "Was that Sandy on the phone? I thought at first you'd gone loco or somethin'."

And as the Valve Grinding Fiend calmed down he managed to tell what Sandy had told him over the phone.

"Sandy put Federal agents on their trail. They took a tip from our radio experience and set up some special receiving sets at different places. Then they used a special kind of set with a loop aerial that hardly receives at all unless the loop is pointed the right way. At first they had no luck for they had to get their settings right and their loop pointing in the right direction before they could pick up the long wave messages being sent out from the gangsters' stronghold.

"Then one night they found 'em with one of the sets. That gave them the dial settings. Then they tuned in the other set the same way and turned the loop until they had 'em.

"It's too deep for me," said Red, "but I get the general idea. After they had the loops pointed from two directions they probably worked it out on a map by trigonometry and figured where the fellows were in hiding."

"Yeh," said Valvy. "Sandy said something like that.

BILL FIXIT STORY No. 11

PREVIOUS installments in this series by A. H. Packer were published March 19, April 2, April 16, May 7, May 21, June 18, July 9, July 30, August 13 and September 3, 1925.

SYNOPSIS: Bill Fixit's electrical trouble shooting men start on a trip in a Speedway car. They stop at various places along the way and at the Welsh mines are requested by Sandy, the foreman, to help out in fixing up a gasoline pumping engine. While there the money they had is stolen from the car, so they are forced to seek employment in Coal City with Jake Penders, the local electrician.

While at Jake's place a customer buys a tire, paying for it with a bill that Red afterwards recognizes as one stolen from them. Red goes after a job of wiring trouble that Jake had previously fallen down on, fixes it and then tells how it was done. At other times he explains electro-magnets, ignition principles, condenser construction and testing a systematic method of shooting ignition trouble on the car and a method of checking firing order and timing.

Anyhow they spotted the place, and the only way to get to it is up Crooked Creek. The bottom is hard and the water shallow and they even run their cars up to the cave that way."

"That's all very nice," said Red. "It means safer living from now on around this dump, but it doesn't mean much to us."

"It does, too," said Valvy. "I nearly forgot. You know that bird that fell down on the watchman job the night they blew up the pumping engines. Well he was one of the gang, but no one knew it. He had that job at the Welch mines so he could keep track of Sandy, but he slipped just once. He was the fellow that bought a tire here with one of the bills that was in our roll. When Sandy heard about it and saw him roll up with a new tire on his car he put two and two together, began to do a little detective work on his own account and now this fellow has confessed and we will get most of the jack back again. The gang has been so hemmed in for fear of the law that they haven't been able to get out to do much spending."

"What a change," the Red Head remarked. "A few months ago we started out like a couple of kings, saying good-bye for a time to Bill Fixit and the old gang. Then we were cleaned by a crook and were glad to get a job in this measly town, board with the hunkies and later sleep in the attic. Now we are sitting pretty on top of the world again. And so it goes."

"And where do we go from here," Valvy wanted to know.

"Now that it's possible, I almost hate to leave," said Red. "I'm almost getting fond of Jake, but I suppose we better be moving along in a day or so, finish up our touring spree and get back to Westville."

Several mornings later, Bill Fixit's roaming electricians said good-bye to Jake, shook the coal dust of Coal City from their tires, stepped on the gas and sped away in search of more adventure.

The Scene Changes

As the day wore on the mountainous mining country was left behind. Low lying hills and pleasant valleys took their place. The outcropping rocks became fewer and fewer and the soil richer. Miners' shacks gave way to substantial farm houses and on every side there was evidence of a bumper harvest and rural prosperity.

Lunch was obtained in one of the small towns. Red had seen visions of fried chicken, at least, as he drove through the thriving community, but when they stopped at the small restaurant, all that was left was corned beef and cabbage.

"Suppose we see if we can put up at some farm house," suggested Red. "I'm fed up on this city cooking gone to seed. I'd like to get some real grub for once."

Valvy was about to answer when a humming whine burst upon their ears, soon to change to the roar of an exhaust from an unmuffled engine. Looking back Valvy saw a home made race car with its embryo race driver stirring up the road for all he was worth. The car passed with a whirl and disappeared over the hill, while the Speedway car with the two adventurers jogged on at its accustomed pace.

Five miles farther on, however, the two trouble shooters were surprised on rounding a curve to see the home made racer stalled by the side of the road, and the driver disconsolately poking around under the hood. Red pulled up and the boys got out to see if they could be of assistance.

Barney Oldfield Smith was glad to get some help, for while clever at assembling his car he was shy on electrical knowledge and when the magneto failed to do its part he was stuck as badly as the car. The cause of the trouble was not evident even to Red and Valvy and as Smith lived but

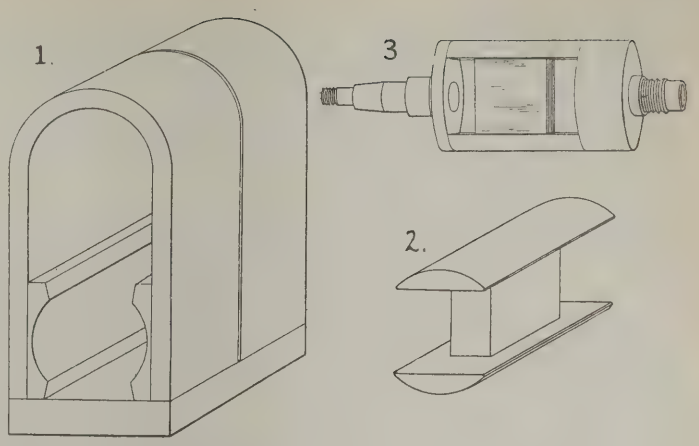


Fig. 1. Typical magneto frame. The base is usually brass, so that magnetism is forced through the armature. Fig. 2, magneto armature core. Fig. 3. Magneto armature core with end plates and shafts attached

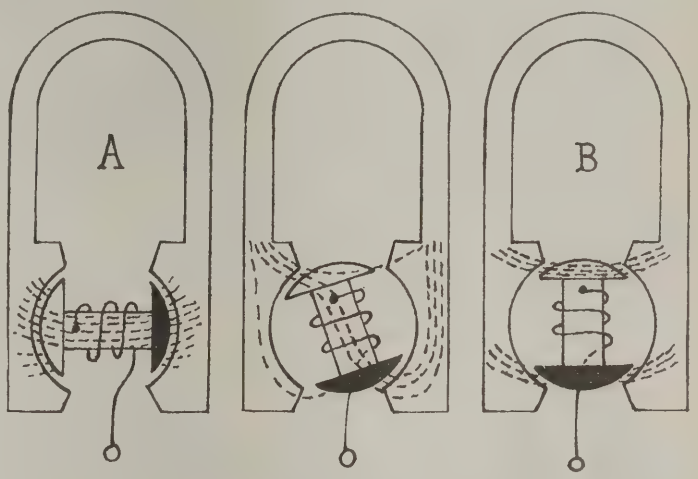


Fig. 4. Changes in the path of the magnetic lines of force as armature makes a quarter turn

a few miles up the road it was decided to tow the car to the farm where Smith lived and do the job right.

Red had another reason for handling the job that way and his sagacity was proved in the results, for the work on the magneto kept them busy until supper time and resulted in their staying at the farm for the night.

The next morning it was found that the magneto armature had a shorted condenser so there was nothing much that could be done until a new one was received. Red wired Bill Fixit at Westville to send one by parcel post and was about to show young Smith how to install it, but Smith was not satisfied to let it go at that.

"Can't you fellows stick around a while? We can hunt squirrels over in the woods or fish in the river. Of course if you have to be goin' I may be able to get by with it, but—"

"Red had been thinking of the fried chicken and apple pie they had stuffed themselves with the night before. It was almost too good to be true. Would they stay? "Yes, I guess we can," said Red. And so it was decided.

"And when you're doing nothing in particular," continued Smith. "You can show me something about magnetos, not only what's wrong with this one, but how other kinds work, too."

"That's a big contract unless you know something about electricity," said Red.

"I know a little," said Barney. "In school we had some experiments with coils and I have played with the battery ignition system on Dad's car, but I never tinkered with magnetos until I got one for this speed bus."

"In the ignition coil," said Red, "We get the high voltage produced by changing magnetism and the changing magnetism is produced by change of battery current in a heavier coil known as the primary. When it comes to magnetos we again have to have changing magnetism, as far as the coil of wire in the machine is concerned, but we get it by rotation."

"Many magnetos are made with a frame like this." And Red made a sketch (Fig. 1) to show what he was driving at.

Center of Armature Smaller

"The two U-shaped pieces are permanent magnets and in between their ends or poles we find the magnetic effect or field is the strongest. Then we take another piece like this (Fig. 2) which we call the armature and we rig it up on bearings so it can be rotated in between the poles of the permanent magnets. The center part of the armature is smaller than the rest and provides a place on which the coil or coils can be wound. At the end of the armature core it is customary to fasten two plates which each have shaft extensions, so that the complete armature core with shafts attached looks like this (Fig. 3).

"In this sketch (Fig. 3) the wide part at the right is a sort of hollow cup in which the condenser is carried, but we will not consider that part of the device much at this time. We first want to see how the current is generated.

"In this other sketch (Fig. 4) we have an armature shown in three positions and on the armature is a winding. At A the armature is in such a position that the lines of magnetic force in going from one magnetic pole to the other go through the center of the coil. As the armature turns to the right or clockwise it gets to the position shown in the center sketch.

"The armature is now not such a good path for the magnetism as formerly. Some of the lines of force still go through the coil, but others go across through the ends of the armature core. When the armature has turned still further as shown at B we have all the lines of magnetic force going through the armature pole tips and none through the coil.

"From this we can see that as far as the coil is concerned the magnetism has changed from a maximum to zero in one quarter of a revolution. Another quarter turn would again permit the magnetism to all go through the center of the coil, but in the reverse direction as far as the winding is concerned. And as changing magnetism in a coil generates a voltage we conclude that there will be a voltage generated in the coil. We also conclude that as the magnetism goes first one way and then the other in the coil, that the voltage will be first in one direction and then in the other, so that current taken from the coil would be alternating current.

"In this other sketch (Fig. 5)," Red continued, "We have some curves that look like spider webs, perhaps, but if we look at them carefully we may be able to figure the armature position that gives us the peak current and therefore the armature position at which the interrupter points should operate.

"At the bottom of this sketch (Fig. 5) we have the armature in different positions which it would take in rotating right hand or clockwise, the first two of these positions, A and B corresponding to A and B of Fig. 4. We will next use a horizontal line X-Y and in line with A we will lay off a distance X-L to represent in height the number of magnetic lines of force which go through the coil on the armature when in position A.

"The distance of the magnetic curve above the line will then represent the number of lines of force going through the coil in one direction while the curve below the line will represent the magnetism through the coil in

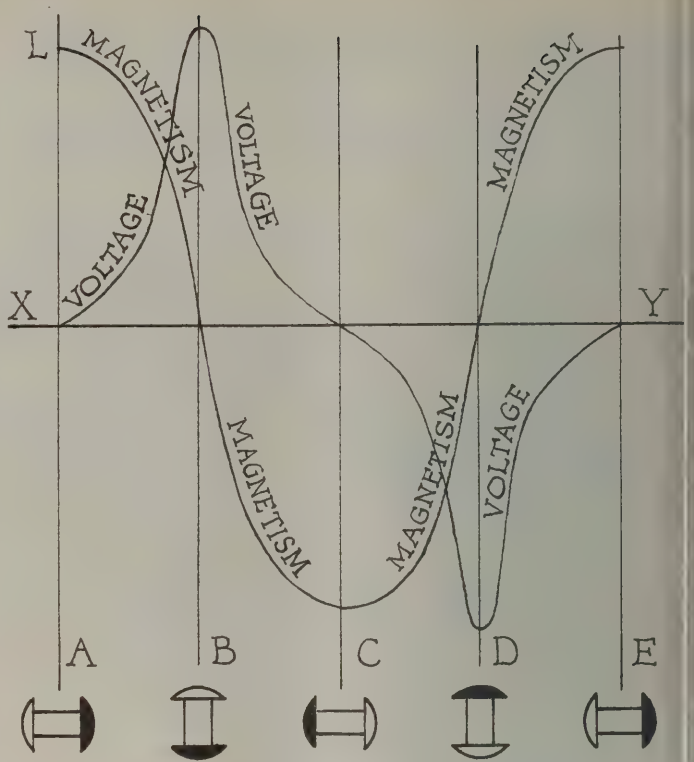


Fig. 5. Armature positions which give the peaks and valleys in the magnetism and voltage curves

the reverse direction. At position B we have lines of force through the pole tips only and none through the coil so our curve crosses line X-Y, the value of the magnetism being zero.

"At position C we have the reverse of the condition of position A, so the curve reaches a low point, while at D the magnetism is again zero and at position E we have the same condition as at A."

"Then we get the greatest voltage from the magneto with the armature crosswise, I suppose," said Barney.

"You're forgetting something," said Red. "Is it magnetism or change in magnetism that generates the voltage?"

"Gee, you're right," answered young Smith. "I don't know the answer yet, but what I said first was wrong, all right."

"We'll have the answer in a minute when we draw the voltage curve," continued Red.

"The high point on the voltage curve will be where the magnetism curve is changing fastest. In line with A, for an instant the magnetism is constant so there the voltage is zero. On the other hand the magnetism curve is steepest, and therefore is changing fastest at points in line with B and D, so one of these is our positive high point and the other the negative peak of the voltage curve."

A Delicacy in Sight

Valvy had heard it all before and was beginning to get restless. "What's that funny noise over by the river?" he wanted to know. "Sounds like dogs barkin'."

"Them's bull frogs," said Barney. "What d'ye say we pass up the magneto stuff for a while and go get a bunch of frog legs?"

"Ugh," said Valvy. "Do folks really eat 'em?"

"I'll say they do, they're better than chicken," volunteered Red, more experienced in the ways of the world.

"Better than chicken," cried Valvy in astonishment. "It sounds fishy to me, but I'm willing to be shown." And a few minutes later the three lads were busy hunting through the tall grass by the river's edge.

Jordan Announces a Lighter Eight

Lower Priced Line Has All Steel Bodies and Specially Designed Engine Developing 64 Brake Horse Power



New Jordan Eight 5-passenger sedan. Metal pillars and narrow door frames result in minimum obstruction of driver's vision. Bumpers and spare tire not included in list price of $1845

By LESLIE S. GILLETTE

THREE new standards have been set by the Jordan Motor Car Company in presenting its new series J model with eight-in-line engine. This is the lowest priced car of this type yet produced, it is the shortest and lightest passenger car chassis employing an eight in line engine and is the first car selling above $1,500 using an entire line of all steel bodies. Although the wheelbase of the new car is 9½ in. less than that of the larger car it is said that the interior space in the bodies is almost the same due to the all steel construction and special design of the portion of the body adjacent to the engine.

The all steel construction of the body makes possible improved vision due to smaller corner posts. Removable upholstery is incorporated in the construction, this facilitating cleaning, and the repairing of body dents.

The interior of the sedan is decorated with inlaid walnut trim, flush type vanity cases and silver hardware of New England design. A cowl ventilator is included and the windshield is of the one-piece type.

On the Playboy model the collapsible top is easily removed, while the curtains are carried in a door pocket. Upholstery in this model is genuine hand buffed leather while the exterior finish on both models is lacquer.

The engine is designed by the Jordan company and built by Continental, the bore and stroke being 2⅞ in. by 4¾ in., giving a piston displacement of 246.6 cu. in. The engine develops 64 b. h. p. at 3,000 r. p. m., while the rated S. A. E. horse power is 26.4.

This power plant, in one of the sedans is capable of showing a speed range in high gear of from 2 to 68 miles per hour, without appreciable vibration at any speed. Gasoline consumption is said to be from 16 to 18 miles per gallon and oil consumption from 600 to 800 miles per gallon. Cylinder head is detachable and the cylinders are cast in a unit with the upper half of the crankcase, while the oil pan is of pressed steel. Four point suspension is provided as in the older model.

The crankshaft has five main bearings and is provided with a Lanchester vibration damper. The rear main bearing is 2½ in. in diameter while the others are 2⅝ in. in diameter, each bearing being 1½ in. long.

Connecting rods have a center to center length of 9¾ in. there being at the lower end, babbitt lined bearings 2¼ in. in diameter and 1$\frac{5}{16}$ in. long. Phosphor bronze bushings are used in the upper ends of the connecting rods. Piston pins are 2 17/64 in. long and 55/64 in. in diameter. Pins are locked by means of a set screw and a snap ring at the end of the piston pin.

Cast iron pistons are used, these being 3⅝ in. long and fitted with three rings, all located above the pin. Oil holes are drilled through the piston wall beneath the lower ring.

The generator and camshaft are driven by a silent Morse chain. By graduating the diameters of the five camshaft bearings from 2$\frac{5}{16}$ in. down to 1¾ in. it is possible to withdraw the camshaft through the front of the engine. The three center bearings have a length of ⅞ in. while the length of the rear bearing is 1 in., the front bearings being 1$\frac{11}{16}$ in. long.

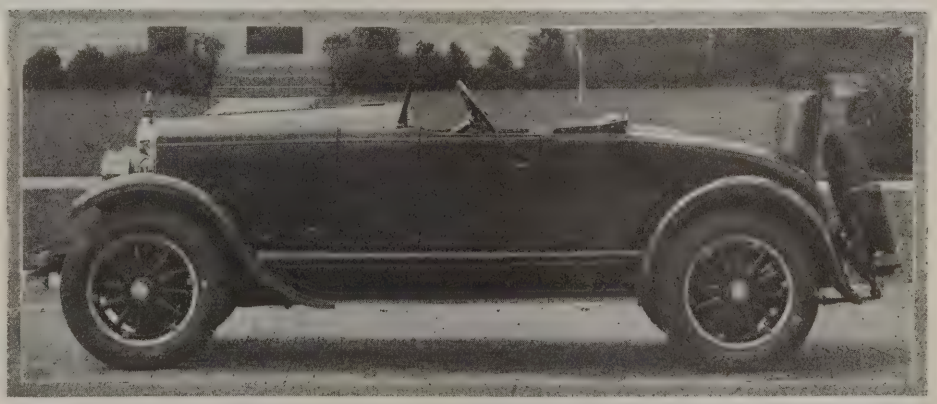
Valve Timing

Valves have 45 degree seat face angle and $\frac{5}{16}$ in. lift. The inlet valve has a diameter in the clear of 1½ in., the exhaust valve diameter being ⅛ in. less. Valves are operated by mushroom type tappets. Double valve springs are used. The valve timing is as follows:

Exhaust closes 8 deg. after T. D. C.
Exhaust opens 40 deg. before B. D. C.
Inlet opens 8 deg. after T. D. C.
Inlet closes 40 deg. after B. D. C.

A gear type pump is used to force oil to the main bearings and through holes in the crankshaft oil is then carried to the connecting rod bearings. Passages in the crankcase web carry oil from the main bearings to the camshaft bearings. The crankshaft holds 7 qts. of oil when filled to the proper level.

Oil from the crankcase may be emptied by operating a plunger at the side of the engine, this plunger opening a valve in the lowest point of the oil pan. The same construction is used on the larger eight. Along side of the plunger is a bayonet type gage for measuring the amount of oil in the crankcase. The



Playboy roadster in new Jordan Eight line. This model has all-steel body and lists at $1695. Detachable top, not shown in picture, is included. Bumpers and spare tire are extra



At the left is shown the left-hand side of new Jordan power plant, Vibration damper is seen at front of crankshaft. Plunger for dumping crankcase oil is at right of oil gage under engine name plate. At the right the right-hand side of the Jordan power plant is shown with rotary air cleaner and combined ignition and generator unit

water pump and fan are built in one unit, the drive being by means of a belt. Belt adjustment is taken care of by means of a movable flange on the fan pulley.

The method of attaching the radiator and shell is somewhat different from that used on the larger car. The radiator core is carried in a cradle which is fastened by means of studs to the front cross member. Leather washers are used to assist in absorbing the shocks and prevent straining the radiator. Water capacity of the entire cooling system is 4¼ gal.

Fuel System

The fuel system includes a Stewart vacuum tank, a 17 gal. tank at the rear of the chassis, a Gas-Co-Lator and a Stromberg model OX-2 1¼ in. carbureter. A United air cleaner is also fitted as standard equipment. The intake manifold is 1⅜ in. inside diameter and is connected with the exhaust manifold to form a hot spot.

American Bosch generator and starter are used as on the larger car. The starting mechanism includes Bendix drive and a 2 to 1 gear reduction, giving a total reduction of 22 to 1. The generator has a field fuse to protect it in case of open circuit between the generator and battery. The ignition unit is provided with automatic advance and is driven from the rear end of the generator.

The electrical units also include a Willard battery and Champion spark plugs. The firing order of the cylinders is 1-6-2-5-8-3-7-4. Ignition cables are carried in conduit.

The engine power is transmitted by means of a Long clutch of the single dry plate type while a Warner Gear Co., model T-69 transmission is used. The gear ratios are as follows:

Low:	3.12 to 1
Second:	1.69 to 1
Third:	1.00 to 1
Reverse:	3.78 to 1

The transmission is fitted with an approved type of transmission lock. The propeller shaft is tubular, being 1¾ in. in diameter and provided with metal oil type universal joints at each end, these being made by the Universal Drive Shaft Co.

A Timken rear axle is employed, this being of the semi-floating type, employing a spiral bevel gear drive, the power being transmitted through the springs by means of the conventional Hotchkiss construction. The bevel pinion is straddle mounted. Side thrust is taken by two Timken roller bearings at each wheel. Standard gear ratios on the Playboy and sedan models are 4 5/11 to 1 and 4 7/11 to 1 respectively. A Timken front axle is also used, the "I" section changing to cylindrical near the knuckles to take the torque due to the front wheel braking action. Ball thrust bearings carry the load on the knuckles to assist in steering and parking.

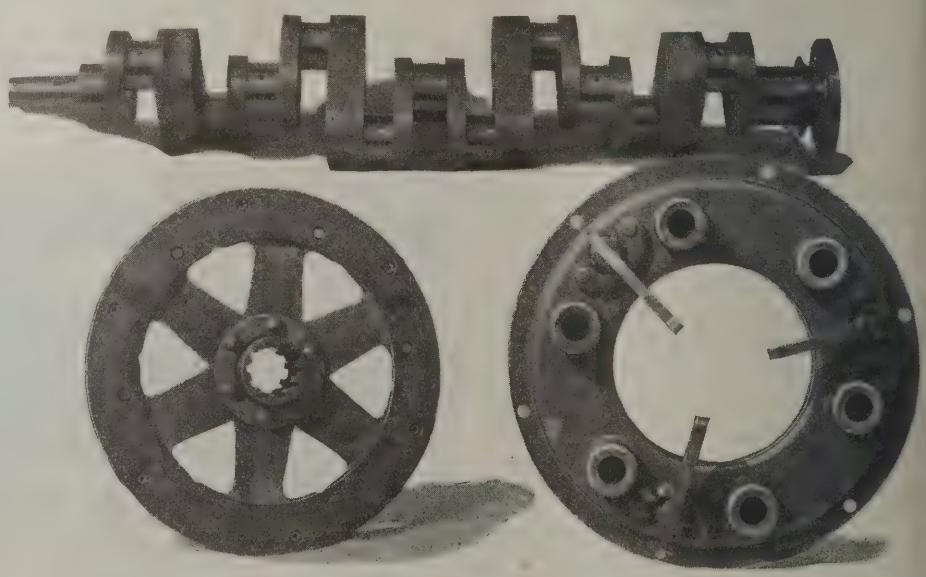
A model 80 Gemmer worm and sector type steering gear is used, the reduction being 11½ to 1 which is specially adapted for balloon tires. The tires used are 30 by 6 in.

Many parts of the Lockhead hydraulic brake used on the new car are interchangeable with the older model. Dimensions of the drum are 14¾ in. outside diameter and 2 in. wide. The emergency brake is at the rear of the transmission the drum being 8 in. in diameter by 2½ in. wide, the brake being of the external contracting type.

Springs are of chrome vanadium steel 2 in. wide. The front spring is 37 in. long and the rear spring 55 ¾ in. long. Self lubricating shackle bolts are employed, lubrication of the chassis being taken care of by means of the Alemite system.

Road lighting is provided by means of Edmunds & Jones headlights which are also equipped with 4 c. p. bulbs for city driving. A combination tail and stop light is also provided. A 75-mile Stewart speedometer and clock are mounted in the right hand panel on the instrument board while an oil and gasoline gage and ammeter are in the left hand panel. The following items are also included as standard equipment; automatic windshield cleaner, rear view mirror, transmission lock, cowl ventilator, motometer, set of four shock absorbers and combined vanity and smoking cases on the closed car.

Except for several minor refinements the larger car is continued without change and will in addition to being companion car to series J model, round out the Jordan line for the coming year.



Top: Five-bearing crankshaft of new Jordan; bottom: Parts of the single plate Long clutch used in new Jordan

Important Improvements Made in Marmon 74 Chassis

Double Fire Ignition, Oil Purifier and Self Lubricator Added to Increase Power Output and Performance. Fuel and Oil Mileage Also Bettered

By B. M. IKERT

THREE major improvements have been made in the Marmon 74 chassis. They consist of a double fire ignition system; three-way oil purifier and a self-lubricating system for the chassis.

As a result engine performance has been materially added to in the way of better acceleration, better fuel economy, entire absence of the so-called heavy fuel knock, greater oil mileage and prolonged life of the units.

The results which have been attained with the new Marmon cannot be attributed to a single improvement, but rather to a series of improvements, the combination of which has worked out to good advantage. Thus, the Marmon Company states that with its valve layout type of manifolding, double fire ignition and oil purification method the following results have been obtained:

1.—Increased gasoline economy.
2.—Increased power.
3.—Increased acceleration.
4.—Cooler exhaust valves and manifold because of more complete combustion during the down stroke of the piston.
5.—Less carbon deposit.
6.—Less tendency towards crankcase oil dilution, because the fuel oils are burned more completely.
7.—Smoother engine power.
8.—Absence of spark knock under all conditions.

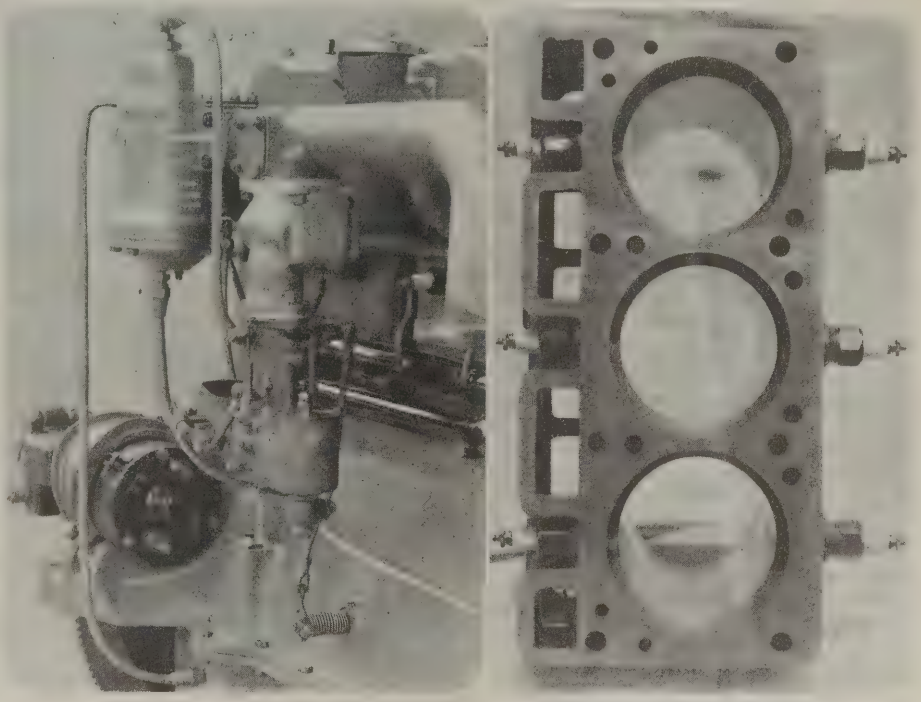
Additional Spark Plugs

In the double fire ignition, system two plugs are used per cylinder, these being on opposite sides and firing at the same time.

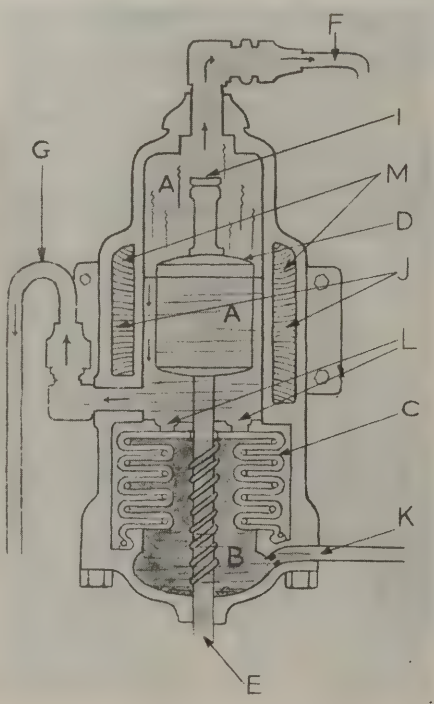
The system consists of a battery and generator on the rear of which is mounted the distributor head having 12 contact points with six pairs of wires going to the twelve plugs.

The current goes to two sets of breaker points, one for each set of plugs. Each breaker controls the primary low voltage current to each coil. Each coil then feeds the high voltage current to the contact points in the distributor head, the forward coil being connected to the center point and the rear coil to a point offset from the center and operating through a carbon brush running on a metallic ring in the distributor head.

The two high tension contact points in the distributor head carry the current to each of the two rotor buttons on the rotor and these two buttons in turn determine the cylinder that is to be fired when the breaker points make contact.



Oil purifier installation on new Marmon; at right is view of one of cylinder blocks showing two spark plugs to each cylinder



Marmon 3-way oil purifier—sectional view

In designing its oil purifier the Marmon company sought the removal of the four following elements:

1.—Abrasives.
2.—Carbon.
3.—Water.
4.—Low quality fuel oil.

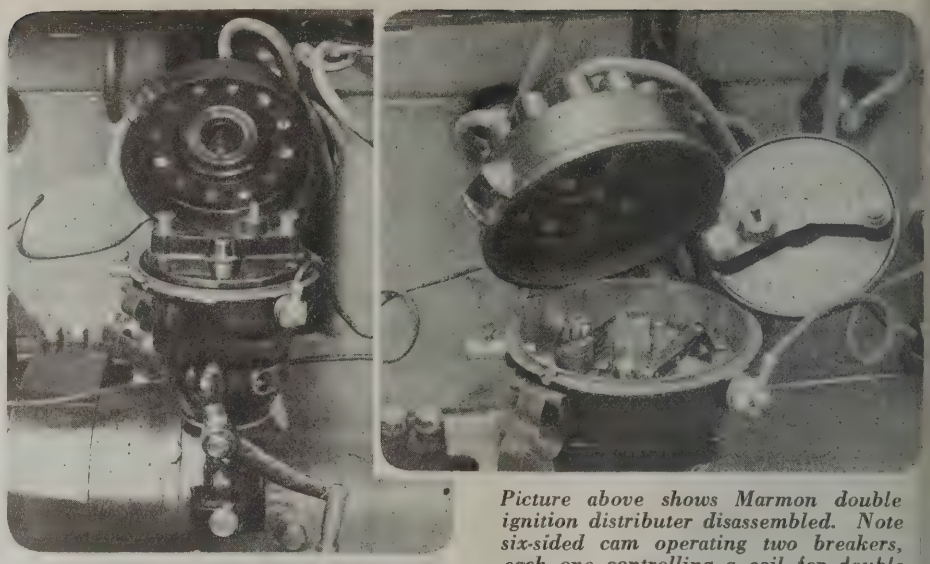
Naturally the removal of abrasives is easier to accomplish with hot oil than with cold oil, since the hot oil will flow through a much finer filter with the results that the finest particles of abrasives are removed. To get proper heat to the purifier the Marmon three-way purifier is fastened to the exhaust manifold between cylinders 4 and 5 and the exhaust gases from cylinders 5 and 6 pass around the distillation chamber A through the gas passage J. The purifier consists mainly of two chambers, A, the upper or distillation chamber and the filtration chamber B.

Four tubes lead to the purifier. Tube F from the upper chamber carries fuel and water vapors to the carbureter intake to be drawn into the engine along with the mixture. Tube K is the oil feed tube, the oil being fed under pressure from the pressure regulator to the purifier. E is an air inlet tube, leading from the crankcase up through the center of B into the upper part of A, creating a condition of atmospheric pressure during the time that oil is

being drained from A. Tube G is a syphon which automatically drains off the oil from A each time the float D rises, permitting atmospheric pressure to exist in A. The asbestos filtering sack C prevents abrasive from being fed back into the oil. I is an air valve operated by the float D. The filter sack C has a very large area and the passage of oil through it is consequently very slow. In the process of filtration, all carbon suspended in the oil is removed.

After having passed through the filter sack, the oil passes out of the top of chamber B into chamber A, through the openings L. Here the oil is subjected to a much higher temperature, which is regulated to a point where it will just evaporate the water and fuel oil, but still remain well under the temperature point where there is a possibility of charring or breaking down the oil.

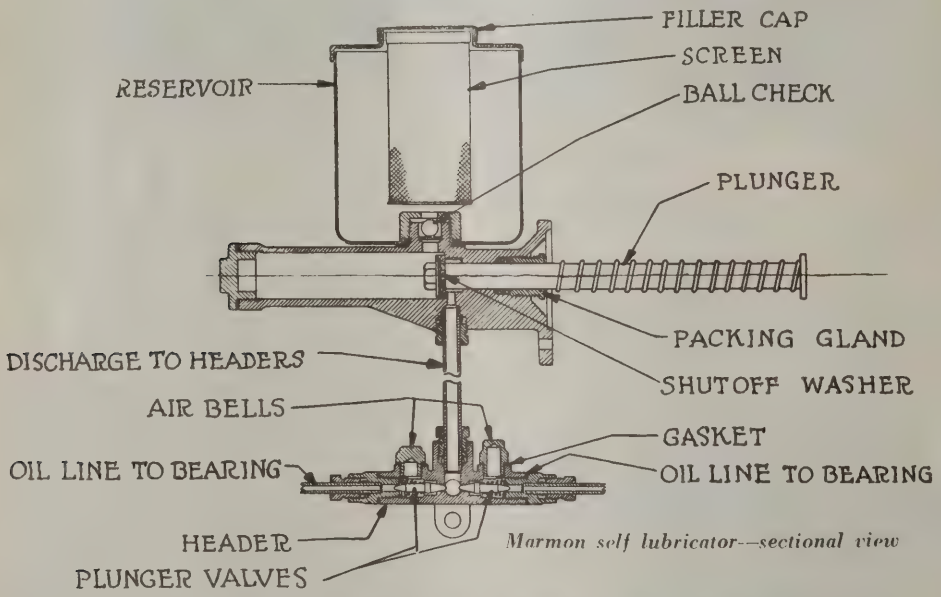
As the temperature of the oil increases, while in chamber A, water, which is in emulsion, is quickly turned to steam and is drawn off through the vacuum lead F to the carburetor opening. As the temperature of the oil continues to rise in chamber A, the process of distilling fuel oils out of the lubricating oil takes place. These, too, are vaporized and pass off through the vacuum lead F. The lubricating oil continues to rise in chamber A until it reaches a level almost at the top of the float D.



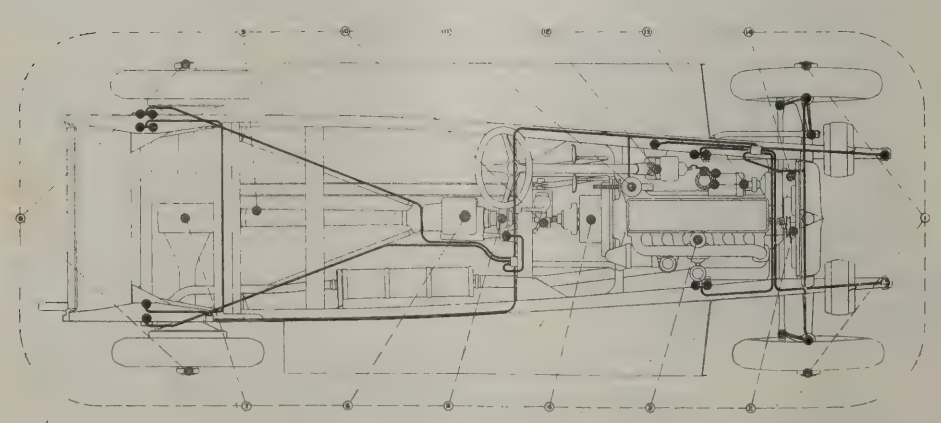
Picture above shows Marmon double ignition distributer disassembled. Note six-sided cam operating two breakers, each one controlling a coil for double ignition. Picture at left shows two rotor buttons and 12 contact points

Also the tube G is filled with oil and when the lubricant in chamber A reaches a point, level with the highest point in tube G, this tube becomes a syphon and seeks to draw off the oil in chamber A. Due to the action of the carbureter intake on the end of the tube F, a vacuum is created in the upper part of chamber A. So long as this vacuum exists, tube G, the syphon, cannot become operative.

It is therefore necessary to create a condition of atmospheric pressure in the upper part of chamber A, and this is done by means of the float D. When this float rises, the valve I at the top of tube E is opened and air rushes in from the crankcase through E to create atmospheric pressure in chamber A. At this point, the syphon in tube G becomes operative and draws off all of the oil in chamber A. With the oil level again lowered, float D lowers to close the valve I and the operation of distillation in chamber A is repeated.



Marmon self lubricator—sectional view



Marmon self lubricator chassis layout

Displacement Type Plunger Pump

The Marmon self lubricator takes care of all spring shackle bearings, all front axle bearings (except wheel bearings), tie rod bearings and two drag link bearings. The system makes use of a displacement type plunger pump located on the dash and operated by the driver's right foot. Oil is fed by gravity into the pump from a tank, a ball check preventing a return flow of oil to the reservoir when the plunger is operated.

From the pump the oil is forced to three main points on the chassis called "headers" for distribution to the various bearings. These headers measure the quantity of oil going to the bearing. The controlling devices consists of small double-end plunger valves held in place by light spring pressure. An air bell is placed immediately above the plunger of each valve and the size of this air bell determines the amount of oil for the bearing.

As pressure is built up against the plunger valve, it is unseated from its normal position and seats itself in the opposite direction, preventing any flow of oil to the bearing. As the pressure increases, the air in the air bell is compressed by the liquid which flows in.

Immediately the pressure is reduced by allowing the main pump to return to its normal position, the plunger valve reseats itself in its normal position and the oil that has entered the air bell is forced out and to the bearing by the air pressure in the air bell.

Four New Types of Radio Receivers Announced

R. C. A. Also Adds New Tubes

FOUR new types of radio receiving sets, three new types of loud speakers, and two types of current supply devices were formally announced by the Radio Corporation of America at a recent dinner and demonstration to the trade press at the Hotel Commodore, New York City. A series of five new types of vacuum tubes, supplementing but not replacing previous types, and the adoption of standard bases for the complete line of tubes, were previously announced.

Foremost among the new model sets is Radiola 30, embodying the new R. C. A. eight-tube superheterodyne, Radiola loud speaker Model 100 of the cone type, the whole capable of operation direct from the 110-volt alternating current house lighting mains. The battery eliminating devices employ the new Rectrons, which are vacuum tube rectifiers able to convert lighting current into the required "A," "B," and "C," voltages. No antenna is required with this model. It retails for $575, complete.

Radiola 28, a desk model, is an 8-tube superheterodyne, dry-battery operated, which can be used with the ordinary loud speaker or in conjunction with the new combination power amplifier-rectifier-loud speaker. It lists at $260, less batteries and speaker.

Radiola 25 is a second harmonic, six-tube superheterodyne which can be used with any of the R. C. A. or other loud speakers. It sells for $165 with Radiotrons but without batteries.

Radiola 20 is a new type of five-tube, balanced radio frequency receiver which differs from the conventional in that it employs regeneration. It sells for $102.50, without vacuum tubes.

Radiola loud speaker 104 has built-in amplifiers and rectifier tubes in conjunction with cone speaker. It is capable of tremendous volume and pure tonal quality. It sells for $245, with all necessary vacuum tubes.

Radiola loud speaker Model 102 is supplied with a rectifier-amplifier unit by means of which it can be operated direct from the lightning mains, drawing therefrom grid, plate and filament voltages. It is of the cone type. The retail price with vacuum tubes is $140.

Model 100 loud speaker is a cone type speaker selling for $35.

The new rectifier units, R. C. A. Uni-Rectron Model AP-935 and R. C. A. Dup-Rectron Model AP-937 supply "B" battery current from the lightning mains. The former includes also a stage of power amplification. Either can be attached to prevailing types of receiving sets. They sell for $105 and $65 respectively.

Vesta Radio "A" Battery

THE Vesta Battery Corporation, Chicago, announces that its low priced competition line of Vaco Batteries will be supplied as "A" Radio batteries at regular prices.

This provides Vesta dealers with four lines of "A" Radio batteries, consisting of the "De Luxe", "EAU," Standard and Vaco.

The "De Luxe" is furnished only in the 100 ampere hour size, but the other lines are supplied in various capacities.

There are also complete lines of Vesta



Vesta "A" battery

"B" Radio Batteries, and the Vesta Chemical Charger, for charging "B" batteries.

The revised edition of Vesta Bulletin 102, illustrating and describing these lines, and giving interesting battery information, will be gladly supplied to interested dealers.

Good Show in Los Angeles

LOS ANGELES.—The third annual National Radio Exposition, which opened in Los Angeles September 5th and continued until September 12th, was by all odds the largest and most successful show of its kind ever held in Southern California. A total of 175 exhibitors engaged every available display space in the large auditorium on the grounds of the Ambassador Hotel where the exposition was held. Every known type of radio was on display from the small tube instrument little bigger than a matchbox, to a huge multi-tube set capable of picking up programs from any point in the civilized world. There were machines that send photographs by radio, others clicking off printed matter like a typewriter without a human hand touching, and all controlled by wireless.

There was a radio set to please everyone, and from prices varying from less than a dollar to more than $1,000. A complete broadcasting station enclosed in glass provided by the Radio Corporation of America, was in constant communication with an airplane that soared a thousand feet over the auditorium every afternoon.

Radio jobbers, distributors and dealers are enthused over the prospects for radio equipment in the Southern California market this year. At a preview meeting held just before the show was opened to the public, it was generally agreed among the representatives of all branches of the radio business that this market will yield unusually well this season.

Waldo T. Tupper was managing director of the exposition. J. A. Hartley was chairman of the finance committee; C. A. Stone, chairman of the arrangements committee, and J. W. Boothe, chairman of the publicity committee. Serving on the various committees were L. E. Taufenback, W. D. Scott, Lombard J. Smith, R. B. Yale, H. C. Braden, F. D. Hutchinson, H. W. Mason, C. H. Mansfield, Al Meyer and C F. Hall.

Radio Operates Cars

RADIO automobiles operated by remote control short-length waves will be a feature attraction at the Wisconsin Radio Exposition to be held in Milwaukee, Nov. 11 to 15, inclusive. Maurice Francill of New York will operate a driverless automobile through downtown Milwaukee, making it conform to all traffic regulations. Later during the exposition he will operate two cars in the same manner and on the closing day will make four cars race each other, hold hill climbing contests, cut each other into curbings and perform other stunts. Seventy-five per cent of available booth space at the exposition has already been taken by exhibitors.

Dealers Meet in Alabama

DEALERS in Atwater-Kent Radio sets and parts for the state of Alabama, gathered at Birmingham on Aug. 26 for their first annual convention. The meeting was held at the Birmingham Electric Battery Co., state distributors, and Ed Henley, president of the company, presided over the meeting.

The dealers gathered promptly at nine o'clock to hear the merchandising plan of their company for the coming radio season and President Henley opened the meeting with a short speech of welcome. Julian Schwartz, automobile editor of the Birmingham News followed with an interesting talk on newspaper advertising.

Automotive Leaders Praise Trade Press

A. L. Reeves, M. L. Heminway and A. H. Bartsch Among Speakers Who Predict Continued Progress of the Industry—C. A. Musselman Tells of Benefits of Publishing Merger

At the annual sales conference of the Chilton Class Journal Company, held in Philadelphia at the publishing headquarters during the past week, which was attended by all of its advertising salesmen from various parts of the country, a great deal of emphasis was given a key-note slogan "Know your stuff," which emanated from A. H. Bartsch, general sales manager of the American Bosch Magneto Corp., Springfield, Mass.

Mr. Bartsch was one of the speakers at the conference and also at the banquet held at the Union League on Friday evening as were Alfred Reeves, general manager of the National Automobile Chamber of Commerce and M. L. Heminway, general manager of the Motor and Accessory Manufacturers Association.

Mr. Bartsch stated that a new note has been sounded in the merchandising of automotive products; that during an era, now passed into history, the salesman who had a good fund of funny stories, "personality," and an acquaintance in the trade could get along pretty well—or at least in many cases did get along pretty well.

But today the salesman who tries to get by without a specific knowledge of his merchandise, a definite knowledge of his competitive market, and a thorough conception of the customer's needs, is a failure—both to himself and the company he represents.

Superficial Salesman Passing

Mr. Bartsch made it quite plain that the superficial salesman is rapidly passing from this industry and trade. He said that another negative brand, the man who is forever discussing reasons why "it can't be done," is also speeding toward the exit turnstiles.

"The salesman of today and of tomorrow," he said, "is the man who, when he enters your office has something really constructive to say—and says it. Such men are welcomed by the executive who sits in the buyer's chair. The inefficient salesman who, perforce, receives scant consideration at the hands of such a buyer may tell you that the buyer is hard boiled and crusty. Well, he has got to be when empty handed salesmen attempt to monopolize his productive time."

C. A. Musselman, president of the Chilton Class Journal Company, upon opening the conference, addressed the salesmen upon general subjects relating to policy, etc. Among other things he said:

"Now, for the first time since the merger of the Chilton and Class Journal companies we find our reorganization practically completed and the decks cleared for action. This merger has been as beneficial to the industry as it has been to us.

"Our internal problems have been minimized and should find us turning outward toward sales possibilities instead of inward toward problems of administration.

"This meeting is the first under the new order, and I hope the knowledge of our present ability to go forward will be as inspiring to you men in the field as it is to us who have been making plans for this turn of the tide.

"There have been many changes, some of a radical nature, since the two publishing interests came together, but I believe the rank and file of the organization are fully convinced that these changes were not only necessary but inevitable.

"It is true that an individual or a corporation cannot go forward if it remains in a rut. Ruts create resistance and when riding in them the slower ones ahead cannot be passed. Let us all take heart in an appreciation of the fact that we are out of the rut.

"Great changes have occurred in the manufacturing and merchandising of automobiles and automotive products. Comparable changes have been made, and are being made, in the publishing service we are rendering the automotive manufacturers.

"You men who represent us in the various territories must be constantly mindful of the new order of things. Your contact with our clients and prospective clients, must be on the basis of serving those contacts faithfully, honestly and well with a group of papers which specifically function to specific needs—whether those needs be manufacturing, wholesaling or retailing the products of the greatest and most interesting of any industry the world has ever known."

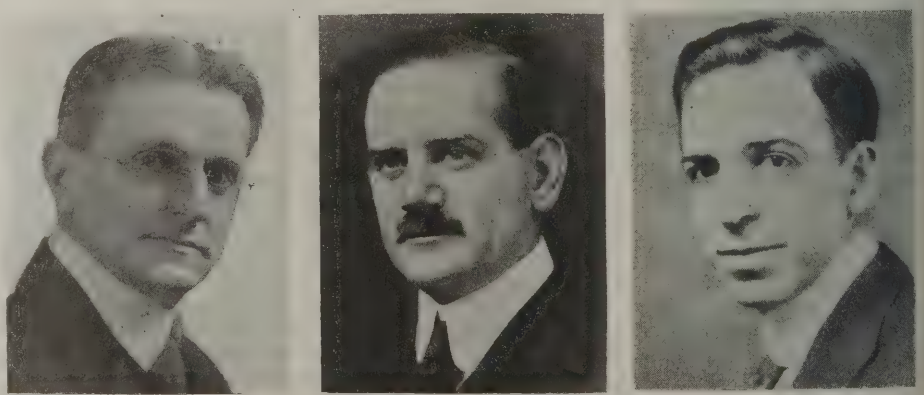
At the conclusion of the convention, on Saturday at noon, Mr. Musselman stated:

"A company with ample finances, with the leading publications, and the right men directing it, such as we find on the United Publishers Corporation board of directors, is one so well entrenched that it is unassailable so long as the manpower is of the quality we have in this organization.

"You on the firing line are more fortunate than many men I know of on other sales staffs, because you have as your sales director a man who understands selling, a man who understands human feelings, a man who is tolerant and helpful, and can lead by example.

"Therefore, I know of nothing more fitting than to give a rising vote of confidence and also of thanks to Joseph S. Hildreth, who is ever looking after your interests."

Guests Who Spoke at Chilton Class Journal Sales Convention



From left to right: M. L. Heminway, General Manager, Motor & Accessory Manufacturers' Association; Alfred Reeves, General Manager, National Automobile Chamber of Commerce; A. H. Bartsch, General Sales Manager, American Bosch Magneto Corporation, Springfield, Mass.

At Chilton Class Journal Sales Meeting



Group of those attending Chilton Class Journal sales convention

At the conclusion of his welcome to the staff Mr. Musselman turned the conduct of the sessions over to Mr. Hildreth, vice-president and sales director.

Alfred Reeves, New York, general manager of the National Automobile Chamber of Commerce in his address said:

"Do not let any one minimize the importance of trade papers in the automotive industry. This has been a big, fast-moving and fast-growing industry, but it has been guided very largely by the trade papers.

"The surveys which you have made in the past have been very helpful. Information is valuable, and the kind we can always depend upon getting from you is especially valuable to those executives throughout the industry who are looking ahead and planning for the future.

"You men in the advertising end of this business are big factors in the industry. Carrying news of high value to the industry the trade paper is of great service and I do not know of any industry in the country where they have been of greater service than in the automotive field.

"It is axiomatic that where you find good trade papers you also find a good, successful, co-operative industry. We want good, independent, thinking papers which will not hesitate to constructively criticize and to comment on the evils of the industry. I am opposed to 'association organs'.

Two Things for Dealers to Do

"There are two things a successful automotive dealer must do: first, read his daily newspaper every day, and, second, read a good trade paper regularly.

"There is room for improvement in automobile advertising. In the class of certain advertising that has come out within the last thirty days you could take one firm name out of a piece of copy, put in another name—and the argument would apply with equal force in either case.

"We have a great big field because the motor car is an article of universal desire. It is going to increase in numbers and in use. We are making thirty-one miles of automobiles every working day of the year.

"Bankers tell me that the automobile business has been the most wonderfully conducted of any business in this country, especially during the first six months of this year. A good measure of credit for this desirable condition of affairs belongs to the trade papers. During this period the dealer made money, the industry made money, there were no price cuts, and no new model announcements until after the first of July, which is as it should be.

"Automobile financing is the best of any being done in this country. Sixty-five per cent of all cars manufactured are sold on time, but the loss to the finance companies is less than two-fifths of one per cent.

Three Normal Problems

"The automobile industry has three normal problems: Engineering, that is taken care of; production, which has been mastered, and, third, sales, advertising and distribution.

"In this third problem you, and the publications you represent, can continue to be highly helpful.

"I want to congratulate you on your magnificent plant and your organization. A big organization has advantages which a small one can never have. Hence your advantages are big.

"If you are going to get results you must have team work. Many times you, as individuals, are obliged to do things you would rather not do, but those things are necessary parts of successful team work. Keep up the Chilton Class Journal team work."

The next speaker was General Manager M. L. Heminway of the Motor and Accessory Manufacturers Association, who evidenced a considerable degree of optimism for the future of the industry and, like Mr. Reeves, stressed the important part taken by the principal trade papers in making this the greatest and fastest moving industry of all time.

William M. Webster, commissioner of the Automotive Equipment Association, was scheduled to speak but could not be present owing to a death in his family.

Speakers at the banquet, in addition to Messrs. Reeves, Heminway, Musselman and Hildreth, were Charles G. Phillips, New York, president, and A. C. Pearson, New York, vice-president of the United Publishers Corporation, of which the Chilton Class Journal Company is a component part.

Mr. Phillips spoke on the subject of "Empty Hands" and laid particular stress upon the mental and other equipment necessary for the present day advertising salesman if he is to be successful.

Mr. Pearson outlined to his nearly one hundred auditors the incomparable advantages they possess in having access to the industrial and merchandising laboratories of the United Publishers Corporation in obtaining authoritative market analyses and trade surveys, not only automotive but those which deal with other United Publishers Corporation units, including iron and steel, hardware, textiles, shoes, leather, etc. He pointed out that these broad research facilities are available to any Chilton Class Journal Company client who can use them.

Position of U. P. C.

He further stated that the U. P. C. is the largest business paper publishing company in the world, and that in the publishing of its periodicals the printing was done upon paper made in the U. P. C. paper mills, from wood grown in the corporation's forests, that the company owns its own engraving and printing plants and, except for the printing inks used, is entirely independent of outside sources of supply.

During the sessions of the sales conference various of the Chilton Class Journal executives and department heads furnished convincing evidence that the automotive industry and trade are in better condition today than ever before, that 1926 will prove bigger than the current year, and that the Chilton Class Journal publications are in stronger position than at any time in automotive history to render both industry and trade an improved editorial service, with circulation distributions virtually blanketing the fields covered.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ^ ELECTRICAL ^ FLAT RATES
SHOP ^ LEGAL ^ PAINT & TRIM ^ ACCOUNTING

Schebler Model S Adjustments

Q. We have a new model S Schebler carbureter on a Reo six which has been run 14,900 miles. We cannot get this to run right at low speeds. The car will not run evenly much under 10 miles per hour, but at other speeds it is all right. It pulls better on a slight grade. The car has new plugs and had valves ground. J. E. Worster, Old Point Garage, Madison, Maine.

According to our specification tables the latest Reo car is shown as having a Schebler carbureter, but in the Reo instruction book the Rayfield carbureter is shown. In accordance with your request, however, we are showing an illustration of the Schebler carbureter and also giving instructions for making adjustments which are as follows:

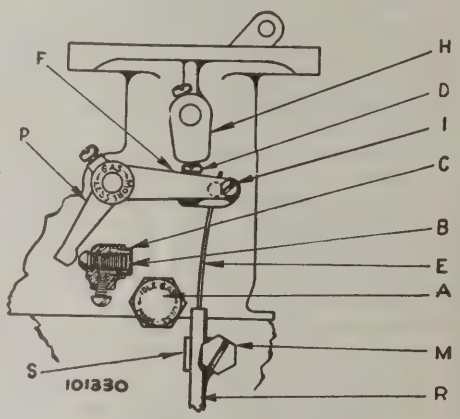
Idle Adjustment.—Turning the idle adjusting screw (A) to the right (clockwise) gives a lean mixture. Turning it to the left (counter clockwise) gives a richened mixture. This adjustment is not sensitive and can be turned from three to ten notches without seriously affecting the idle.

The idle adjustment should be set so that by depressing the air valve slightly (about 1/32 to 1/16 of an inch) the engine will start to cut out, showing that the idling mixture is about right. If the mixture is too lean the engine will stop when the air valve is depressed slightly. If the mixture is too rich the engine will speed up slightly on depressing the air valve and the air valve will have to be depressed considerably before the engine cuts out.

Important.—If the idle adjustment is turned to the right (clockwise) too far, the air valve will not seat, since the needle is shut off too far. Turn to the left or (counter clockwise) until air valve seats and adjust as explained above.

Range Adjustment.—This adjustment is only effective in the driving range at speeds from 20 to 40 miles an hour and does not affect acceleration or hill climbing. This adjustment as shipped from the factory will usually be found to be the best unless it is necessary to give a lean or richened mixture at speeds from 20 to 40 miles an hour. Turning the range adjusting screw (B) to the left (counter-clockwise) gives the driving range a lean mixture. Turning it to the right (clockwise) so that more of the threads of the screw (B) are exposed gives the driving range a richened mixture. To obtain the original setting as shipped from the factory, set the head of the range adjustment screw (B) flush with the range adjustment bushing (C). If the range adjustment is changed it is necessary to readjust the idle mixture.

High Speed Adjustment.—This adjustment as shipped from the factory ordinarily need not be changed. This adjustment is not sensitive to one turn in either direction and is effective only at wide open throttle running. In changing this adjustment try it on a hill after each change for best results. In extreme cases it may be necessary to furnish a leaner or richer mixture for wide open throttle position. The adjusting cam tappet screw (D) is turned to the left (counter clockwise) to give a richened mixture and turned to the right (clockwise) to give a leaner mixture.



Reo Six carbureter adjustments

To obtain the original setting as shipped from the factory, the head of the range screw (B) should be flush with the range adjustment bushing (C). With throttle wide open adjust the cam tappet screw (D) until there is about 7/32 to 1/4 of an inch space between the dash control lever (P) and the end of the range screw (B).

FIRST ESSEX TO USE TIMING CHAIN

Q—What was the serial number of the last Essex four-cylinder car which used timing gears or what was the serial number of the first car which used chain drive at the front end.—Russel W. Moore, 908 E. Marshall Street, Paris, Ill.

The first Essex four cylinder cars which had chain drive at the front end were as follows:

Phaeton	620945
Cabriolet	842961
Coach	512041
Chassis	900048

All cars previous to these numbers were equipped with metallic gear front end drive. This information is furnished through the courtesy of the Hudson Motor Car Company.

When a Car Bucks—What to Do?

Q.—We have a Ford coupe that bucks between 15 and 20 miles per hour, this being a 1925 model. The car ran perfectly for the first 2½ months and began bucking, at which time we began to look for trouble. First operation included reseating and grinding valves, testing intake manifold for leaks with gasoline, replacing new timer wire, timer and roller, inspection of coil box connections and porcelain and plugs, also adjusted valve stem clearance to .008 inches, with no better results. The second operation included refitting pistons and rings after which we had 50 lbs. compression in each cylinder under the compression gage. Also tightened rear hubs on axle shafts, replaced universal joint with new one and inspected transmission which seemed to be o. k. Have adjusted commutator pull rod to right position. Car runs fine for about 75 to 200 yards then the bucking starts and continues until car is speeded up. George N. Smith, Meridian, Texas.

We would recommend your testing to see whether the spark misses or not before you do any more work. Disconnect one spark plug wire at a time and with the engine running at a speed corresponding to the speed at which the trouble occurs, check the spark. The end of the high tension wire should be held about 3/16 inch from the cylinder block and the spark should jump regularly. We suspect that a coil is giving trouble and while you mention checking the coil connections you do not say that you tried a new set of coils.

Even if the spark is o. k. it is possible that the plugs are bad and we would recommend your using a set of plugs from a car which is operating all right. Another possibility is that the carbureter is adjusted to give too rich a mixture or that the float is not operating properly and occasionally permits flooding which would give too rich a mixture and cause the engine to gallop. You might try a new carbureter as this would be a simple test to make.

WHICH WAY DOES A BELT GO ON THE PULLEY?

Q.—Which way should a leather belt be applied to pulley, smooth side of belt or rough side to pulley? Petterborg-Nash Motor Co., Preston, Idaho.

The hair or grain side should be against the pulley. One side is as good as the other as far as friction is concerned. The strength of the belt, however, comes from the inner or flesh side of the hide. As the belt goes around the pulley the outer portion is stretched and carries the greatest amount of the driving strain, consequently, this outer portion should be the flesh or rough side.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

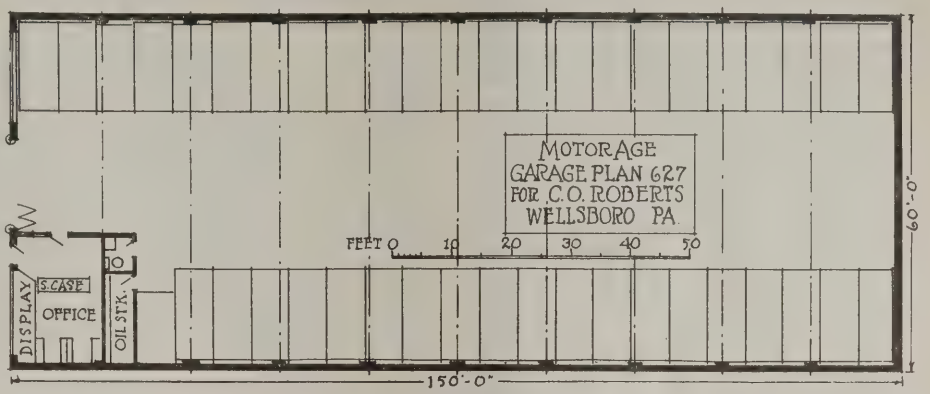
A Storage Garage With Ample Aisle Space

Q.—I am planning on building a one-story garage 60 ft. x 150 ft. and would be pleased to have you offer some ideas and plans regarding same. C. O. Roberts, Main Street Filling Station, Wellsboro, Pa.

We judge from your letter that you want a purely storage garage, but as most garages of this sort handle a few accessories, we have arranged for a show window, show case, small office and accessory stock room. This building will be a little wider than absolutely necessary, but we consider this a very good fault as it gives you a wider aisle and makes it much easier to handle the long cars with their bumpers, etc. The wide aisle space will also make it possible to store trucks, if business of this sort is available in your vicinity. This building should have a trussed roof, the trusses spaced about as indicated, and they may be either of wood or steel the wood getting as favorable an insurance rate as the steel.

It would be well to make your front entrance wide enough to permit traffic both ways, but of course, this is not absolutely necessary. The heating plant for a building of this kind is usually installed in a small basement arranged in one corner of the building. Some communities require an outside entrance to this basement and if this is necessary where you are, the entrance would have to be from the alley if there is one or from the street in front.

Steam is usually preferred as a heating medium as it is cheaper to install and quicker of action than hot water and gives a better distribution than hot air unless some sort of blower system is used.



It would be advisable to have some skylight here even if the building is not surrounded and can have plenty of side windows; the aisle would be dark without them

REDUCE THE OUTPUT TO MAKE GENERATOR RUN COOLER

Q.—We have a Wagner generator, model E M 155 on a 1918 Saxon, model S—4-T. This generator charges 18 amperes and seems to be all right except that it overheats. New brushes have been fitted and the commutator turned down, but it gets so hot you can hardly bear your hand on it. It is correctly wired according to an automobile hand-book. Should the cutout be grounded? There is no sparking at the brushes and all wires are in good shape. It has me stuck. C. A. Harrington, 10 Brookside Park, Milton, Mass.

We believe that 18 amperes is too much output for a machine of this size. Twelve amperes would be sufficient in summer and 15 in winter. The cutout should be grounded and if it is not grounded the generator will not cut in and will not charge the battery by itself and will only charge if the cutout points are closed by hand. Accordingly if the cutout operates all right you know that it must be grounded. We do not believe there is anything wrong with the machine and that the heating is nearly normal for this much current output.

LEGAL QUESTIONS ANSWERED

By WELLINGTON GUSTIN

of the Chicago Bar

Q.—Last May I contracted with an advertising company to furnish me "One single column cut series D cartoon and reading matter weekly for one year" in advertising my automobile repairing and radiator business. It also states that the contract cannot be cancelled without written consent of the company. Now the contract does not define or describe the Series D line, the only description I have of it is the solicitor's description and the samples he showed me. The cuts they are sending me are not living up to the description he gave me nor as good as the samples he showed me. Also the reading matter half the time cannot be used at all, branching off into other lines such as fixing sewers and guttering roofs. I have refused to accept the cuts at the postoffice and refused to pay for them on the assumption that a contract that does not bind them to live up to their agreement does not bind me to live up to mine. Can I do this or do I have to pay for anything they care to send? Pedersen's Garage, Cozad, Neb.

Regarding your contract for advertising. You are correct in the assumption that a contract which is not binding upon both parties is not enforceable in law. This kind of contract is not binding because of its very quality of lacking "mutuality" as termed in law. While you are right on this rule of contracts you may be wrong in your conclusions. If you have contracted for delivery of a certain thing, you should consider whether you are getting what you bargained for. It is a rule of contracts that where an agreement is reduced to writing the written agreement supersedes all preliminary statements and offers and is presumed to more definitely state just what the agreement is.

But the contract may not embody all the terms of the contract and oral testimony may be resorted to in order to determine just what has been left out of the written part. For instance, where the description of a service sold is left out of the written agreement, I am of the opinion that your court would permit oral evidence as to what representations were made as to the kind of service, etc. Now the rule is that where goods are sold by sample and the goods delivered are not in accordance with sample, the buyer may return the goods and bring suit to recover money paid, or he may keep and use the goods and sue for the difference in value of the inferior goods to the sample. The statement that contract cannot be cancelled without written consent of the company means little in law. The rule is no party has a right to cancel a contract unless under a provision of the contract giving that right. The provision may indicate that the other party will not agree to a cancellation without suit. So, if by negotiations you are told you may cancel the agreement you should get the consent in writing, then you will have complied with the provision. Of course you are not required to pay for anything a seller cares to send and which is not in accordance with the contract of sale.

AN ELECTRICAL MYSTERY

Q.—I put on a new timer and roller on a Ford car but it would fire on two cylinders at the same time. Turning the engine by hand it would fire on three and four and then turning it farther it would fire on one and two. A new timer shell and new wires and tested coils were used but it worked the same way. After about an hour I found out the trouble and I wonder if there are any MOTOR AGE readers who could guess what it was. C. E. Loring, Loring Garage, Riverdale, Kansas.

Mr. Loring told us the answer to the above mystery. We are going to see if any MOTOR AGE readers can tell us what caused the engine to act this way.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Curing Oil Leak at Rear Main

Q.—Referring to your instructions, relative to stopping oil leak through the rear main bearings, 1924 Hupmobile 4. I wish to inform you that we got ahold of one of these cars last week and that we followed your instructions. To date the car has been driven a few hundred miles and the leak has increased. Also the oil pressure is recording on dash gage much lower, in fact, after car is warmed up and at from 25 to 30 miles per hour, it records only from five to seven pounds pressure. Will you please see if you can investigate this case further and get me some additional information on this trouble. D. S. Milne Garage, Fairmont, Minn.

The following instructions have been supplied through the courtesy of the manufacturers of the car, the Hupp Motor Car Corporation, Detroit, Michigan. The bulletin covering the repair of the oil leak is as follows:

"Certain conditions cause rear main bearing oil leaks and in most cases they can be corrected by chamfering the top edges of the lower bearing as shown at the lower left sketch of illustration No. 235. Aggravated cases sometimes require a tube installation to return surplus oil to the oil pan. Follow the chamfering instructions first.

"To chamfer bearing remove rear main bearing cap and file the babbitt along the upper end of the bearing from the circular oil groove to the inner end of the bearing which is nearest to the crankshaft counterweights. Do not file beyond the oil groove. Be sure that the oil retainer plate screws are tight and that the plate seats firmly at all points along the gasket; also be sure that the plate does not touch crankshaft.

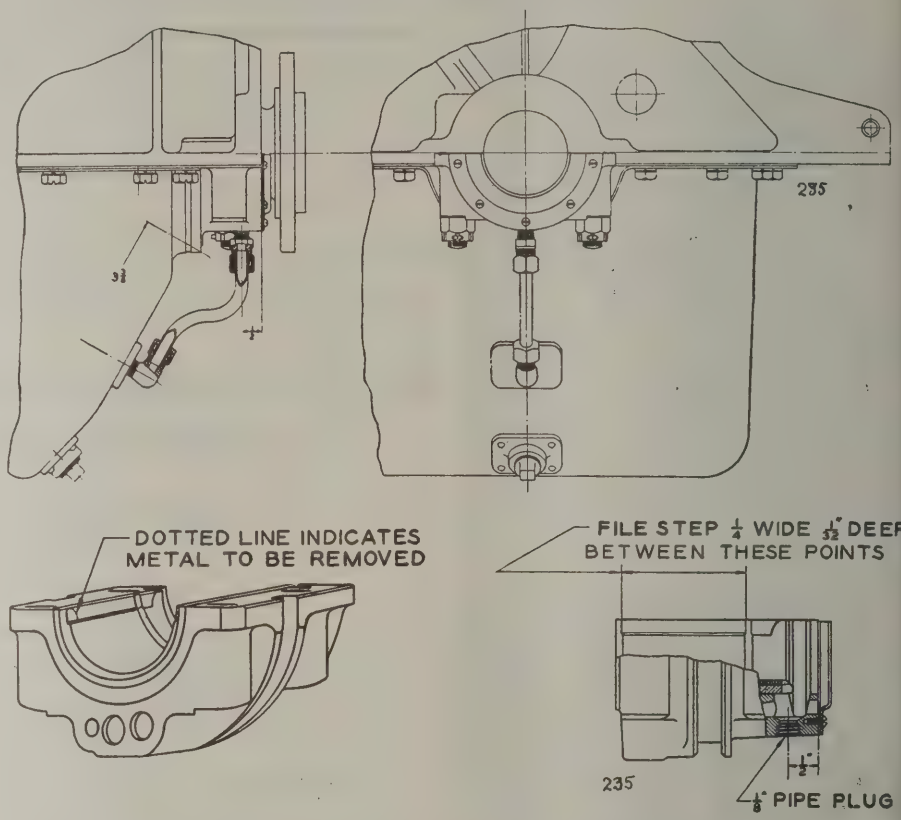
Amount of Clearance Required

"One sixty-fourth of an inch clearance is required at all points between crankshaft and plate. If this cannot be obtained by shifting the position of the plate it may be necessary to use a half round file on plate to obtain this clearance. The main bearing shims should not touch the crankshaft in rear of the oil fling and must have 1/16 inch clearance at this point. If necesary cut ends of shims with snips. While bearing is removed install a ⅛ inch pipe plug for the purpose of tube installation should this become necessary. Drill a ⅛ inch guide hole in the center and at the bottom of bearing cap oil trap ½ inch from the rear end of cap casting as shown at the lower right hand sketch of illustration No. 235. Follow this by drilling 11/23 inch hole. Operate drill from outside of cap—tap and install a ⅛ inch pipe plug securely.

"Remove the necessary shims from rear main bearings until a drag can be felt on the crankshaft when bearing nuts are tight. Use gasket glue or shellac along top and side surfaces of bearing cap when assembling.

"On engines from No. R-100,000 to R-100,019 always renew the new cork inserts on each side of rear main bearing shim. Install oil pan and check engine for leak. If above procedure does not correct the trouble remove oil and procedure with the following instructions.

"Clean back end of oil pan thoroughly and drill a ⅛ inch hole in the center of pan, 3⅜ inches from bottom of oil pan packing surface. Make up a brass plate ¼ inch thick by 1¼ inches square. Drill a ⅛ inch hole in center of plate and solder same to oil pan securely, lining up the two ⅛ inch holes. Using the ⅛ inch hole as a guide drill plate and pan with 11/32 inch drill and tap hole with ⅛ inch pipe tap. Then install a ⅛ inch tubing elbow. Now remove ⅛ inch plug from bearing cap and install ⅛ inch tube coupling. Install oil pan. Cut a piece of 5/16 inch tubing 3¾ inches long and install a union nut and sleeve at each end connecting the two with bearing cap and oil pan elbow as shown in the two upper sketches of illustration No. 235. Be sure that tube enters coupling in elbow ¼ inch and that union nuts are drawn up securely. The parts required are one length of 5/16 copper tubing 3¾ inches long, one brass plate ¼ inch thick and 1¼ inch square. One No. 45400 pipe coupling, two No. 45402 sleeves, two No. 45403 union nuts, one No. 45404 union elbow.



Chamfering the bearing and installation of drain pipe will carry excess oil back to the crankcase

READER'S VIEWS ON CAUSE OF SHIMMY

From time to time I see readers asking the cause and cure for shimmy in front wheels, and your answers do not satisfy me. From my observations in over sixteen years at this work shimming at low speed is always caused by excessive tilt in the front axle. If bushings and pins are stiff and steering gear absolutely tight, it is possible to prevent shimmy even if the tendency is there. In many light cars it is common to see the tilt of spindle bolts up to and over one-half inch. The cure is to reduce the tilt to not over one eighth inch. This will also cure the tendency to pull hard to the low side of the road. On the small Overland lengthen the radius spring under the front axle. Phil Churchill, proprietor North Bend Garage, North Bend, Wash.

Clearing Up Electrical Trouble

EDITED BY A. H. PACKER

The READERS' CLEARING HOUSE

Too Many Secondaries Spoil the Sparks

Q.—We have a 1912 Stevens Duryea engine No. 509 from which the Connecticut battery system has been removed. We have a Bosch model V. D. switch with which we are using a Ford coil, not having the Bosch coil. Wiring it according to the enclosed diagram which is the original Bosch diagram we could get no results, at all, simply because we had a continuous flow of current in the primary winding of the magneto.

Again with the magneto points closed, we get a spark from the Ford coil, but this is impractical because the spark occurs on the compression stroke. We are under the impression that the Bosch V. D. coil is a low tension coil and have accordingly shorted the Ford coil secondary. It is our opinion that we have overlooked something and wish you would show us what that something is. F. L. Tighe, Central Auto-Electric Company, 2639 Harlen avenue, Baltimore, Md.

We are not going to try to straighten out your wiring diagram, but we wish to point out the way battery current can be used to strengthen a magneto spark at low speed and some of the pit falls that are encountered when an installation of this sort is attempted. The illustration shows the circuits of a high tension magneto as well as a coil shown connected at the right. When the magneto is operating normally it generates currents in its own primary winding, due to the rotation of the armature in the field of the permanent magnets.

Armature Magnetism Changed

The flow of current generated in this primary winding of the armature is through the interrupter contacts to ground and back to the primary. When the interrupter contacts open, the primary current is suddenly interrupted and there is produced a sudden change in magnetism in the armature of the magneto. This change in magnetism is more sudden than could possibly be produced merely by the rotation of the armature. For this reason the secondary winding which is also on the armature has a voltage generated in it which is much higher than could otherwise be obtained. The condenser in the armature which absorbs the arc at the interrupter points makes the stopping of the primary current still more sudden and thereby helps to raise the secondary voltage.

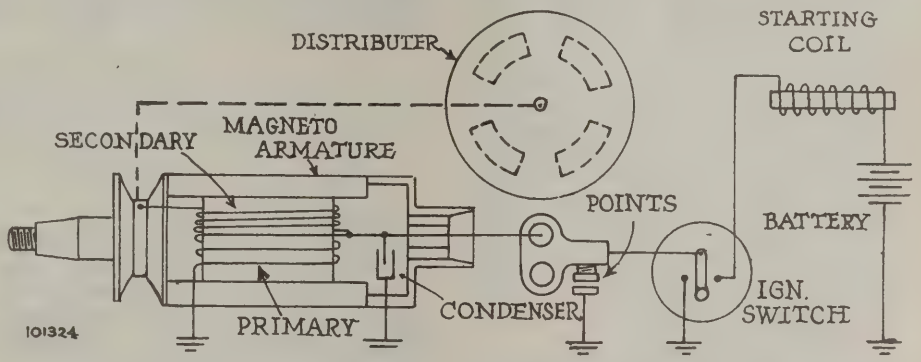
When the armature is rotating at very low speed the secondary voltage is correspondingly low and in some cases may not be enough to give a good spark at the plugs. Our recommendation from a practical standpoint is to have the magneto put in A-1 condition and then if the spark is insufficient to have an impulse coupling installed. It is possible, however, to get a hot spark at low speeds by using a battery and an extra coil. As the magneto already has its secondary winding connected to the distributer it is not feasible to use a Ford coil as you tried to do and if you short the secondary winding it has an effect on the primary which to a great extent neutralizes its action.

The coil required is similar to the coil used in a make and break system as used on some stationary engines, being nothing more or less than a coil of wire wound around an iron core, the core usually being made of a bundle of iron wire. Such a coil is shown connected with battery, switch and magneto armature in the illustration previously mentioned. With the switch in the middle position the magneto operates as a straight high tension machine. With the switch at the left the magneto is shorted so that this would be the stopping position. With the switch at the right we have a circuit from the battery to the starting coil and through the interrupter points or the primary to ground.

When the interrupter points are closed you will notice that they short out the primary winding, so that the battery current would not flow through it. The battery current, however, would flow through the starting coil and would magnetize its core. Then when the magneto is rotated and the interrupter points open there would be a sudden rush of current through the primary winding of the magneto armature due to the magnetic effect of the core of the starting coil. This sudden rush of current through the primary winding would suddenly produce magnetism, which in turn would generate a voltage in the secondary winding.

The difference between this condition and the one previously described is that the magnetism suddenly rises instead of suddenly dying away. A circuit of this kind will work with the ordinary high tension magneto when it is rotating very slowly. As soon as the rotation is appreciable, however, we find that there is voltage generated in the primary of the magneto armature which has the effect of strengthening two of the sparks and weakening the others, so that if we tried this scheme we would find that the engine will run on two cylinders and the other two will not fire, so that as illustrated, the scheme is hardly practicable.

To overcome this difficulty the Duplex magneto was made at one time by one or two concerns. This magneto was similar to a straight high tension magneto except that the interrupter cover had two semi-circular brass pieces or segments on the inside, these segments operating as a two part commutator. The interrupter carried two brushes which rubbed on these segments and the effect of the whole construction was to reverse the relative connection of battery and magneto armature at each half revolution. This had the effect of making all four or six sparks as the case might be, stronger, and at the same time reduce the tendency to weaken the magnetism of the magneto magnets. Any authorized electrical service station can tell you the approximate expense of installing one of the Duplex type interrupters and getting a suitable coil.



Experimental circuits for obtaining a stronger magneto spark at low speed

Impulse Coupling Preferable

On the other hand they can quote you on an impulse coupling to remedy the trouble you are experiencing. Referring again to the electrical problem, wish to point out that it is impossible to merely connect a battery to the magneto without using a coil of some sort or the interrupter contacts would constitute a short circuit and burn out the wiring and points. On the other hand a coil with a secondary winding cannot be used with a straight high tension magneto, although it can be used with a Dual magneto.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

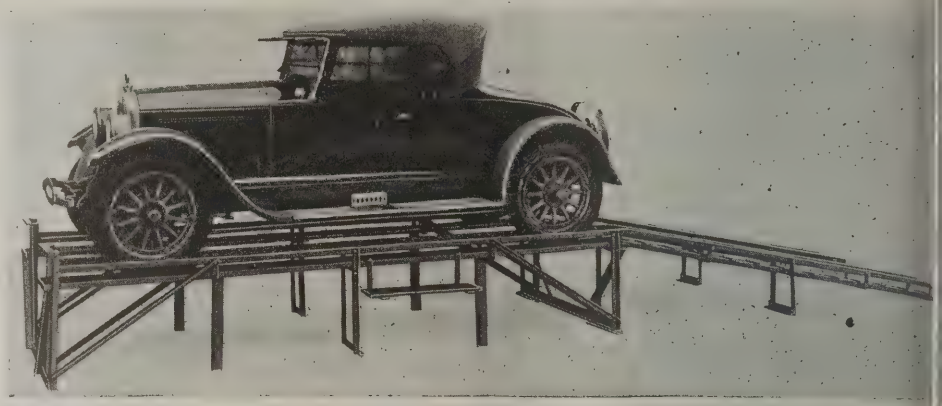
Flat Rate Means More Than Merely Adopting Fixed Prices

JUST because a shop may have a flat price for every operation it is likely to perform this does not mean no trouble ever will be encountered. There will be snags at times as with everything else. If such were not the case we should never need executives and managers for all other lines of business.

In using flat rates there must be a constant striving to make the system better. It is possible very often to perform some operations more quickly than the time limit set up for the job and on which the price to the customer is based. The live shop is always on its toes to develop new methods and equipment to cut down the time factor.

Putting the men on a piece work basis (providing the shop is large enough to handle a volume of work warranting it) produces an incentive for them to evolve new schemes to do the work more quickly and at the same time not sacrifice quality.

When you install a flat rate system you have just started to work. As time goes on you will be able to adjust prices and time schedules to suit your conditions more adequately.



THINGS THAT HELP FLAT RATE

Being able to get at the job is half the battle and when it is necessary to get underneath the car a raised platform or runway, as shown above, helps very materially. It gives the mechanics a chance to work in comfort and under such conditions they are bound to do a better job

Maybe the Flat Rate Manual Would Tell?

The other day a car owner found it necessary to take his car to a "garage" for repairs and was told he must buy a new rear axle housing, a bearing and several other parts. He had run the car and in some manner the pinion shaft housing broke away from the differential housing. Naturally quite a bit of damage was done. Also, the repairman said a new ring gear and pinion were advisable. While he was about it, the owner decided to also have the engine put in shape by regrinding the valves and taking up the bearings, installing new clutch disks and several other jobs. He was telling us about the work and we asked him what the job was going to cost. He said, "I don't know, you see they can't tell until they see how much work they have to put in on it."

Looks like flat rate still has to win over some garages and shops.

MOTOR AGE'S FLAT RATE FORUM

No. 32

FLAT RATES FOR OAKLAND CLUTCH OPERATIONS

Manufacturer's Official Designation		Time Hrs.	Min.
6-1	Clutch Assembly. Removed, refaced, any necessary part except clutch hub change, assembly replaced	4	
6-2	Clutch assembly. Removed, overhauled complete except leather and clutch hub and assembly replaced	3	
6-7	Clutch equalizer bolt removed and replaced		45
6-8	Clutch equalizer bolt removed and replaced (drilled out)		30
6-9	Clutch leather trued and fitted after assembly to cone		20
6-10	Clutch leather treated with neats foot oil or Fuller's earth		30
6-12	Clutch and brake pedal shaft auxiliary bracket. Removed and replaced	1	
6-13	Clutch pedal shaft freed up		30
6-14	Clutch assembly. Remove transmission, change clutch release bearing, retainer and nut and replace transmission	2	
6-15	Clutch release bearing oil kip removed and replaced and bearings oiled		15
6-17	Clutch release springs or support bearing removed and replaced	2	30
6-18	Clutch release spring or support bearing removed and replaced, (transmission down)		30
6-19	Clutch release bearing oiler tube removed and replaced		30
6-20	Clutch assembly. Clutch driven disc or clutch clamping plate removed and replaced, one or all	3	30
6-22	Clutch assembly. Removed, overhauled complete or any part changed and clutch assembly replaced	3	45
6-25	Clutch release fork or shaft removed and replaced (transmission in place)	3	
6-26	Clutch release fork or shaft removed and replaced (transmission down)		25
6-27	Clutch release shaft operating lever removed and replaced		30
6-28	Clutch driving bolt removed and replaced, one only		30
6-31	Clutch pedal removed and replaced		45
6-32	Clutch pedal adjusted		30

Operation 6-1, applies to models 34, 6-44, 34-C and 6-54, incl.
Operations from 6-2 to 6-17 apply to model 34 to 6-44, incl.
Operation 6-19 applies to models 34-C to 6-44, incl.
Operations from 6-20 to 6-28 apply to models 6-54.
Operations 6-31 and 6-32 apply to all models.

Flat Rates for Trucks

STATE TRADE SCHOOL.
Vancouver, B. C., Canada.

To the Editor of MOTOR AGE:

If you publish a Flat Rate Manual for motor trucks, we would appreciate it very much if you would forward a copy to us at your earliest convenience.

HAYES-SLUMAN MOTOR CO., LTD.

Excepting for the flat rates operations given in MOTOR AGE's Flat Rate Manual on a few light delivery cars such as Chevrolet and the Reo Speed wagon, we have not as yet brought out a flat rate manual covering the various makes of trucks.

You probably will appreciate the fact that it is much more difficult to make up a list of such operations for trucks, since the work involved is of a different nature than that found in passenger cars. Usually where trucks are operated in fleets it is customary for the owners of the trucks to operate their own maintenance shop and to them flat rate prices or time schedules are not so important.

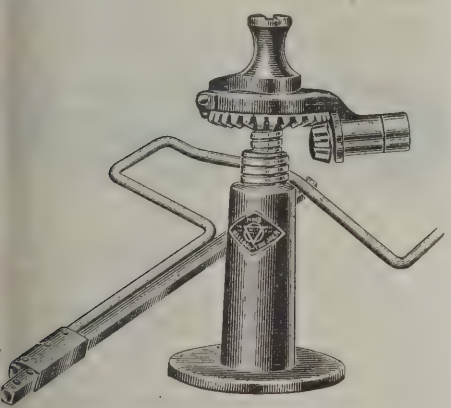
In the rural sections, however, where a shop often is called upon to work on a farmer's truck, for instance, it probably would be quite an advantage to be able to quote a flat rate price for maintenance work.

THE MARKET'S NEW OFFERINGS

Accessories -- Equipment — Supplies

Decker Shock Absorber

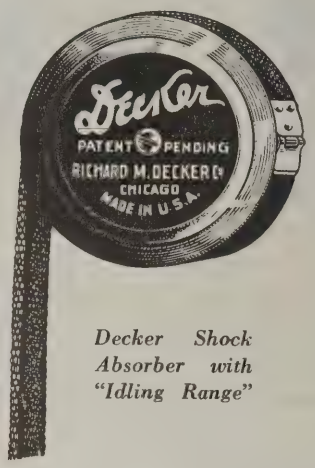
A SHOCK absorber which is said to control spring action of the motor vehicle "only" when necessary and which at the same time responds powerfully and efficiently when called upon by unusual road conditions, is being manufactured by the Richard M. Decker Company, of Chicago. This shock absorber, by reason of its "Idling Range" comes into action only when the riding condition ceases to be normal and up to that point leaves the springs of the car free to function as they should under normal requirements. In other words, it is designed to control excessive spring action. The "Idling Range" remains the same regardless of the load carried, automatically adjusting itself to changing weights. The working parts of the Decker Shock Absorber are enclosed in a heavy metal housing, being thus protected against dirt, water or other elements that tend to destroy efficiency. To service the device it is only necessary to remove the cover. Price for set of four (for all cars except Ford), $32.50. Price per pair for Ford, $17.50. Attaching charge extra on all cars.



National Standard Company's New Balloon Tire Jack.

Standard Auto Jack No. 18

A BALLOON tire jack which the makers say will serve the most extreme conditions is being produced by the National Standard Company, of Niles, Mich. The appliance is designated as Standard Auto Jack No. 18. It can be used under the lowest hung axles with the largest size balloon tires. A telescoping screw eliminates breakage of springs and other working parts. The telescoping feature of the handle permits its use at any length. The height of the jack lowered, is 6 and 7¾ in. The height, raised, is 14 and 15¾ in. The capacity is 2,000 lbs. and the weight of the jack is 7 lbs. It is suitable for a car weighing 5,000 lbs. The list price is $6.50.



Decker Shock Absorber with "Idling Range"

"Pressure" in Selling Over the Counter

High pressure salesmanship in the accessory store is all right providing the pressure is properly directed. The conception entertained by some of high pressure salesmanship is to coax, din and worry the customer until he is stampeded into buying... That is positively misdirecting the pressure and it is dynamiting future business.

In selling over the counter the sales pressure must be applied in a different manner than in other forms of selling. Yet in the general business system of the store there is ample room for "high pressure"—in the advertising, in the direct-mail campaigns and in other progressive devices for getting business.

Cultivating the good will of customers is a very profitable form of "pressure" and often the accessory dealer finds that the highest sort of pressure is, in fact—no pressure at all, to use the word more literally.



McCord's Cellular Radiator for Fords

Kelly Roadlite

THE Kelly Roadlite, manufactured by John B. Kelly, 4617-19 W. Harrison Street, Chicago, is attached to the front wheel spindle and therefore turns with the front wheels, giving full illumination of the road on curves as well as straight ahead. One or two lights may be used, depending upon the amount of illumination desired, for Ford, Chevrolet and Overland installation, but for other cars two lights are required. Two types of brackets and three types of studs are furnished to provide for practically universal application to all makes of cars. The brackets and studs are shown in the illustration. The lamp is made in two sizes, Model No. 1, 6¼ in. in diameter, priced at $5 each or $8.50 a pair, and model No. 2, 5½ in. in diameter, priced at $3.50 each or $5 a pair, at retail. The prices include necessary wire and switch.



Kelly Roadlite

Cellular Radiators for Fords

COMBINING many advantages in construction and service the McCord Type "B" Cellular (hexagonal) Radiator for Fords, is being manufactured by the McCord Radiator & Manufacturing Co. of Detroit. One feature is its triple-riveted side brackets which are strongly made of spring steel and which protect the radiator by absorbing the road shock and vibration before reaching the center core of the radiator. This feature is said to lengthen the life of the radiator. The radiators are tinned inside and out to afford protection against corrosion through the action of chemical or mineral substances in the water. The top and bottom tanks are constructed of heavy gage brass and it is said they will last the life of the radiator core. The McCord Type B core and shell are interchangeable with the regular Ford product. No. R-123, Type "B" radiator for Fords, complete 1916-23, lists at $16, No. R-124, Type "B", complete less shell, 1916-23, lists at $15, No. R-126 Type "B" radiator for Fords, complete, 1924-25, lists at $17. No. R-126, Type "B" radiator for Fords, complete less shell, 1924-25 lists at $16.

GETTING MORE OUT of the SHOP

Worthington Feather Valve Vertical Air Compressor

Worthington vertical "Feather" valve air compressors were designed to meet the demand for a small machine for use in garages, repair shops and small industrial establishments. They are made in two types: air-cooled and water-cooled. The air-cooled compressor is made in 2½x3 in. and 3½x4 in. sizes and is exceptionally well adapted for tire inflation. The water-cooled type is made in four sizes up to 6½x5 in. and is suited for supplying compressed air for one or more of the following uses: tire inflation; air-blast cleaning; pressure and air-mist car-washing systems; pneumatic jacks, lifts, hoists, drills, hammers and other tools; forced draft for brazing forges, etc.

Automobile-type construction was adapted in designing Worthington vertical compressors so as to obtain the long life, low upkeep and reliable service. Accordingly pressure forced-feed lubrication and accurate balance of reciprocating parts were incorporated.

The "Feather" valves used in these compressors are similar to those used in larger and more costly Worthington compressors. The valve proper consists of a strip of light, ribbon steel which, when closed, covers a slightly smaller slot in the ground face seat. The strip is restrained but not rigidly secured at the ends by a curved drop forged steel guard which allows the passage of air on either side of the strip. Quiet operation and maximum life is insured by the lightness of the valves and by the fact that there is no destructive impact. The valve itself is all but indestructible while the expense of renewals, which are seldom required, is obviously nominal being confined to the replacement of the valve strips.

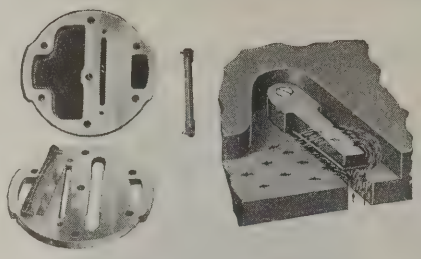
The suction and discharge valves and guards are identical and interchangeable. The openings for these valves are located on the same side of the cylinder. The cylinder head and valves may be removed without breaking pipe connections.

Another feature of the Worthington vertical compressor is forced-feed lubrication of all bearings. The oil is forced through drilled oil passages in the main crank-shaft and delivered to the bearings under pressure.

The piston is ground to size and fitted with three hammered piston rings. Special provision is made to wipe surplus lubricating oil off the walls and return it to the crank case.

The wrist-pin of hardened steel, ground to size, is held in the piston by a spring ring on each end.

The main bearings are of the two-part removable die-cast babbitt type and may be readily adjusted, removed and replaced. The shaft, crank pin and counter weights are drop forged in a single piece. The connecting rod is a drop forging of "I" beam section which gives maximum strength with minimum weight. All reciprocating parts are heavily counterweighted to reduce vibration and to prevent pounding of the bearings.



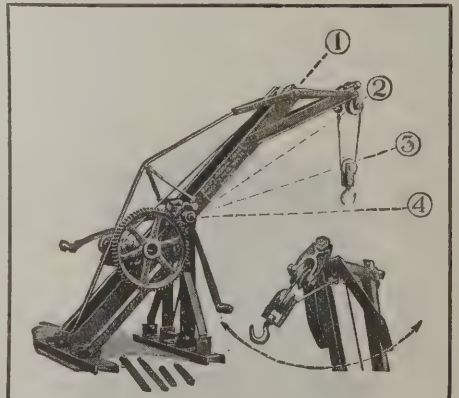
Details of the valve used in the Worthington compressor

Manley 2 Ton Quick Detachable Wrecking Crane

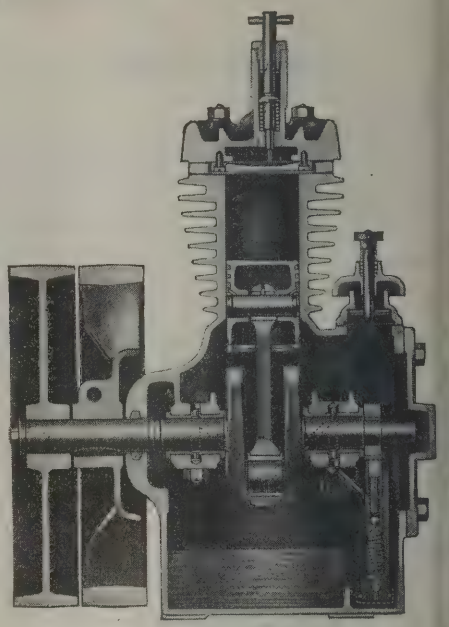
The Manley 2 ton quick detachable wrecking crane is built on exactly the same principle as the combination crane, except that it is designed to be almost instantly detached from the service car by removing two pins. When the rear pin is pulled out it allows the crane to swing back and by removing the king pin in the saddle the crane is free from the car. The hinged saddle folds out of the way on the car platform or may be completely removed by taking out another pin and two bolts. All of this requires about 3 minutes.

The tilting beam on the No. 102 crane is accomplished in the same manner as on the larger crane by changing the length of the links at the rear end, which allows the beam to tilt into any position. It does not interfere in any way with the quick detachable feature. The crane also has a swivel nose permitting a chain to pull on any angle and eliminates the possibility of its running off the sheave pulleys. Two handles are now supplied, enabling two men to operate the winch in case of extreme heavy loads. The price complete with hoist and 24 ft. of chain is $95 and without hoist and chain, $65. The swivel nose can also be bought separately for $8.50.

The crane is made by the Manley Manufacturing Co., York, Pa.



Manley quick detachable wrecking crane



Cross section of Worthington Feather valve air compressor in which the reciprocating parts are balanced

Mack's Wheel Pullers

Mack's wheel pullers are made in sizes to fit every car and so built that the shock is distributed, a pilot preventing damage to the threads while the threaded body prevents damage to the end of the axle shaft. Because of their short, sturdy construction they prevent an off center blow from springing the axle shaft. Heavy duty pullers are also made for trucks on special order. In use the hub cap of the wheel to be taken off is removed and the opposite wheel jacked up. Next the axle shaft nut is removed and the Mack's wheel puller screwed tightly to the axle shaft. The puller is then struck with a hammer the jar of which loosens the wheel. The carbonized pilot fitted to the inside of the puller is made a slightly loose fit and the body of the puller is made of machined steel, heat treated after machining. The mechanic's set containing five pullers which take care of practically every standard make of car, lists at $10.00. The smallest of these has a thread size 5/8 in. by 18 in. for such cars as Ford, Chevrolet, Star, Essex 6 etc. and the largest has a thread size 1 1/8 in. by 12 in. for cars as the Haynes 57. Buick Master 6. Fulton Model A truck, etc. Heavy duty truck pullers in sizes from 1 1/4 in. to 1 1/2 in.—12 S. A. E. list at $5.00 and $6.00 respectively. These pullers are made by the American Sharpening Machine Co., Kalamazoo, Mich.



Mack wheel pullers

EDITORIAL

More Roads Are Coming

IN this issue of MOTOR AGE is an extensive article on the progress being made in city and country in building streets, highways and parking places to relieve traffic congestion. The last few years of unprecedented increase in the number of motor vehicles have resulted in almost intolerable conditions in the vicinity of many large and medium sized cities. Even in the less populous centers the available paved highways frequently have been found inadequate.

But there are many encouraging signs. Not only are the states and counties building modern highways, but cities of the first rank are spending millions of dollars to open up the bottle necks and give free flow to the traffic that comes from both town and country.

In and near such cities as Chicago the delay and traffic jams that result from narrow and inadequate outlets, railway grade crossings and devious routes that have to be followed cost the motor vehicle users vast sums. That is why cities like Chicago can afford to put many millions of dollars into the construction of such traffic expedients as the solid concrete double-decked Wacker drive or the great proposed viaduct that will connect the north and south sides across a vast expanse of railway yards and the Chicago river.

Activities like these, which are being duplicated, on a comparable scale, in hundreds of other cities and towns mean a great deal to the automotive trade.

Service with a smile is a good motto, but whose smile is it? There should be two smiles—one by the dealer and one by the customer.

Ask 'Em to Buy Again

THERE are some merchants in the automotive business who seem to think that when once they have feebly whispered in a customer's ear, "Wouldn't you like to buy?" they have fulfilled all the requirements of the Ask 'Em to Buy Club and are thenceforth elected to full membership with access to the treasury and nothing more to do but count their profits. They seem to think they have spoken a magic password that admits them to a higher circle wherein the streets are paved with gold and no one worries. There they appear to have no use for business energy and soon forget even the magic words that they depended upon to bring them immunity from further industry.

Asking them to buy is not a thing to be done once and forgotten. The successful man in any business practices it constantly. He may not be always droning into the ears of customers, "Won't you buy this or that?" Probably not. More than likely his verbal entreaties are in the way of subtle suggestion. "Here is a fine little article that will give you a lot of pleasure and comfort in your driving." "You will like this device so well that after you have tried it you wouldn't let it be taken off your car for anything." "If you would like to try this article I'll put it on your car and if you don't like it I'll take it off and you won't owe me a cent."

But asking them to buy is not always by word of mouth. The air of cheerfulness with which customers are waited on is a distinct invitation to come back and buy more. Clean merchandise well displayed with the price plainly marked speaks louder than words in its appeal to the customer. Intelligent advertising wisely placed is another constant invitation to the public to buy.

There has been criticism of automotive merchants that they do not know how to sell goods. This criticism has been directed especially at dealers in accessories and supplies. We know that the proportion of good merchants in the automotive trade probably is as great as in any other industry. But still there are many dealers who need encouragement and help in the direction of promoting sales.

The Automotive Equipment Association has done a wonderful work with its Ask 'Em to Buy campaign. But there are some indications that this campaign has not been recently pushed, that it has lagged due to the energy that the merchandising department of the A. E. A. has diverted to other phases of its beneficial work.

Now would be a good time to again turn the spotlight on "Ask 'Em to Buy" and leave it there. This campaign has such vast possibilities and can be expanded to so great an extent with profit to the whole industry—cars, parts, accessories, supplies, equipment—that if it does nothing else but properly develop the Ask 'Em to Buy movement the A. E. A. and its merchandising department will have rendered a service of inestimable value to the industry.

How long will the recollection of quality continue after the last note is paid?

Common Sense in Buying

RETAIL dealers in the automotive trade are constantly being given the opportunity to "get in on a good thing." A chance to buy goods at special discounts, bargain lot assortments, exclusive agencies and what not. There is usually something the matter with any proposition that is held up as offering the dealer the opportunity to buy at extremely low prices or make an exorbitant profit. Legitimate business is pretty well standardized and competition maintains a fairly level basis of prices and profits on reputable merchandise. Dealers who think they are getting special advantages by devious methods usually find they are stung in one way or another. It pays the dealer to confine his buying to reputable establishments about whose honesty and integrity there can be no doubt.

Industry Continues Ahead of 1924

Ford Production Is Rapidly Turning Toward Normality

Largest Gains in 1925 Business Thus Far Are in Export Volume—Parts and Equipment Best

NEW YORK, Sept. 23.—The decrease of approximately 140,000 in car and truck production in August as compared with July is an indication of the divergent courses taken during the last six or eight weeks by the leading factors of the industry. A majority of the producers reported gains in August and early September over the July levels, but Ford output has been at the lowest point of recent years. Ford production normally is slightly more than 50 per cent of the total for the industry.

As September draws near its close, the situation is being reversed, and Ford is rapidly gaining while some of the others are tapering off. But conditions on the whole continue to be better than they were last year at this time. This is emphasized by reports of the representative parts, accessory and service equipment manufacturers, showing that the year to date has been 30 per cent over the corresponding period of 1924 in volume of business. A survey of prospects in these allied industries indicates that about the same ratio of gain will continue until the end of the year.

At the same time, the current business being done by original equipment companies, and by the automotive steel producers, indicates clearly a progressive decline in car production from now on. Truck and bus output is being maintained on a more even basis, and there is no indication of very considerable month to month changes in this field.

The largest gains for 1925 so far have been in exports of motor vehicles. If export business for the last six months is equal to that of the first six, the total for the year will be about 540,000 vehicles, as compared with the record of 377,000 made last year.

NEW OAKLAND MODEL

DETROIT, Sept. 21.—A new two-passenger Oakland roadster, listing at $975, has been added to the latest six series, it is announced today by the Oakland Motor Car Co. Finish is pyramid two-tone duco with red striping and upholstery is in genuine leather. Special features include one-piece windshield and collapsible top.

SAFETY CONTEST PLANNED

WASHINGTON, Sept. 19.—A trip to the national capital and cash prizes will be awarded to the winners of the fifth annual national safety lesson and essay contest sponsored by the National Automobile Chamber of Commerce and conducted by the Highway Education Board. The essay contest is open to children in the grade schools, while teachers in the grade schools may compete in the essay lesson contest, according to an announcement made here by the chamber. The first prize for the pupil will be a trip to Washington and a gold watch; the first prize for the teacher will be $500 in addition to the trip to the National Capital.

Attention Is Called to Trade Marks

NEW YORK, Sept. 19.—The need for warning automobile companies to attend promptly to the renewal of expiring trade marks is seen by several men of the industry here who have had occasion to look into the situation.

Many trade marks are expiring this year, as the present Federal act under which they were issued for twenty-year terms was passed February 20, 1905 and made effective April 1, 1905. Applications for a renewal should be made six months prior to the date of expiration or the registration automatically lapses.

In some instances, it is reported, company executives have overlooked the necessity for applying for renewals.

REMY PLANS NEW PLANT

INDIANAPOLIS, Sept. 19.—The Remy Electric Company of Anderson, Ind., has announced that it is establishing an additional plant at Muncie, Ind., to take care of business from old customers and to handle models on which it will go into production shortly. The new Muncie plant, one of the factory buildings of the Muncie Products Company, a division of the General Motors Company, has a floor area of 80.000, and the force that will be established there will have about 300 persons when it gets into operation. In making the announcement C. E. Wilson, general manager of the Remy Company. also announced that A. B. Gomery, who has been chief inspector of the Remy plant, will be superintendent of the Muncie plant. He will be succeeded at Anderson by M. E. Van Meter. Fred E. Kroeger has been promoted to the position of factory manager with general supervision over the Remy plants 1 and 3 at Anderson and the Muncie plant also

FORD BOOKING HEAVY

CHARLOTTE, N. C., Sept. 19.—Orders for Ford cars totaling 10.161 were booked in this territory by authorized dealers within a week after the announcement of the new models, according to an announcement at the Ford Motor Company's assembly plant here.

August Output of Passenger Automobiles Totals 221,756

Production Both in U.S. and Canada Shows Decrease From July Figures

WASHINGTON, Sept. 21.—August production of motor vehicles, as announced by the Department of Commerce, was 221,756 passenger cars and 37,643 trucks, of which 214,326 passenger cars and 36,207 trucks were made in the United States, and 7,430 passenger cars and 1,436 trucks in Canada.

Production in both the United States and Canada showed a decrease from July figures, this being accounted for almost entirely by the fact that Ford production in August was restricted by preparation for the improved models recently announced.

Passenger car production in the United States and Canada fell from 357,883 in July to 221,756 in August, and truck output decreased from 41,748 (revised figures) to 37,643.

The total of 214,326 passenger cars produced in the United States in August was 133,039 less than the revised total production in July, whole Canadian passenger car production dropped 3,725.

The decrease in United States truck production was 3,761, and the Canadian decrease was 344.

The total of 391,302 passenger cars and 47,822 trucks produced in the United States and Canada in April is the monthly high for the year so far, each month since showing a decrease, except that July truck output gained over June.

In August, 1924, passenger car production in the United States and Canada increased to 255,232 over the July total of 244,544, and truck output increased from 26,391 to 28,647.

Total passenger car production in both countries for the first eight months of 1925 was 2,516,339 against 2,351,913 during the same period of 1924, while total truck output for this year so far has been 316,215 as compared with 257,462 for the same months last year.

ROBERTS JOINS KOKOMO

KOKOMO, Ind., Sept. 19.—Joseph J Roberts, formerly sales manager of the Herbrand Company, Fremont, Ohio, has been placed in charge of sales in Michigan and Ohio, for the entire line of Kokomo Products, manufactured by the Kokomo Automotive Manufacturing Co., of Kokomo, Ind.

As direct factory representative, Mr Roberts will sell to automobile manufacturers exclusively. An office has been opened at 14344 Robson Blvd., Detroit The Kokomo line includes windshield wings, mirrors, transmission linings and Checkers.

Motor Truck Industries, Inc. Holds Session in Michigan

Next Meeting to Be Held in Washington Week of November 8

BUCHANAN, Mich., Sept. 19.—More than 100 truck and parts maker executives attended the opening meeting of Motor Truck Industries, Inc., here this week.

"This organization," says B. A. Gramm, of Lima, Ohio, secretary and treasurer, "should not be regarded as a rival of any other, or as duplicating any work by any other. This is an association of executives banded together for the fundamental interests of the motor truck industry, the user as well as the builder, and it means a great help to every association that has anything to do with motor trucks."

Group committees were appointed on standardization of units, sales and finance. H. Colin Campbell discussed highway improvement as affecting standardization of automotive products and William H. Dawes, president, Central Trust Co. of Illinois, talked on greater protection for loans.

Directors and members were entertained by officers of the Clarke Equipment Co. at their plant. The invitation from the Department of Commerce to hold the next meeting in Washington was accepted. The meeting will be held during two days of the week of November 3. Twenty-five new members were admitted.

Klugh Takes Duffus' Place With Pennsylvania Body

HARRISBURG, Pa., Sept. 19.—Claude S. Klugh, for nine years with the bureau of motor vehicles of Pennsylvania, as assistant registrar, has been selected as secretary-manager of the Pennsylvania Automotive Association, it is announced by E. T. Satchell, president. Mr. Klugh takes the place of R. C. Duffus, who has accepted a position with Hare & Chase, as manager of the Detroit office of that firm.

Plans are going forward rapidly under the direction of Mr. Klugh for the convention of the Pennsylvania association in Pittsburgh, October 12-14. Both Mr. Duffus, the ex-secretary, and Mr. Klugh, the new secretary, will be present at the convention.

Mr. Duffus has long been associated with the automotive industry and in his new capacity with Hare & Chase, will continue that association. He started in the automobile business in the Oldsmobile plant at Lansing 17 years ago, where he was motor builder, tester and race driver. He then joined the Buick engineering department where he worked with Walter P. Chrysler and C. W. Nash.

When Edward Ver Linden took charge of the Olds works, Mr. Duffus was made factory wholesale man for Illinois and Iowa, with headquarters at Chicago. He then joined Briscoe and Studebaker as wholesale man. During the war he bought steel for Liberty motors for Packard, then retailed Packard in Detroit, then built and managed the Packard branch at Kalamazoo when Packard brought out the single six. Mr. Duffus then took over the Hupmobile and Pierce-Arrow contract at Kalamazoo.

Following this connection, he was made assistant general manager of the N. A. D. A. under C. A. Vane, and joined the P. A. A. three years ago.

St. Louis Used Car Auction Opens With Spirited Bidding

ST. LOUIS, Sept. 19.—The first of five auctions of used cars conducted by A. A. Selkirk Company was held at the St. Louis County Farmers' Market, Sarah street and Laclede avenue last Saturday. Six automobile firms consigned ten cars each to Selkirk and there were 19 cars sold, ranging from a Ford which went for $75 to a used Nash which brought $625.

Expenses of the auction were prorated among the six firms participating but they were not otherwise identified with the endeavor.

About 200 persons attended and the biddng was spirited.

The auction will be repeated next Saturday morning and on each of the following two Saturdays at the same place. Should the business justify it this method of disposing of used cars will be continued throughout the winter.

CHANDLER DEALERS MEET

CLEVELAND, Sept. 19.—A three days convention of Cleveland and Chandler dealers closed here last week with an inspection of plants of the two companies. There were 1,500 dealers in every state in the union in attendance, and reports from every section indicate that fall business will far eclipse the record of the corresponding period a year ago.

O'BRIEN JOINS REO

DETROIT, Sept. 19.—R. C. Rueschaw, general manager of the Reo Motor Car Company has announced that Thomas T. O'Brien, formerly assistant sales manager of the Olds Motor Works has joined the sales organization of the Reo Motor Company.

Revenue Collections From Industry Growing Smaller

Decrease in Year is $33,326,964.10 —Total Levy for 1925 is $124,686,745.30.

WASHINGTON, Sept. 19.—The automotive industry contributed the sum of $124,686,745.30 to the receipts of the Internal Revenue Bureau for the fiscal year ended June 30, 1925, it is shown in a preliminary statement of the Treasury Department just made public here. This total is considerably less than the sum of $158,014,709.40 which the automotive industry paid during the fiscal year ending June 30, 1924.

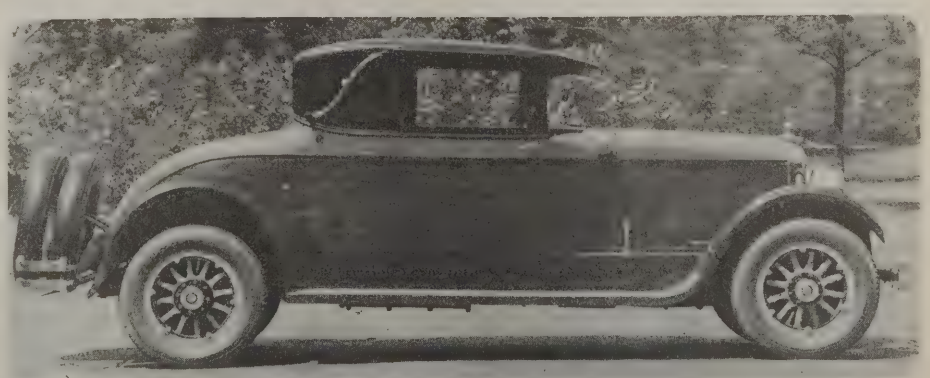
The decrease in the automotive receipts, however, the statistics reveal, is a normal one as the total collections from all sources of revenue for the fiscal year 1925 were $2,584,140,268.24 or $212,038,988.82 less than were the receipts for the fiscal year ended June 30, 1924.

In the itemized statement it is further shown that the receipts from automobile trucks and automobile wagons for the fiscal year ended June 30, 1925 were $7,807,811.16 or $3,702,751.89 less than in 1924; that the receipts from "other automobiles and motor cycles" for the fiscal year ended June 30, 1925, were $94,141,539.29 or $18,728,987.28 less than for the fiscal year ended June 30, 1924 and that the receipts from "tires, parts, or accessories for automobiles, etc." for the year ended June 30, 1925, were $22,737,384.85 or $10,896,224.93 less than the receipts for the fiscal year ended June 30, 1924.

GEYLER LEAVES INDUSTRY

CHICAGO, Sept. 19.—Louis Geyler, president of the Louis Geyler Company, 2635 South Wabash avenue, one of the pioneers of the automobile trade in Chicago, has retired from the industry. He has severed his connection with the Case and Chandler companies, for which he was distributor in the Chicago territory and is now devoting his entire time to his radio interests. He is a stockholder and a director in the Electrical Research Laboratories.

New Marmon Coupe



The new Marmon two-passenger coupe. *See story on page 19*

Automotive Electrical Men Study Motor Bus Equipment

Head Lighting and Parts Distribution Also Subjects Before Convention of Association

EAGLESMERE PARK, Pa., Sept. 19.—Motor coach electrical equipment, head lighting and parts distribution were among the major topics discussed at the ninth annual convention of the Automotive Electrical Association which closed here this week.

The elimination of the dash ammeter and the use either of a voltmeter or a charge-off-discharge indicator in its place on motorcoaches having voltage regulators, was recommended. The reason given is that with voltage control the reading shown by the ammeter is often so small that the operator believes the battery is not receiving sufficient charge and he changes the adjustment of the regulator, with consequent overcharging of the battery.

In order to meet the requirements of summer and winter bus operation, it was adopted as recommended practice that provision be made so that the driver could change the charging rate conveniently, within a certain range. This control will be in the form of a small lever which can be thrown either into the summer or winter position.

In the discussion following the paper presented by Williard C. Brown of the National Lamp Works on head lighting, a resolution was adopted directing the preparation of a booklet on the adjustment of headlights and the equipment required for this service. This booklet will be mailed to all electrical service stations in the country.

The subject of parts distribution through authorized electrical service stations came in for much spirited discussion and the association plans to study this subject with the view of increasing sales through these outlets.

Fabric Body for Essex Coupe

ST. LOUIS, Sept. 19.—Hudson-Frampton Motor Car Co., Hudson and Essex distributor in St. Louis, has introduced a new fabric body for the Essex coupe here. The body is built by the Fabric Body Co. at Detroit and mounted on the Essex chassis here. Three color options are provided: midnight blue and black; gray and black and all black. The price is $1275 delivered in St. Louis with full equipment.

Fresh Merchandise in a Clean Store

(*Continued from page* 13)

have demonstrated that automotive merchandise can be sold for Christmas gifts. Merchants who have put special effort on Christmas selling campaigns have been bountifully rewarded with a large volume of profitable business. Now while the slick up process is under way is the time to make plans for a large Christmas business and select the kind of merchadise that will be salable. The proper display of this merchandise with the holiday background must be provided.

Summing up, then, the stock of merchandise should be slicked up by:

Moving new cars that have been on hand too long.

Fixing up and reducing used car stock.

Getting rid of shop-worn and slow moving merchandise.

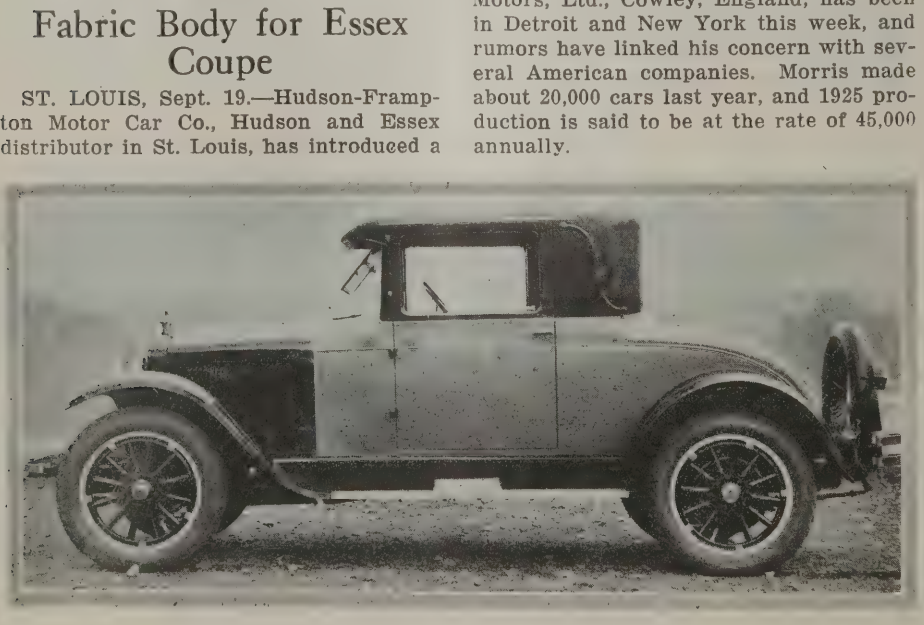
Filling up depleted stocks.

Stocking seasonal merchandise and arranging seasonal display.

When these steps have been taken the slicked up store will present a new selling appeal.

AUSTIN DEAL DEFEATED

NEW YORK, Sept. 19.—The proposed purchase by the General Motors Corp. of the Austin Motor Car Co., Ltd., has been defeated by the opposition of some of the share holders, according to cabled advices from London that have not been denied here. Reports of other developments that would result in the entrance of American manufacturers into the European light car field are unabated, however. W. R. Morris, governing director of Morris Motors, Ltd., Cowley, England, has been in Detroit and New York this week, and rumors have linked his concern with several American companies. Morris made about 20,000 cars last year, and 1925 production is said to be at the rate of 45,000 annually.



Directory of Technical Books and Libraries Is Published

Nearly 50 Large Collections on Transportation and Communication Included

NEW YORK, Sept. 19.—There are almost 50 libraries in the United States wholly concerned with transportation and communication, it has been revealed by the second nation-wide survey completed recently by the National Special Libraries Association. Railroads lead the list in the volume of transportation literature, with automobiles and street railways coming next. Literature dealing with aviation is rapidly increasing and literature of radio is now well commenced.

Among the larger transportation libraries are: the collection of over 100,000 volumes of the Bureau of Railway Economics—the largest transportation library in the world; the libraries of the Boston Elevated Railway and the Philadelphia Rapid Transit Company; the general, engineering and legal libraries of the American Telephone and Telegraph Co., totalling some 25,000 volumes; the well-known library of the National Automobile Chamber of Commerce with its collection of 300,000 automobile patents; and the rapidly-growing aviation libraries of the Manufacturing Aircraft Association and the United States Air Service.

The subjects covered run from aeronautics to tractors; from motor trucks to navigation; from shipbuilding to subways; from tires to terminals; from radio to river improvement, and from telephones to marine engineering.

The results of the survey have been published in the form of a directory covering all special libraries in the business and technical fields. Use of the directory is facilitated by means of title, subject, and geographic indexes. Copies of the volume may be obtained from Gertrude D. Peterkin, treasurer of the association, Room 2513, 195 Broadway, New York.

Chevrolet Demand Forces Big Production Increase

DETROIT, Sept. 19.—Sustained demand and a growing list of unfilled orders has caused the Chevrolet Motor company to increase heavily its production schedule during September.

The schedule revision involves an increase of more than 16 per cent over the production program originally planned for September. The new schedule calls for 53,165 motor cars and trucks in September, a Chevrolet record for that month and only 3,078 less than the highest production month in the history of the company.

Both day and night shifts have been augmented to maintain the new schedule. The company shipped 4,284 cars to dealers on Aug. 31, establishing a new record 600 higher than the largest previous shipment for one day.

Cleveland Announces Four New Cars at Lower Prices

Two Coupes, a Touring De Luxe and a Sedan Are Added to 1926 Series

CLEVELAND, Sept. 19.—The Cleveland Automobile Company has announced four entirely new models in the 1926 series, and has reduced prices as much as $200, the heaviest cuts applying on the new Cleveland Six four door sedan at $995 and the special four door sedan which now lists at $1295 f. o. b. factory. Formerly these models were priced at $1195 and $1495 respectively.

A coupe model, an entirely new creation, is announced at $975. Included in this same series is Touring De Luxe model, which features a sportive touch throughout. This car lists at $1025.

In the Special Six series a new coupe also makes its debut at the price of $1175. The De Luxe Sedan and Sport Sedan have both been reduced $100.00, now listing for $1595 and $1625. A $50 reduction has also been made on the Sport Touring; this model is now $1245. The Coach is priced at $1295 while the two touring cars list at $895 and $1095, the latter being the Special model.

The new low priced Cleveland Six sedan is in beige brown. A gray forms the interior color scheme. It also includes a one piece windshield.

In the Special Six series the four door sedan carries Cleveland blue color as its body finish while the interior is in gray broadcloth. This creation is characterized by a raised bead in contrasting color, running completely around the car. A one piece, waterproof V type windshield is shown with this model. Pockets are provided in both rear doors and the hardware is in mat silver finish.

Both coupe models in the Cleveland Six series are finished in Cleveland blue with a bead in different color running from the hood to the rear of the car. Doors are wide to allow easy entrance and exit. A notable feature with these coupe models is the rear deck compartments which provide ample carrying space for luggage and other cumbersome articles of travel. Directly back of the driver's seat another storage space is available for small incidentals. Genuine leather constitutes the upholstery material of the coupes but gray corduroy is optional at no additional cost. There is ample room for three passengers in either of these coupes.

The new Touring De Luxe model is featured in two tone sage brush green with a body bead in different color. Throughout the interior it is finished in spanish leather. It is fully equipped, carrying front bumper, bumperettes, windshield wings and is further enhanced at the rear by a trunk rack with base bars upon which is mounted a trunk. Windshield cleaner and rear vision mirror are also included as standard equipment with this model.

All models come in durable Duco finish. Balloon tires are standard while four wheel brakes are provided as optional equipment.

The well known One Shot automatic chassis lubrication system is a distinctive feature with the 1926 Cleveland Six line, inasmuch as it eliminates entirely manual lubrication of the chassis.

Nevada Has Road of Gold

LOS ANGELES, Sept. 19.—Promises held out in ancient hymns that the future home of the good will have streets paved with gold are being realized in White Pine County, Nevada. Here the state highway department is building a road between Ely and McGill from materials including flour and flake gold. The precious metal was discovered in the gravel being excavated eight miles from Ely for road construction, and while it is not present in quantities sufficient for profitable mining, when panned it shows the colors so eagerly sought by the Argonauts of '49.

Chromium Cited as Perfect Substance for Reflectors

DETROIT, Sept. 19.—Chromium, good friend of all who work with steel, was introduced yesterday to Detroit automobile men and to the Illuminating Engineering Society delegates in convention at Hotel Statler here, as the perfect substance for automobile lamp reflectors. Robert J. Piersol, physicist, of East Pittsburgh, Pa., told the delegates it stood all the tests and strains which must be encountered in motor car headlamps.

Every owner of an automobile knows the anxiety of seeing his headlight reflectors gradually darken, without knowing what to do to stop it. Cleaning the reflectors usually results in scratches. Most reflectors are made of silver or nickel, the former being more common. At high temperatures, such as are found near electric lamps, the reflectors tarnish.

Chromium, widely used in the making of steel alloys, "Stellite," a substitute for tool steel, and stainless tableware, has excellent reflecting properties and its polished surface cannot tarnish or darken. It is very hard and cannot be easily scratched. Mr. Piersol predicted its use for flood-lighting and searchlight reflectors, as well as for automobiles.

WILLYS ADVANCES KNAUS

PORTLAND, Ore., Sept. 19.—Appointment of A. H. Knaus, sales manager of the Willys Overland Pacific company, as assistant branch manager, in charge of the Seattle branch of the company is announced by J. H. Alfred, manager of the company. Jack Crittenden, formerly with the Portland Motor Car Company has been named sales manager of the Portland branch.

Plans for Ford's Dirigible Given to Navy Department

Airship Would Be Smaller, Safer and Would Cost But About $300,000

WASHINGTON, Sept. 19.—Construction of an all-metal "flivver" dirigible, invented by engineers of the Ford Motor Company is being seriously considered by the Navy Department, Secretary Wilbur declared here this week.

A group of Detroit experts, including William B. Mayo, chief engineer for Ford, have laid before the Bureau of Aeronautics complete details, illustrated by a model, of such an airship which, they assert, will answer all the purposes of the Shenandoah, but will be smaller, safer and less expensive.

Mayo and his associates offered to turn over all of their data—the results of four years' experiments — so that the Navy can build the dirigible at its Philadelphia aircraft factory.

The Ford dirigible would cost approximately $300,000, as compared with $2,000,000 for the Shenandoah. It would have the general shape of an egg, 150 feet long and 50 feet at its greatest width.

The motors would propel it at a cruising speed of 60 miles an hour, and its cruising-range would be 2,000 miles.

FRASER LEAVES INDUSTRY

PEORIA, Ill., Sept. 19.—W. H. Fraser, for a number of years with the General Motors Corporation, has left the automobile industry to join the W. B. Wilde Co., Peoria, Ill., in the manufacture of oil burners. Mr. Fraser was branch and district manager for the Cadillac division of G. M. C. and comes to the Wilde concern as director of sales, a department being developed under the new extension policy of the oil-burner manufacturing concern.

NEW BOOKLETS ISSUED

CHICAGO, Ill., Sept. 19.—The Stewart-Warner Speedometer Corp. has issued a series of booklets on "Shop Management" for the benefit of automotive retailers. These booklets cover the following subjects: Bookkeeping for Dealers in Cars, Parts, Repairs and Accessories; Stock Records for Replacement Parts and Accessories; Turnover in the Selling of Accessories and How to Determine Mark-Up for Profit Overhead. Another booklet entitled, The Golden Key" is a compilation of the experience of automobile accessory dealers who tell the various methods they have used to succeed. Copies of these booklets are sent free to interested dealers.

SERGARDE WITH REO

DETROIT, Sept. 19.—Fabio Sergarde, for a number of years chief engineer of the Olds Motor Works, has joined the engineering forces of the Reo Motor Car Company, according to an announcement recently made by N. T. Thomas, vice president and chief engineer of the Reo company.

Mack's New Home Declared Largest of Kind in Country

Los Angeles Plant Occupies Two Blocks and Gives Five Acres Floor Space

LOS ANGELES, Sept. 19.—The new home of the Mack-International Motor Truck Corporation in Los Angeles, which was recently occupied, is declared to be the largest, most modernly and completely equipped building in the United States devoted to the sale and service of commercial motor vehicles. The plant is fully two blocks in length, all enclosed, and it represents an investment of approximately $1,000,000.

The ground area covered by the new building is three and one-half acres and the total floor space is more than five acres. The salesroom floor is 160 feet long and has a depth of 57 feet. A portable screen of lattice work separates the used truck display from the new truck department. The screen is in sections and can be placed wherever desired, extending or reducing the area to meet the requirements. A unique feature, which is original and exclusive with the building, is the inside court, which is 125 feet by 100 feet in size.

The spacious shop has many points of unusual interest, particularly the type of construction of the repair pits. The pit proper is almost 400 feet long and nine feet wide, built of concrete. Access is from ramps at each end. A continuous bench 30 inches wide runs the full length. The bottom of the pit is four feet below the floor level. Daylight facilities are provided by means of windows which extend to within 18 inches of the top of the bench. At the floor level on the side opposite the windows are 14 bays each 24 feet wide. Each bay will accomodate two trucks and has a drift from the main pit five feet wide under each.

In front of each bay is a board runway 12 inches higher than the floor level thereby affording five feet of headroom clearance beneath the vehicle. This makes it possible for a mechanic to do his work standing upright. At the back of each runway is a bench for hand tools. A pipe railing incloses each bay and there is a stairway on both sides to the floor level.

MODEL GARAGE PLANNED

SPRINGFIELD, Ill., Sept. 19.—The Weaver Manufacturing company, makers of garage equipment and supplies, is to erect a "laboratory" garage at 2158-68 South Ninth street, covering a tract 125x129 feet. It will be a distinctive enterprise, architecturally unique, all brick construction with re-inforced steel and cement floors. Repair departments will face street windows, the shop will be plotted as an ideal garage for exposition and demonstration of the Weaver products, and the builders hope to end forever the practive of condemning repair departments and garages, to ill-lighted, stuffy corners of a building. Although primarily intended for a display room there will be a storage section and limited public service will be offered.

NEW LACQUER BRANCH

ATLANTA, Sept. 19.—The Egyptian Laquer Co. announces the opening recently in Atlanta of a new southern branch and warehouse as distributors of the line of Egyptian lacquer finish for automobiles in the southeastern territory. W. E. Hutchison is named as manager of the new branch.

WITWER BATTERY BOUGHT

DANVILLE, Ill., Sept. 19.—The Danville Battery Manufacturing Company has been organized here by L. T. Allen, W. T. Gunn, J. E. Epler, J. F. Geddes, and H. E. Douglas and capital stock fixed at $200,000. The new company has taken over the plant, equipment, contracts, and patents of the Witwer Battery Company, which suspended a year ago. Epler will be general manager. Production will be resumed shortly.

SCOTT JOINS FLINT

FLINT, Mich., Sept. 19.—The announcement is made of the appointment of George R. Scott, one of the country's seasoned production men, as assistant general manager of the Flint Motor Company. He also becomes a member of the board of directors and of the executive committee. This appointment is just made public by R. H. Mulch, recently elected vice president and general manager, and C. O. Miniger, chairman of the executive committee.

TAYLOR TAKES TECH CHAIR

DETROIT, Sept. 19.—C. Fayette Taylor, M. E., who has served as chief power plant engineer of the Wright Aeronautical Corp., of Paterson, N. J., for the last three years, has resigned to join the faculty of the Massachusetts Institute of Technology. Since Mr. Taylor's graduation from the Sheffield Scientific School of Yale, he has devoted his entire time to aeronautical engineering, having served with the National Advisory Board, and later at McCook Field experimental station prior to his association with the Wright Co. Mr. Taylor will take up his new duties on January 1, 1926, and will have charge of the research work in connection with aeronautical and automotive power plants.

GILMER NAMED BY OLDS

CINCINNATI, Sept. 19.—R. C. Gilmer, formerly assistant manager of the Oldsmobile Company in the Kansas City zone has been named to succeed Walter Zimmerman, formerly in charge of the Cincinnati district for "Olds" distribution, who was recently appointed export manager of the Peerless Motor Car Company at Cleveland. Mr. Zimmerman was factory representative of the Oldsmobile company in the Cincinnati district for more than a year and has many friends here. Mr. Gilmer is making a fine record here in the sale of 1926 "Olds."

Hupp Expects to Produce 15,000 Eights in 192

Statement From Factory Says Esti mates Are Exceeded 50 Per Cent Every Month

DETROIT, Sept. 19.—The great inter national demand that the Hupmobil Eight has created will result in its sale for 1925, its first year, exceeding 15,00 says O. C. Hutchinson, general sale manager of the Hupp Motor Car Cor poration, in a statement emphasizing th remarkable success which has attende that car ever since its inception.

"A record of 15,000 sales in its firs year for a car of the high quality of thi eight is a mark never before approache in the automotive industry," the state ment reads. "It means a demand mor than three times as great as that en joyed, during its first year, by any othe company manufacturing eight cylinde cars.

"What Hupmobile has actually don has been to increase its initial estimate for eight cylinder output over 50 pe cent. Last December we made plans t produce 9,999 of these cars during 192 What has happened is that we have ex ceeded our production estimates ever month since the first car was buil Within five months the eight became th most demanded car of its type in th world. Since it gained that honor, it sales have been even greater, until toda they are rapidly approaching a poi where they will surpass those of a other eight-in-line cars put together. Th reduction in its original prices of fro $180 to $230 on each model brought th car to a point where it has since repre sented an outstanding value."

In making this record, the compan announces that sales by its distributo and dealers for the last three month have exceeded those for the same perio a year ago by nearly 50 per cent. I export sales likewise show an unusu demand abroad, more than $2,000,0 worth of these cars having been shippe to countries overseas during the fir eight months of 1925.

McCRUDEN IN ST. LOUIS

ST. LOUIS, Sept. 19.—J. H. McCrude until recently Chicago branch manager the Victor-Springfield Tire Co., is no associated with John Glenn of the Gle Tire Co., Grand and Pine, St. Louis di tributors of India Tires. J. L. O'Donne formerly of the General Tire & Rubb Co., has recently joined the sales for of the Glenn Tire Co.

McCORMICK IN MILWAUKEE

MILWAUKEE, Sept. 19.—Malcomb M Cormick, formerly sales manager of t McCord Radiator & Mfg. Co., Detroit, h joined Milwaukee Motor Products, In Milwaukee, manufacturers of Milwauk Timers, as director of sales and adve tising. He succeeds W. P. Ferris, w has resumed active management of t Pressed Metal Mfg. Co., Waukesha, W

ales by General Motors Are 21,704 Above August, 1924

'otal Purchases by Consumers 76,546—Dealers Buy 75,973 Last Month

DETROIT, Sept. 19.—The sale of Gen-:al Motors passenger cars to ultimate)nsumers during August totaled 76,546 : 21,704 greater than for August, 1924. he total for that month was 54,842. he sale of passenger cars and trucks to ealers by the manufacturing divisions lso showed a corresponding increase, ie total for last month being 75,973 or 7,359 greater than for August, 1924.

The following tabulation shows monthly ales of General Motors passenger cars y dealers to ultimate consumers and ales by the manufacturing divisions to ie different dealers.

Dealers Sale to Users

	1925	1924	1923
an.	25,593	33,574	31,437
eb.	39,579	50,007	33,627
[arch	70,594	57,205	74,632
pril	97,242	89,583	105,778
[ay	87,488	84,715	90,327
une	75,864	65,224	75,423
uly	65,850	60,836	62,209
ug.	76,546*	54,842	56,846

Division Sales to Dealers

	1925	1924	1923
an.	30,642	61,398	49,162
eb.	49,146	78,668	55,427
[arch	75,527	75,484	71,669
pril	85,583	58,600	75,822
[ay	77,223	45,965	75,393
une	71,088	32,984	69,708
uly	57,340	40,563	51,634
ug.	75,973*	48,614	65,999

**These preliminary figures include passenger cars and truck sales in the United States, Canada and overseas by the Chevrolet, Oldsmobile, Oakland, Buick and Cadillac manufacturing divisions of General Motors.*

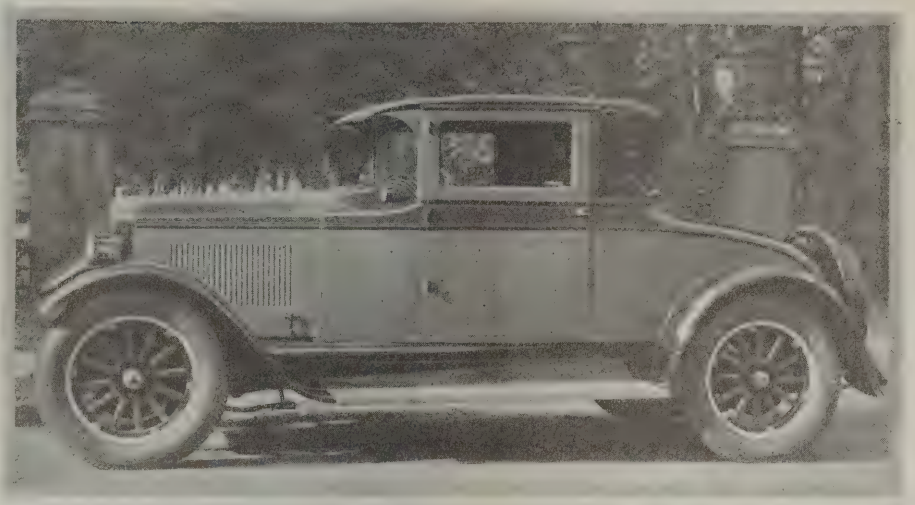
YELLOW ENGINE OUTPUT UP

EAST MOLINE, Ill., Sept. 19.—A pro-uction schedule of 1,000 engines monthly hroughout 1926 is anticipated by L. R. Tuthenberg, general manager of the local nit of the Yellow Sleeve-Valve Engine Vorks, which is now averaging 500 ngines monthly with night shifts em-loyed in some departments to maintain he schedule. Increased demand for the ngines since the General Motors Cor-oration merger with the Hertz interests as sped the plant to capacity and fur-her increases by the first of the year re expected.

BABCOCK LEAVES HOLT

PEORIA, Ill., Sept. 19.—Col. George). Babcock has resigned as manufactur-ng executive of the Holt Caterpillar Tractor Company and will make his eadquarters in Syracuse, N. Y. His fu-ure plans are not yet announced. He vas formerly associated in the manu-acture of the Franklin motor car, and oined the Holt organization in 1918.

Three-Passenger Coupe Is Latest Velie Product



Three-passenger Velie coupe finished in duo tone blue. Upholstery is in blue Spanish leather with headlining of matched broadcloth

A three-passenger coupe in duotone blue duco is the latest of three new body types recently introduced by Velie Motors Corp., Moline, Ill. It is mounted on the standard Velie chassis of 118 in. wheel-base on which Lockheed hydraulic four-wheel brakes and balloon tires are standard equipment.

The new coupe is low hung and symmetrical in appearance. A curved steel visor is built integral with the roof. Laundalet bow in black, nickeled at the imitation joint, contrasts with the black leatherette of the top. The windshield is of the one-piece ventilating type and the cowl ventilator is operated from beneath the dash. An automatic windshield wiper, rear vision mirror and transmission lock are standard equipment.

Upholstery is of grained blue Spanish leather with headlining of matched broadcloth. The instrument board is in black with garnish rails to match. Speedometer, ammeter and oil gage are under a glass in a single panel of satin silver—indirectly lighted by a lamp concealed within the panel.

The light control lever is placed on the steering post and the ignition switch and choke lever on the dash at each side of the steering post. The seat is 46 in. wide, seat back to floor board, 43 in. and from seat to roof 35½ in.

Dura hardware is used with four turn regulators on the door windows. Outside door handles are of black, with nickeled ends. There is a package compartment behind the seat back and large space under the rear deck for cases, golf bags and large packages.

Finish is of duotone light blue below a ¾ in. black moulding running from radiator shell to the lower edge of rear deck and above a ¾ in. black moulding which encompasses the body at bottom of the superstructure from the windshield pillar. The space between the moulding, top of cowl and hood is in dark blue. There is a stripe of imitation gold below the upper and above the lower moulding.

DENVER HAS CAR HOTEL

DENVER, Sept. 19.—The Transcontinental Investment Company of Denver has just completed and opened for business the first Autohotel in this section of the country, with E. W. McDowell, president of the company in atcive management. This building, built under patents held by the Ramp Building Corporation of New York, is three and one-half stories in height with seven levels for car storage. There are no elevators, the cars being driven to their individual stalls under their own power, and the longest ramp is only 30 feet in length. and the steepest grade only 14 per cent. No repair work will be done in this garage, and no accessories will be handled. The service will be confined to furnishing storage, washing, greasing, gas and oil.

NEW DURANT BRANCH

NEW YORK, Sept. 19.—Colin Campbell, vice president of Durant Motors Inc., announces the establishment of a new wholesale office at 12 Colcord Building, Oklahoma City, in charge of Emery Miller, sales manager. This makes the nineteenth wholesale office established by Durant Motors since the reorganization of its sales facilities.

Personnel and Training Are Features of S. A. E. Meeting

Gear Grinding Also Brought Up for Discussion by Automotive Engineers

CLEVELAND, Sept. 19.—Better understanding of the human element and training of men in various phases of automotive work is necessary to further increases in production efficiency. That was one of the chief ideas brought out at the annual production meeting of the Society of Automotive Engineers, held here September 14-16. Mutual interchange of troubles and problems between automotive manufacturers and machine tool men, evidence of considerable interest in gear grinding, announcement by Col. H. W. Alden that Timken Axle Co. is working on an entirely new type of gearing, and discussion of inspection methods and machine tool safety were other outstanding features of the meeting.

Attendance at the S. A. E, gathering totalled over 300. The large machine tool exhibit held in connection with an exhibition staged by the American Society for Steel Treating convention attracted many of the automotive engineers. The A. S. S. T. annual meeting, which was held here September 14-19, had an attendance of over 3,000. An important statement developed at the steel treaters' meeting was that the automotive industry is large responsible for the current activity of the steel business.

Emphasizing quality as the paramount objective of production, and quantity and low cost as other prime considerations, K. T. Keller, general manager, General Motors of Canada, Ltd., told the S. A. E. men at the annual production dinner on Tuesday evening, that efficient production from every standpoint gets back to proper handling of personnel.

Col. H. W. Alden, Timken Axle Co. stated his belief that the present basis of gear tooth forms is all wrong and said that his organization now has in the mathematical stage some new developments.

R. M. Hidey, White Motor Co., and W. G. Cariens, Ajax Motors Co. gave the car builders' side of the machine tool problem, while Cook of Warner Swasey and Earnest F. De Breuile, general manager, National Machine Tool Builders' Association, and others, showed how the vehicle makers can get better results from further co-operation with the machine tool industry.

Chenard-Walcker Wins Boillot Cup



Lagache in Chenard-Walcker which won Boillot cup road race

PARIS, Sept. 1.—(By Mail).—Averaging 63.5 miles an hour for a distance of 325 miles, A. Lagache won the Georges Boillot Cup handicap road race at Boulogne yesterday, with a Chenard-Walcker car of 67 cubic inches piston displacement, carrying touring equipment. The winning car embodied many distinctive features.

The four cylinder engine had two big diameter vertical intake valves and one very small exhaust valve in the head, with operation by pushrods and overhead rockers, and at the base of the cylinder there was an auxiliary rotary exhaust valve. As the greater portion of the exhaust gases were discharged at the bottom of the stroke, the exhaust in the head did not need to be of big size, thus leaving space for two big inlets.

Another advantage of this design, for which Engineer Toute was responsible, was that with the additional exhaust port spark plugs did not overheat or give trouble. Although there were three valves in the head, room was found for the spark plug also in the cylinder head, the plug as well as the valve operating gear being under an oil tight aluminium cover.

The chassis and the body formed one construction, the width of the body being equal to the full length of the car, thus enabling the front wheels to be encased without interfering with steering. A narrower track was used at the rear, and the driving wheels were entirely hidden. Duralumin was used throughout for the body panelling.

This type of body was accepted by the Jury as being in accordance with touring practice, although being a distinct departure from standard design.

On the varied Boulogne roads the small Chenard-Walckers showed themselves equal in speed to cars of twice their piston displacement and under the handicap the bigger cars had no chance of catching them. Three cars started, but two were forced out with defects not associated with the engine.

Second place was won by Laly on a 183 cubic inch Aries and third position fell to C. M. Harvey on a 122 inch English Alvis.

The scratch cars were two Belgian Excelsiors driven by Arthur Duray and Charlier, which allowed 1 hr. 6 min. 30 sec. to the limit of cars, a couple of Austins of 46 cubic inch piston displacement.

Head of Morris Motors, Ltd., Studies U. S. Factory Methods

DETROIT, Sept. 19.—For the purpose of studying American production methods, W. R. Morris, governing director and owner of Morris Motors, Ltd., of Oxford, Coventry and Birmingham, England, has been spending a week in Detroit. While here, Mr. Morris confirmed the announcement of the purchase by him of the Leon Bollee Company, manufacturers of the Bollee car of Le Mans. This company has been a moderate producer of a high grade French car for many years, and Mr. Morris announced his intention of introducing modern American production methods in the French factory for the purpose of greatly increasing production.

Mr. Morris stated that his company in England has just finished the fiscal year with the production of 50,000 cars. This is ten times more than any other manufacturer in England

GAS TAX PARLEY PLANNED

MILWAUKEE, Sept. 19.—A national convention of state officials charged with administration of gasoline taxes in the various states will probably be called at Madison, Wis., this fall. Soloman Levitan, state treasurer of Wisconsin, has invited all state officials interested to attend such a meeting at Madison and out of 35 replies received thus far, 31 executives favor the parley. Forty-four states in the union have gas taxes.

Canadian National Motor Show Is Best Ever Held

Attendance Sets Record—Authorities See 1926 As Dominion Industry's Greatest Season

TORONTO, Sept. 19.—Canada's National Motor Show looks even better in retrospect than it did in prospect. Measured by the criterion of attendance, sales and active prospects it was the most successful event of the kind ever held in the Dominion. Automotive business since the first quarter of the current calendar year has been excellent in Canada and continues so. The summer sales valley proved unprecedentedly small and shallow and it is the concensus in the trade that the automotive year of 1926 will be the best in the history of the industry in Canada. The current production schedules of the motor plants of the Dominion are record breaking ones.

Back of the demand that has produced this unprecedented output is a growing prosperity. Following his annual national survey T. A. Russel, the re-elected president of the Automotive Industries of Canada (the N. A. C. C. of the Dominion) declared that the Canadian West is harvesting a crop that will net it two hundred millions of dollars more than the very profitable crop of last year.

The fact that the Canadian dollar has been above par for a coonsiderable period is indicative of the soundness of Canadian credit and the incipient prosperity evidenced by growing optimism and expressed in the record demand for automotive products.

Sir William Letts, president of the British Society of Motor Manufacturers and Traders and the Crossley Company, Ltd., Charles Kettering, president of the General Motors Research corporation and past president of the S. A. E., and T. A. Russel, president of the Automotive Industries of Canada and Willys-Overland, Ltd., were the speakers at the C. N. E directors' luncheon on automotive day. Among the United States automotive industry leaders who came to Toronto during the show, most of whom spoke at national dealers meetings convened by manufacturers, were Henry Ford, Charles Kettering, John North Willys, Field of Chrysler, Benjamin Gotfredson and E. H. McCarthy.

It is noteworthy that the annual meeting of the Automotive Industries of Canada was the most largely attended meeting of that organization ever held, every director being present and the conventions of the dealers called by the Canadian manufacturers—Chrysler, Dodge, General Motors, Gotfredson, Studebaker and Willys-Overland—each established a new record in attendance.

The attendance at the show likewise established a record. Approximatey 1,000,000 persons saw the new season models. The Transportation Building could not accommodate all exhibits so some cars were displayed in the Coliseum with the buses, trucks and automotive equipment exhibits, which drew far larger crowds than ever before.

More English makes were represented than in many years—A. C. Morris, Oxford and Morris Cowley, Rolls-Royce, Sunbeam, Trojan and Vauxhall among the cars and Leyland and Thorneycraft among the trucks. Col. A. Hacking, secretary of the Society of Motor Manufacturers and Traders stated while in Toronto that Humber, Morris and Standard are maturing plans to establish Canadian plants next year.

Among the passenger cars there were thirteen makes of "fours" represented. In the order they appeared on the floor plans they were: Chrysler, Dodge Bros., Vauxhall, Gray, A. C., Morris Cowley, Morris Oxford, Ford, Willys-Knight, Durant, Star, Sunbeam, Hupmobile, Chevrolet and Overland.

The twenty-nine "sixes", in the same sequence, follow: Packard, Chrysler, Rickenbacker, Gardner, Oakland, A. C., Peerless, Willys-Knight, Moon, Franklin Sunbeam, Reo, Ajax, Nash, Studebaker, Essex, Hudson, Rolls-Royce, Oldsmobile, McLaughlin, Marmon, Overland, Jewett, Paige, Flint, Pierce-Arrow, Chandler, Cleveland, Auburn. There were nine eights of which three were V. type—Cadillac, Lincoln and Peerless—and six of the "in line" type—Auburn, Diana, Gardner, Jordan, Packard and Rickenbacker. The little Leyland built Trojan is a two cylinder light car.

There were twenty bus and truck exhibits and seventy-five automotive equipment displays. The motor boats were shown in the Grand Stand Building and the tractors in the Tented City.

New Federal 2-Ton Model Will Sell for $500 Less

DETROIT, Sept. 20.—Sensing the strong demand for a truck of from 1½ to 2 ton capacity to be used in heavy duty work, both in highway transportation and heavy hauling, officials of the Federal Motor Truck Company of Detroit have announced their latest model, a truck of this capacity, motored by the famous Knight sleeve-valved engine, at a substantial reduction in price over the former Federal model of the same capacity.

The new model, at a new low price $500 below that of the former Federal truck of the same capacity, brings the use of the sleeve-valved motor into the heavy duty trucking field, where it is expected to more than bear out the unusual performance records of hundreds of owners of the one-ton Federal-Knight truck which was introduced some time ago.

The absence of many parts found in the poppet type motor, lighter weight and stronger construction in the new model has met with acclaim by truck owners. It represents the first time that a sleeve-valve motored-truck has been introduced to the field demanding exceptionally sturdy construction.

Cleveland August Sales Are Above Those of Last Year

Volume for Month Is Within 9 Per Cent of July, 1925, Record

CLEVELAND, Sept. 19.—Sales of both new and used automobiles in Cleveland during August broke all records for that month, according to the Cleveland Automobile Manufacturers' and Dealers' Association. The volume for the month just closed was within 9 per cent of the July record, and it was 100 per cent greater than in August, 1924.

The remarkable increase recorded is due to the announcement of improved cars and lower prices, selling points that can not be eclipsed, the association believes.

Bills of sale for new cars that were filed with County Clerk George Wallace during August totaled 3,993. This compares with 2,773 for August, 1924 and 3,095 for August, 1923.

The used car sales recorded totaled 13,853, as compared to 6,182 for August, 1924, and 6,303 during August, 1923.

In July this year there were 4,383 sales of new cars recorded, the decline during August being but 9 per cent this year, while last year the drop in sales from July to August was 19 per cent.

VAN FLEET JOINS PEERLESS

CLEVELAND, Sept. 19.—F. A. Van Fleet, for the last 10 years managing editor of the State Journal at Lansing, Mich, has been appointed advertising manager for the Peerless Motor Car Co. For a number of years he was engaged in editorial work in Detroit, specializing on the automobile industry. He was at one time secretary to the mayor of Detroit.

INAUGURAL RACE OCT. 17

SALEM, N. H., Sept. 19.—The Rockingham Speedway near here is nearing completion and the management has all arrangements made for the opening race on October 17. This Inaugural Race will be 250 miles. Jack LeCain, general manager, declares this will be the fastest track in the world. It is being built by the Prince Construction Co. of Oakland, California. Its straightaways are 1,460 ft. long and the turns banked as high as 49½ degrees at the steepest part.

BRISBANE BUILDS GARAGE

NEW YORK, Sept. 19.—Arthur Brisbane, nationally known for his newspaper editorials, will begin shortly the construction of a 750 car garage employing d'Humy motoramps on a plot, 100x 200 ft., located on 102nd street just off Fifth avenue. The new garage will serve the needs of car owners residing in nearby apartments, and will be operated by the Fifth avenue and 102nd street Garage Corp., under the name of the Brisbane Fifth Avenue Garage.

Along Automobile Row

BOSTON.—Linwood H. Young is now handling the Renault line with salesrooms on Newbury Street. For years Alfred Cutler Morse had the agency in Boston, but gave up business here and moved to Taunton where he made his home.

KNOXVILLE, Tenn.—The Red & Gray Tire Co., has announced plans for the construction of a new and permanent home at Locust Street and Western Avenue. The company conducts both a wholesale and retail tire department.

HASTINGS, Neb.—The Frank Rose Mfg. Co., announces the appointment of the E. H. Baughman Company, 88 Spring Street, Atlanta, Ga., to represent them in the southeast territory for the sale of Rose tire pumps, lubrication, equipment and other Rose products.

EUGENE, Ore.—B. F. Goodpasture has obtained agency for Buick cars. F. E. Calkins has been named agent for the Oldsmobile line.

DETROIT.—Stephens H. Moffitt, Nash dealer for Lansing, Michigan, and the nearby vicinity is building new and larger quarters at the corner of Michigan and Eighth Streets which will be occupied October 1.

MINNEAPOLIS.—Reilly-Craig Co., 1201 Harmon Place, Minneapolis, formerly distributing the Maxwell-Chrysler, has been made sales agent for the Willys-Overland, Inc., which has moved its wholesale and retail department to the Overland building, St. Paul.

BUFFALO.—The A. W. Haile Motor Company, 1291-1299 Main Street, has been appointed as an authorized dealer of the Ford Motor Company. The Haile Company will service the various Ford units.

MEMPHIS.—The Richardson Motor Sales Co., located at 257-259 East Butler Street, has taken on the Star and Durant lines of automobiles.

WINNIPEG.—The Robert Bosch Magneto Co., Inc., of New York, has appointed the Acme Magneto & Electrical Co., Ltd., this city, as official service station.

ASHLAND, Ore.—One of the largest business transactions made in this region this year was announced today when Harrison Brothers, who for several years have been Ford agents in Ashland, announced the sale of their business to H. L. Claycomb, formerly of Walla Walla. Harrison Brothers, purchased the Patton-Robinson agency for the Chevrolet automobile in Medford, Ore.

SALT LAKE CITY.—A. E. Tourssen, Oldsmobile distributor and dealer in Salt Lake City has been selected chairman of the advertising and publicity committee of the Salt Lake Chamber of Commerce Commercial Club.

HARTFORD, Conn.—The S. & M. Sales Corporation, handling the Overland and Willys-Knight, has occupied the north side salesroom and service station in the new Buick building at 80 Washington Street.

LITTLE ROCK, Ark.—Grady J. Greene, for the last three years service manager for 555 Tire and Service Company, Little Rock, has been appointed manager of the 555 Tire and Service Company at Stuttgart.

MEMPHIS.—The Memphis Motor Car Company, Hudson-Essex dealers, will have a sales and display room in the new twelve-story Hotel Peabody, which recently opened here.

EUGENE, Ore.—Sweet-Drain Automobile Company has taken the agency for the Studebaker line.

BOSTON.—The New England Cycle & Radio Company, Inc., for some years at 840 Washington Street has just moved into new and larger quarters on that same street. Originally it was a bicycle and accessory store, but has branched out into one of the largest radio houses in Boston.

EDMONTON, Alta.—Edmonton Motors, Ltd., Chevrolet and Reo dealers, has organized under the management of Frank Wolfe.

PAWTUCKET, R. I.—Bradburn Motors Co., Oakland dealer, has moved from old quarters at 91 Exchange Street, this city, to a larger building located at 127 High Street.

COLUMBUS.—E. H. Huffman & Sons, has been made agent for the Hudson and Essex lines by the Walter B. Zimmerman Co., central Ohio distributors.

OSCEOLA, Ark.—The Osceola Motor Company has occupied its new home on Walnut Street, erected at a cost of $16,000 and equipped as a Ford sales station.

WOODSTOCK, Ont.—R. J. McCarron has been appointed representative in Woodstock of the Ford Motor Company, to succeed Elliott Bros.

BOSTON.—Snow, Coombs & McBeath, Ford dealers, are to move October 1 to 642 Beacon Street in the building formerly occupied by the Autocar Sales & Service Company.

LONGVIEW, Wash.—Fred Hess Motor Company has secured the Ford agency. Green-Porter Nash Company has opened a new garage at 1337 Vandercrook Way.

MOBERLY, Mo.—A. J. O'Hern of the Durant Motor Co., signed a new contract for the current year with A. C. Sibbitt & Son to handle the Durant and the Star cars.

BLYTHEVILLE, Ark.—Tom A. Little, Chrysler dealer, International Motor trucks, farm implements and wagons, has moved to a new location with a floor space of 125 by 116 feet. A service station for automobile and truck customers and a full line of parts and accessories for Chrysler and International is carried.

BUNCETON, Mo.—The Cline Garage of Boonville, agents for the Chevrolet Motor cars moved from their home location with the Freeman Implement Co., to the building on Morgan Street, until recently occupied by the Hobrecht Motor Co., agents for Overland cars.

ST. LOUIS.—Ford-Seifert Auto Electric Co. has occupied a new building at 2629 Locust Street erected expressly for it. The company's business consists of the repair and replacement of all electrical automotive equipment.

MILWAUKEE.—Shawano Motor Car Co. has been organized at Shawano, Wis., with capital of $10,000 by E. H. Ramm, E. F. Ramm and J. J. Henderson. Fords and Ford products will be sold.

NORTHAMPTON, Mass. — George P. Beaudry, president of the F. C. Magranis Co., Hudson and Essex dealer, has bought Mr. Magranis' interest in the concern and has become sole owner.

HARTFORD, Conn.—Harry L. Nichols, proprietor of the Nichols Auto Top Co., William P. Allen, formerly vice-president and sales manager of the L. & H. Motor Co. and Elmer P. Sellew, formerly service manager of the same organization have formed the firm of Nichols, Allen & Sellew and will sell and service A. B. C. fuel oil burners.

MILWAUKEE.—Berbanatz & Boll, Inc., a new Chrysler dealer agency, has been organized at 1914 North Avenue in Milwaukee.

DES MOINES, Ia.—The O'Dea Motor Co., former Ford dealer in East Des Moines, has taken the Hudson-Essex contract for that section of the city. John Beller of the Beller Franklin Co. has acquired an interest in the company.

CHARLOTTE, N. C.—E. G. Godwin has closed a contract for the Willys-Knight and Overland agency at Goldsboro, N. C. His salesroom is located at 212 North Cedar Street, there.

MINNEAPOLIS.—The Zenith Motor Co. Duluth, has moved into a new building at 222 East Superior Street, opposite the new Hotel Duluth. The building is three stories and will have service quarters as well as show rooms, also an oil station. J. H. Kohn is the new proprietor. The company is agent for Hudson-Essex cars.

DES MOINES.—Leroy V. Jones, manager for the Gibson Motor Company, the last year, has taken charge of the retail sales department of the Herring Motor Company, Ford distributors. Mr. Jones was formerly with the Cleveland Automobile Company before coming to Des Moines and is well known in automobile circles of the Middle West.

TOLEDO.—The Riley Nash Co. has been incorporated with an authorized capital of $25,000 by William J. Dean, Harley F. Riley, Howard H. Harpst, Harold J. Rehoe and Frances Rothschild. The new concern will do a general agency and commission business in automobiles and trucks.

KOKOMO, Ind.—The Wilbur Johnson Company, of Indianapolis, has opened a branch agency here, with both sales and service departments for Cadillac and Hupmobile cars. Glenn Ellis, of this city, has been appointed manager.

BOSTON.—Knowlton M. Watson, for the last year in charge of the New England agency for Stewart trucks, has rejoined the sales force of the C. P. Rockwell Company, Nash and Ajax distributors.

DETROIT.—Willys-Overland last week gained a new establishment when Fred W. Turrill, manager of the Northwestern Sales Company of Bay City, Mich., opened a new show room for the display of Willys-Overland and Willys-Knight cars.

NORTH ADAMS, Mass.—The City Garage & Sales Co., Dodge dealer, has let the contract for a new $15,000 service station, to be completed early in October.

DES MOINES, Ia.—Leroy V. Jones, manager of the Gibson Motor Co., Iowa distributor of Chandler and Cleveland, has joined the Herring Motor Co. as manager of retail sales. Mr. Jones will have supervision over Ford and Lincoln sales in Des Moines.

COLUMBUS.—Ralph E. Brown, formerly connected with the Columbus branch of the Kelly-Springfield Tire Co., has purchased an interest in the E. J. Benson Tire Co., distributors for the Corduroy line.

MINNEAPOLIS.—The Wills-Ste. Claire Automobile agency has moved to 723 Third Avenue. S. Kenneth Kingsley is manager.

ST. LOUIS.—Sam L. Chorlins, president of the State Tire Co., 2235 Washington Boulevard, is to sever his connections with the company and move to Florida to engage in the real estate business. The State Tire Co. will continue business as usual under the direction of other officers of the firm.

NORTHAMPTON, Mass.—Bernier & De Roschers have taken over the Chevrolet agency from L. A. Rust, who retains the franchise for Easthampton.

MILWAUKEE.—Joseph Collins of Madison, Wis., has become associated with the Wisconsin Motor Sales Co. of that city, dealers in Locomobile, Durant, Flint and Star cars.

PITTSFIELD, Mass.—Ralph Hooker has been appointed Chrysler and Maxwell dealer and is opening a show room in West Street.

ST. LOUIS.—The Riesmeyer-Yates Motor Co., a newly authorized Ford dealer, has begun business at 110 West Lockwood Avenue, Webster Groves, Mo., in the building formerly occupied by the Wielandy-Reller Motor Co.

MILWAUKEE.—H. F. Van Horn, former automobile editor of the Indianapolis Star and for the last two years publicity director for E. G. (Cannonball) Baker, test pilot for the Rickenbacker Motor Co., has joined the Stader Auto Sales Co. of Milwaukee, downtown Rickenbacker dealers.

EDMONTON, Alta.—The Paige-Jewett franchise has been taken over by Lou Keeling, formerly of NorWest Motors.

With the Associations

N. Y. Jobbers Plan Drive

SYRACUSE, N. Y., Sept 19.—"Keep ur Shop Busy This Winter." This rase is to be the keynote of a very tive and money making campaign for r distributors and service stations, unched by the New York State Jobbers ssociation. Together with the A. E. A. sk 'Em to Buy", "Shop Profits", and rofitable Maintenance" campaigns, is phrase is to be heard and recognized roughout New York State during the ming season as a major program.

At a special meeting of the New York ate Jobbers Association held in Syra-se, the A. E. A. jobbers of New York ate, exclusive of Metropolitan district, ere represented 100 per cent strong. An tire day was spent in discussing the ed car problem and the repair shows' nter slump as it has been noted in the st few years. Every jobber present was cidedly in favor of any action or move-nt which would assist their customers improve this condition.

R. W. Procter of Black & Decker nufacturing Company, a member of e merchandising committee of the A. A., and George Fleming of the Flem-g Machine Tool Company, made ad-esses, starting a line of thought which lminated in a campaign to be developed the New York State Jobbers Associa-n and in the slogan, "Keep Your Shop sy This Winter". A committee com-sed of Arnold, of the Onondaga Auto pply Company, Syracuse; Murphy, of ited Auto Accessories, Buffalo; and hipple, of Whipple's, Binghamton; re appointed to confer with manufac-ers, distributors, dealers, and associa-ns who would be interested in this ovement.

Active plans are already under foot to unch this campaign through a state de agitation, sponsored by the 16 A. A. jobbers in attendance at the meet-g. Very interesting and profitable de-opments for the car distributor and rvice station were phophesied and de-opments already started show evidence a very active campaign to be launched hin the next few weeks.

Window Space Supplied

LOUISVILLE, Sept. 19.—Use of the ow windows in the new headquarters the Louisville Automobile Dealers' As-ciation has been offered to the automo-ile trade of this city for the display of cessories and other automotive equip-nt, and at present the windows are oked for the next two months and many plications have been made for dates. Eh firm is priviledged to display its oducts for one week and in order to ke the displays more attractive the widows will be well illuminated each ening until after theater hours.

St. Louis Opens Winter

ST. LOUIS, Mo., Sept. 19.—The first fall meeting of the St. Louis Automobile Dealers' Association was held at the Claridge Hotel with a large number of dealers and their employes in attendance.

H. D. Bullock, sales expert from San Francisco, J. L. Spencer, automobile editor of the St. Louis Post-Dispatch and L. Frank Brown, special representatives of the Prudential Insurance Co., were the speakers.

Bullock said that 80 per cent of automobile sales were traceable to hard work and only 20 per cent to sales analysis but that expert sales analysis will double the results of the hard worker.

Spencer spoke on the relation of good roads programs to automobile sales and told how good roads would leave some communities now lively high and dry and make other backward towns into important centers.

Brown told how the insurance of the heads of firms increases the credit standings of those firms.

The Oliver Cadillac Co., recently appointed Cadillac distributor in St. Louis was elected to membership and Robert E. Lee, manager of the association presented the applications of five other companies for memberships and their election followed: they are, St. John's Motor Car Co., Paige and Jewett dealer, Love-Johnson Motor Co., Ford dealer, Townsend-Bohn Motor Car Co., Dodge dealer, West Side Nash Co., Nash dealer, MacCarthy-Pardue Motor Co., Chevrolet dealer.

Delegates Are Named

CHARLOTTE, N. C., Sept. 19.—Five delegates were named by the Automotive Service Association, of Charlotte, N. C., to attend the convention of the National Tire Dealers' Association, at St. Louis, November 17-19. They are Keeley A. Grice, president of the local association, Victor Shaw, J. H. Huntley and J. C. McDonald. Mr. Grice, as president of the North Carolina Gas and Tire Dealers' Association, said he will endeavor to influence other local associations of this state to send delegates, in the hope a large combined delegation will attend the St. Louis event.

Denver Sales Congress

DENVER, Sept. 19. — The National Automobile Dealers' Association has announced a sales congress to be held in this city December 9. These meetings are held with the sanction of the National Automobile Chamber of Commerce. A number of prominent speakers will attend, and the Denver Automobile Dealers' Association will be in charge of the local arrangements. Special emphasis will be laid upon the marketing of used cars.

Portland Studies Credits

PORTLAND, Ore., Sept. 19.—At the regular monthly meeting of the Portland Standard Parts association eleven members of the association were present. The matter of credits was gone into thoroughly and a resume of the activities of the various members in the field was carefully considered. Due to the increased business in the garage and repair lines it was generally considered that the credit situation was much improved. The association has established a credit clearing house and it is found of much benefit to members who are asked to open accounts and also to those whose present credits in some instances are "overdrawn."

Would Have All Cars Insured

CINCINNATI, Sept. 19.—Strong efforts will be made by the Cincinnati Automobile Club and the Cincinnati Automobile Dealers' Association to induce the Ohio General Assembly to pass an act providing for compulsory insurance for all motorists. One of the plans favored most is to place the burden of cost of the accident on the person found to be responsible for the accident. An objection to this plan is that numbers of irresponsible drivers have their cars heavily mortgaged and have no financial responsibility whereby they can be made to pay. Judge Louis R. Marx of the Superior Court at Cincinnati is carrying strong campaign to accomplish the compulsory insuring of all motor vehicles. An extra session of the Ohio legislature may be called in January, when this bill is to be introduced.

New Orleans Plans Congress

NEW ORLEANS, Sept. 19.—Leaders of the automobile industry are expected to be in New Orleans for an annual sales congress of the National Automobile Dealers' Association and the National Automobile Chamber of Commerce, November 6, according to an announcement recently made by the publicity department of the New Orleans Association of Commerce. On the program will be addresses by the sales managers of some of the larger automobile manufacturers. This sales congress, which is one of several the N. A. D. A. is holding throughout the country this fall, will bring together in New Orleans a number of representative dealers and distributors in the Louisiana and Mississippi territory.

Coombs Heads Radio Trades

TORONTO, Sept. 19.—R. H. Coombs, general manager of the Canadian National Carbon Co., Ltd., Toronto, has been elected chairman of the manufacturers' division of the Canadian Radio Trades Association.

Indianapolis Chamber Plans Survey of Air Development

Will Determine How Many Would Use Airport if One Were to Be Built

INDIANAPOLIS, Sept. 19.—An air mail survey is to be made at once by the Indianapolis Chamber of Commerce to determine what support air mail and Indianapolis Airport could depend upon. John B. Reynolds, secretary of the chamber, says that several air mail and express transport companies have made inquiries recently as to the support which such service can expect in Indianapolis, and the possibilities of the city establishing an adequate airport.

The survey will be made through the newspapers to learn of the number of local factories and commercial houses and individuals who will use the air mail and express service if it is established here. At present the city is without a suitable landing field although the government maintains an army flying field.

It is understood that representatives of Ford flying ventures were here recently to investigate the army field and the possibility of using it for the civilian service. Unfortunately, the government owns the ground of the landing field. It is said that if the field were operated by the government on leased land that some joint use of the army and the civilian air service could be worked out. This condition will necessitate the city acquiring a proper field for its airport if the survey shows sufficient demand to warrant such an investment by citizens.

Secretary Reynolds later announced that he will appoint a committee to meet and welcome the planes of the First Airplane Reliability Tour which leaves Detroit September 28 and reaches Indianapolis on the last leg of its journey October 2. It is hoped that by that time the survey will be completed and a plan for action, if such is deemed advisable, will be put to the citizens and interest in the venture stimulated by the arrival of the planes engaged in the tour.

Coming Motor Events

Automobile Shows

Dallas, Tex.—Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

Fresno, Cal.—Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.

Oklahoma City, Okla.—Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.

Shreveport, La.—Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

New York—Nov. 15-21
Twenty-first Annual Automobile Salon.

Chicago—Oct. 10-17
Seventh annual Used Automobile Show under auspices of Chicago Automobile Trade Association, at Coliseum.

Chicago—Nov. 5-7
Annual show in connection with convention of National Standard Parts Association, Coliseum.

Chicago—Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Boston—Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Danbury, Conn.—Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Chicago—Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.

Salt Lake City—Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building. Wm. D. Sutton, supervisor of Automobile Show.

Boston—Oct. 12-17
Annual radio show in Mechanics' Building. Shelton Fairbanks, manager.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Louisville, Ky.—Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Races

Charlotte, N. C.—Nov. 11
Fresno, Cal.—Oct. 3
Los Angeles, Cal.—Nov. 26
Rockingham (Salem, N. H.)—Oct. 17
Baltimore—Oct. 24

Conventions

Buenos Aires, Argentine—Oct. 3-13
Pan-American Road Congress.

Des Moines, Ia.—Nov. 12-13
Automotive Merchants' Association Convention.

Montreal, Que.—Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Pittsburgh, Pa.—Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis—Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Montreal—Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Foreign Shows

Berlin, Germany—Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina—Oct. 3-13
Pan-American Road Congress.

London, England—Oct. 8-17
Olympia Passenger Car Show.

London, England—Oct. 29-Nov. 7
Annual Truck Show.

MOVIE COMEDY IS AD

CHICAGO, Sept. 19.—Motion pictures, in the form of a comedy-drama, are being employed by the Bassick Manufacturing Co., supplementary to their other advertising media, as a means of exploiting Alemite. The film, produced and released by the Atlas Educational Film Co. of Oak Park, Ill., is having national theatrical distribution in conjunction with a unique method of introducing and popularizing the Bassick company's lubricant. "Squeaks" is the title of the picture, which is being run in addition to the regular program, in numerous motion picture houses throughout the country. The plan operates in association with the local Ford dealer. When the film is shown, patrons of the theater are given coupons which they fill out, giving names, addresses and stating whether or not they own an automobile. These coupons are numbered and are collected as the crowds pass from the theater. Later, through the local Ford agency, holders of lucky numbers receive awards consisting of Bassick merchandise—Alemite and grease guns—valued at from $15 to $26.

WILCOX MANAGES SHOW

MINNEAPOLIS, Sept. 19.—H. E. Wilcox of Wilcox Trux, Inc., of Minneapolis, has been named as manager of the 1926 automobile show of the Minneapolis Automobile Dealers' Association. The show will be staged in Minneapolis the week of February 8 to 13. Mr. Wilcox managed the 1925 show of Minneapolis dealers and it proved to be one of the greatest automobile shows Minneapolis has ever seen.

THOMPSON ADDS TO STAFF

CLEVELAND, O., Sept. 19. — C. E. Thompson, president of The Steel Product Company, announces the appointment of T. P. Cagwin as his personal representative for The Steel Products Company and Thompson Products, Inc., both manufacturers of automobile engine valves and chassis parts. Mr. Cagwin was formerly an official of the Gibraltar Savings Company, Cleveland.

JOHN KELSEY RECOVERS

DETROIT, Sept. 19.—John Kelsey, president of the Kelsey Wheel Co., has returned to Detroit after having spent five weeks in the Mayo Brothers' Hospital in Rochester, Minn. Mr. Kelsey has recovered from a series of operations and his health now is said to be excellent.

Details of Christmas Photo Contest Announced by A. E. A.

Prizes Aggregating $500 Will Be Given for Best Window Display by Dealers

CHICAGO, Sept. 19.—Details of the third annual Christmas display for automotive dealers have been announced by the Automotive Equipment Association. As in previous contests fifteen prizes aggregating $500 will be awarded to dealers submitting photographs of the best trimmed windows featuring the idea, "Give Something for the Car This Christmas."

The first prize will be $150, second prize $100, third $75, fourth $50 and fifth $25. The next ten prizes will be $10 each.

The contest is open to all accessory dealers, car dealers, garage men, service station proprietors and others engaged in the resale of automotive equipment and service anywhere in the United States or Canada. No entry fee will be charged.

One condition of the contest is that the window must have displayed in a prominent place at least one large card, poster, streamer or paper sign reading, "Give Something for the Car This Christmas."

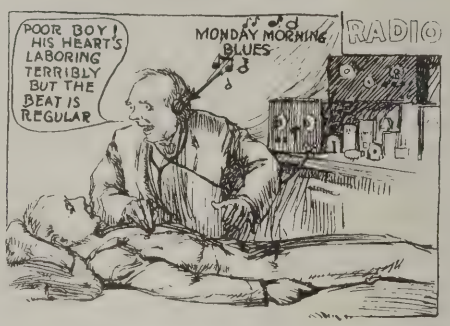
The contest will be decided from photographs which must be not smaller than post card size. It is suggested that they be eight by ten inches. Each photograph entered must have an official entry blank attached and must be endorsed on the back, "Approved and released for publication," with the date, firm name and address, and signature of the entrant. Entry blanks will be supplied free by A. E. A. members or their salesmen.

Judges of the contest will be the following editors of automotive business publications: Leon Banigan, Motor World Wholesale; Ken Cloud, Jobber Topics; A. V. Comings, Automobile Trade Journal; S. P. McMinn, Automotive Merchandising; Sam Shelton, MOTOR AGE; Ray W. Sherman, Motor; Ray P. Cloan, Automobile Topics. The contest closes at 5 p. m., Dec. 24.

Photographs should be mailed to Arthur R. Mogge, merchandising director, Automotive Equipment Association, City Hall Square Building, Chicago, Ill.

SQUEEKS and RATTLES

CLINICAL MELODIES



Doctor Neersite has been called to treat an injured mechanic. The old man forgot his spectacles and got the radio receiver instead of the stethoscope.

A driver of a taxi was recently fined for being intoxicated while at the wheel. We understand that suspicion was aroused when he started to slow down at corners.

—London Opinion

Priscilla—Going downhill yesterday I stripped the gears.

Prim—O-o-o-oh! How terrible! Did they show?

—Williams Purple Cow.

Mrs. Benrich: I gave my husband an imported meerschaum for his birthday.

Mrs. Newrich: Oh how charming! Touring or sedan?

—Ziff's.

Automotively Speaking

Nashes to Nashes,
Stutz to Stutz,
If the Buicks don't get you,
The Chevrolets must.

—The Pure Oil News

Friend: Steady! You barely missed running over that man. If he hadn't jumped—

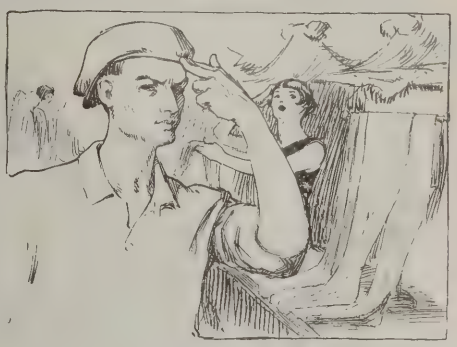
Lady Driver: Oh, that's all right. It was my husband, and the doctor said he needed exercise.

—Answers

While you were reading this, Henry Ford made ten dollars.

—Harvard Lampoon

TRIALS OF BILL FIXIT



Absent-minded mechanic, shopping for some garters for his wife:

"What'd I want? Le's see. Oh yes, a set of hose clamps, I believe."

Putting More Cars on the Road

(*Continued from page* 12)

lation increases in future years as it has in the past, such projects will have to be rushed to completion with all speed to cope with the situation.

Every city in the United States faces in varying degree these same conditions. The country population has its roads, or is getting them, and consequently visits the city a great deal more often than in former years. This adds another load to the city traffic burden not considered when the plans of the city were drawn. Nor, for that matter, was the automobile and its great and rapid development, counted upon when most of the larger cities of the United States were planned.

In their attempt to catch up with this unforeseen traffic condition, city planners and every one else interested, have put forth gigantic efforts. It is only recently, however, that they have been able to make appreciable headway. It is evident that a twenty-five year start on the part of the automobile business will take time for the traffic experts to overcome. They need help now and will need it still more urgently as long as the automobile continues to sell in such volume. But with proper encouragement it is evident that comfortable and economical traffic facilities will ultimately be provided for all the motor vehicles the people want to use.

A. N. Johnson, chairman of the highway research board of the National Research Council, in a recent address declared:

"Probably no more perplexing problem is prpesented than that of traffic congestion today. We provide radial or arterial roads which concentrate such a large flow of traffic at given points, as of itself to cause stagnation through these centers. We may bring traffic readily and rapidly to the confines of a city, only to discover that there is not traffic area sufficient to take care of the volume that has been so attracted.

"Eventually this must cause so great inconvenience as to reduce the amount of traffic. The problem before us, is to determine, if possible, what may be the ultimate flow of this highway traffic and the provisions which should be made for its accommodation. What may very likely happen is the essential readjustment of the distribution of population, tending to disperse it, rather than continue concentration as has been the case for so many years, witnessed by the upbuilding of our great cities."

THOR HAS NEW BRANCH

CHICAGO, Sept. 19.—The Independent Pneumatic Tool Company, manufacturers of Thor pneumatic tools and electric tools, announces the opening of a branch office at 288 East Water street, Milwaukee. A complete stock of Thor tools, electric tools, spare parts and accessories will be carried. The Milwaukee branch will be in charge of G. H. DuSell, an experienced pneumatic and electric tool man, who has traveled in the Milwaukee district in the interest of Thor tools for a number of years.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
		"8-88"	
.....	4-p	Sport Roadster	1,975
.....	6-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	7-p	Sedan	2,550
.....	.....	Wanderer	2,400
BUICK		"Standard"	
.....	2-p	Roadster	$1,125
.....	5-p	Touring	1,150
.....	2-p	Coupe	1,195
.....	4-p	Coupe	1,275
.....	5-p	4d. Sedan	1,295
.....	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
.....	2-p	Roadster	1,250
.....	5-p	Touring	1,295
.....	5-p	Sedan	1,495
.....	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
.....	3-p	Sp. Roadster	1,495
.....	5-p	Sp. Touring	1,525
.....	4-p	Country Club	1,765
.....	4-p	Coupe	1,795
.....	5-p	Brougham Sedan	1,925
.....	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
4075	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
4155	7-p	Sedan	3,295
4240	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	.....	Phaeton	3,250
.....	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,795
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,595
3223	7-p	Touring	1,785
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Chummy Sedan	2,045
3525	5-p	Met. Sedan	2,195
3128	5-p	Sedan 4d.	1,995
3594	7-p	Sedan	2,295
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2435	5-p	Touring DeLuxe	1,025
.....	3-p	Coupe	975
2580	5-p	Sedan	895
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
.....	3-p	Coupe	1,175
.....	5-p	Sedan	1,295
3190	5-p	Sedan De Luxe	1,595
3190	5-p	Sport Sedan	1,625
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DORRIS		"6-80"	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4810	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
.....	2-p	Sp. Roadster	900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	795
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER			
		"6"	
3070	5-p	Touring	1,395
.....	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3290	5-p	Sport Sedan	1,895
3300	.....	DeLuxe Sedan	1,895
		"8"	
3350	5-p	Touring	1,995
3360	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HERTZ		D-1	
3360	5-p	Sedan	$1,695
HUDSON		"Super Six"	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,195
3425	4-p	Brougham 4 d.	1,495
3675	7-p	Sedan	1,695
HUPMOBILE		"R"	
2595	2-p	Roadster	$1,225
2705	5-p	Touring	1,225
2760	2-p	Coupe	1,350
2875	5-p	Club Sedan	1,375
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		"23-25"	
3025	4-p	DeLuxe Road.	$1,500
3015	5-p	DeLuxe Touring	1,320
3000	5-p	Coach 2d.	1,245
3150	5-p	DeL. Coach 2d.	1,400
3305	5-p	DeLuxe Sedan	1,680
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,275
3340	5-p	Touring	2,275
3450	3-p	Friendly "9"	2,575
3625	5-p	Brougham	2,575
3520	4-p	Victoria	2,475
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		"55"	
3130	2-p	Speedster	$1,785
.....	2-p	Sp'dster De Luxe	2,185
.....	4-p	Speedster	1,995
.....	4-p	Sp'dster De Luxe	2,285
3530	2-p	Enc. Speedster	2,285
.....	2-p	Enc. Sp'd'r DeL.	2,785
3190	4-p	Tourster	1,895
.....	4-p	Tourster DeL.	2,085
2980	5-p	Phaeton	1,685
3170	5-p	Phaeton DeL.	1,885
.....	7-p	Touring	1,785
.....	7-p	Touring De L.	1,985
3430	4-?p	Coupe	2,185
.....	4-p	Coupe De Luxe	2,585
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,685
.....	5-p	Brougham 2 d.	1,795
4070	7-p	Sedan De Luxe	3,285
4010	7-p	Berline Sed. DeL.	3,385
3530	5-p	Victoria	2,285
.....	5-p	Victoria De Luxe	2,685
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster De L.	2,585
.....	2-p	Speedster De L.	2,585
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Tourster De L.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Luxe	2,885
.....	5-p	Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,195
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,985
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
.....	.....	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

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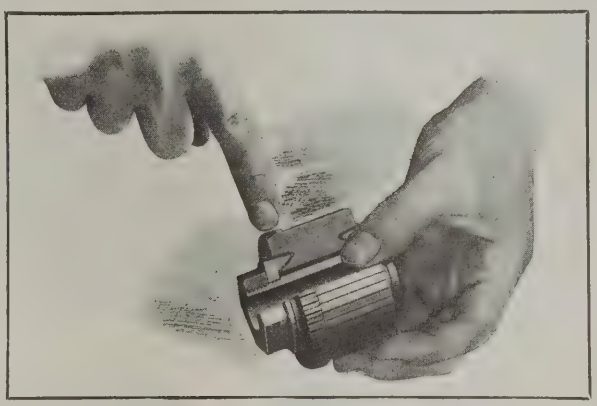
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Thor

Construction Makes Portable Electric Drills Pay Their Way

(This is another of a series of advertisements showing Thor superior construction. Ask for booklet "Inside Facts" and get the whole story.)

Fourth-Commutator Design Is Correct



None but a motor so perfectly balanced could make the performance records that Thor drills have set. Balance is the keynote of Thor design. First the commutator and fan, and then the complete armature, are balanced separately, so there is no distortion or vibration.

Furthermore, in the Thor motor the commutator is not attached direct to the steel armature shaft—because steel does not expand the same under heat as copper. The Thor commutator is a separate unit, built up on a brass sleeve that expands and contracts evenly with the copper segments, thus making sure that these segments will not work loose and rise. That's why Thor commutators are free from loose segments, which occur when the commutator is built on the steel armature shaft.

INDEPENDENT PNEUMATIC TOOL COMPANY

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LAMINUM

MOTOR AGE

Vol. XLVIII | Chicago, October 1, 1925 | No. 14

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

REPORTS from practically all sections of country indicate strong tone to new car sales. Page 32.

National Association of Finance Companies plans survey to determine what constitutes sound credit terms in payment for automobiles. Page 35.

Automotive interests getting organized for war tax battle. Page 33.

Leading rubber companies announce they will abandon "spring dating plan" of selling tires to dealers. Page 39.

Foreclosure suit filed by trustees for mortgage holders against Lexington Motor Co., of Connersville. Page 33.

Paige-Detroit directors decide to call $500,000 block of notes six months before maturity. Financing plan will cut funded debt a million dollars. Page 32.

Four wheel brakes will be fitted to Willys-Knight 4-cylinder cars. Page 32.

Three new features added to all Kissel models. month in 1924. Page 34.

September business in Chicago shows gain over month in 1924. Page 34.

Hold drawings for A. E. A. show in Chicago November 9. Page 14.

Battery manufacturers hold meeting at which several new members are admitted and steps taken to increase general efficiency of organization. Page 35.

Moscow committee awards American passenger cars seven out of total of 15 major prizes in 3000 mile trials. American trucks take four of five major prizes. Page 43.

Trouble prevention will be keynote of joint session by S. A. E. and N. A. C. C. in Chicago October 9-10. Page 33.

Dining car buses are one of California's latest innovations. Page 39.

Financial details of Yellow Cab-General Motors merger are completed at board meeting and new corporation now ready to build trucks and coaches. Page 39.

Hudson-Essex passes record output mark of 200,000 automobiles. Page 42.

Ford may enter textile industry in North Carolina, reports declaring he will buy mills now making fabrics for tires. Page 42.

August registrations in Illinois show 32 per cent decrease. Page 42.

All automotive lines show gains in Texas territory during September. Page 36.

Automobile plants in Toledo continue to increase their production, while employment shows gain of 1,014 in week. Page 36.

Salt Lake City territory business is in healthy condition during September. Deliveries are one problem. Page 37.

Survey shows that it costs 5.85 cents per mile per passenger to drive an automobile in national capital, figuring average capacity of 1.9 passengers to a car. Page 37.

September business this year in northern and central California is 22 per cent ahead of the same month in 1924. Page 38.

Des Moines business is marked by conservative trading in September. Page 38.

In Next Week's Issue—A Practical Trade Association Program



Christmas window display arranged last season by Olympic Auto Supply Co., Seattle, Wash. This window was awarded tenth prize in the A. E. A. contest in which prizes totalling $500 were given. A similar contest has been announced for this year by the A. E. A.

SOMETHING ON THE CHRISTMAS TREE

Santa Claus Will Hang Up Profits for Those Who Aggressively Push Holiday Merchandising Plans

THE Christmas merchandising campaign of the Automotive Equipment Association will be conducted more vigorously this year than ever before. The merchandising committee has laid its plans early so that there will be ample time for manufacturers, jobbers and retail dealers to arrange to get the full advantage of the campaign. Director Arthur R. Mogge has already prepared the promotional literature and shortly it will be possible for dealers everywhere to make use of the strikingly colored window cards, streamers, wreaths and other decorations provided by the A. E. A. for the purpose of creating a holiday atmosphere.

Meanwhile the opening of the third annual Chirtsmas window display contest for dealers has been announced by the A. E. A. Details of this contest, in which prizes amounting to $500 will be awarded, were published in last week's issue of MOTOR AGE. An additional prize of $50, will be awarded this year to the one of the window prize winners who submits the best letter telling how he decorated his window.

The promotional work done of the merchandising department of the A. E. A. in the two preceding years to popularize the idea of using automotive products as Christmas gifts provides a background of favorable opinion upon which the committee and Mr. Mogge believe it will be possible this year to build up a much greater volume of Christmas business than ever before.

It is not too early for the retail dealer to begin his plans for the holiday season. Actually it is 12 weeks until Christmas. But in recent years the shop early idea has grown so much that one can be sure a large number of people will be buying Christmas gifts late in November and early in December. At the latest the dealer should be pre-

Automotive Gift Suggestions

From a booklet prepared by the Merchandising Department of the Automotive Equipment Association

Articles that may be purchased for $2.50 or less

Ash Receiver	Pump
Bar Cap	Radiator Cap
Brushes	Seat Cushions
Bulb Kit	Spark Plugs
Can of Oil	Spot Light
Chains	Step Plates
Cigar Lighter	Stop Signal
Cleaning Material	Timer for Ford
Clock	Tire Chains
Flashlight	Tire Cover
Flower Vase	Tire Gauge
Heater	Tire Lock
Jack	Tool Kit
Lamp Kit	Tools
Lock	Tube
Luggage Carrier	Tube Patches
Mirror	Vacuum Bottle
Moto Meter Lock	Windshield Wiper
Parking Lamp	Wrenches
Pliers	Wrench Sets

Articles that may be purchased from $2.50 to $5.00

Ash Receiver	Pump
Bar Cap	Radiator Cap
Brushes	Radiator Cover
Bulb Kit	Seat Covers
Chains	Seat Cushions
Cigar Lighter	Spare Tire Carrier
Clock	Spark Plug Kit
Cushions	Spot Light
Flashlight	Step Plates
Flower Vase	Stop Signal
Heater	Tire Chains
Horn	Tire Cover
Jack	Tire Lock
Lock	Tool Kit
Luggage Carrier	Tow Line
Lunch Kit	Tubes
Mirror	Vacuum Bottle
Motor Meter	Visor
Parking Lamp	Windshield Wiper
Primer	Wrench Sets

Articles that may be purchased from $3 to $10

Automatic Windshield Wiper	Radiator Shutter
Bar Cap	Robe
Chains	Seat Covers
Cigar Lighter	Spark Plug Kit
Clock	Steering Wheel
Flower Vase	Steer Warms
Heater	Step Plates
Horn	Stop Light
Jack	Stop Signal
Lock Steering Wheel	Tire Chains
Luggage Carrier	Tool Box
Lunch Kit	Tool Kit
Mirror	Tow Line
Moto Meter	Tubes
Primer	Vacuum Bottle
Pump	Visor
Radiator Cap	Windshield Wiper
Radiator Cover	Wrench Set

Articles that may be purchased for $10.00 and up

Bumpers	Seat Covers
Chains	Shock Absorbers
Cigar Lighter	Speedometer
Clock	Spot Light
Fire Extinguisher	Steering Wheel
Flower Vase	Stop Signal
Heater	Tire Chains
Horn	Tire Cover
Jack	Tires
Lock Steering Wheel	Tool Box
Motor Meter	Tool Kit
Pump	Trunk
Radiator Cover	Visor
Radiator Shutter	Windshield Wings
Robe	

Give Something for the Car this Christmas

pared to offer the public a full selection of Christmas merchandise the first week in December.

The time intervening before the dealer should be fully stocked up with Christmas merchandise, well displayed and decorated, is therefore only nine weeks. It will take some time for the dealer to study his market, make an analysis of his probable requirements and place his orders. Orders should be placed early enough that a complete assortment of goods will be on hand by Dec. 1.

Car dealers have to think about arrangements for making deliveries of new cars on or about Christmas day. With the lower prices in effect this year it is likely that new automobiles will be more in demand as Christmas gifts than ever before and a corresponding problem of delivery will be presented to the dealer. This means the salesmen should get their Christmas orders signed up as early as possible so that dealers can get the cars from distributors and factories in time for Christmas delivery.

To aid in the Christmas campaign this year the A. E. A. has prepared an elaborate assortment of window cards and decorations which will be distributed to dealers through the A. E. A. jobbers. Stock assortments include two window streamers with holly sprays in green and red at either end and the words, "Give Something for the Car This Christmas" in green letters. Also included are two large green and red holly wreaths, some window cards with the words, "We wrap your Christmas parcels in holly paper," some large and small Santa Claus price cards which the dealer can use to mark the prices of individual items, and two large counter cards with appropriate Christmas messages on them.

Another feature of the Christmas assortment is a handsome little booklet filled with suggested automotive Christmas gifts at various prices. This little booklet, which will easily fit into a vest pocket or a woman's purse, has covers strikingly printed in red and green. In addition to a suggested list of automotive gifts it contains memorandum space for listing the names of persons and the gift selected for each.

It is the intention of the A. E. A. to supply these booklets to dealers at nominal cost in any desired quantity for general distribution. The dealer's name and address can be imprinted on the back cover.

In surveying his market the dealer should take into account the number of each of the various makes of cars in his territory, the number of closed and open cars, the age of cars and other factors which will influence owners in the desire or use for various types of accessories and supplies. The buying habits of the people of the community also should be taken into consideration.

The automotive merchant may enjoy a profitable Christmas season if he will make his plans early enough and carry through energetically. He will have the assistance of the expert merchandising representatives of not only the Automotive Equipment Association, but also of many manufacturers and jobbers. The extent to which dealers avail themselves of these helps will largely determine their degree of success.



Some of the promotional printed matter provided by the A. E. A. for this year's Christmas merchandising campaign

$300.00
AND WHAT HAPPENED TO IT
Told in Three Letters

This is a story with a moral that automotive dealers can readily pick out for themselves. The actual correspondence is printed here in the sequence in which it was written. The first letter was received in the MOTOR AGE editorial office on September 9, 1925. It follows:

So-Called Buying Corporation Offers Low Prices

Brockport, N. Y., Sept. 7, 1925.

Motor Age,
Chicago, Ill.
Gentlemen:

I have been approached by a representative of the ———— Corporation of New York City who has a proposition that seems to be good. They want a deposit of $300 that stays in their hands as long as a dealer buys from them and in return they enable him to buy his accessories at big savings.

Knowing that you are always ready to be of assistance to the trade I am writing you asking for your advice for a dealer as to joining this corporation.

If you can, will you send me your report by direct mail instead of waiting for it to be used in your magazine, so that I can decide the question at once.

Thanking you for your interest in this matter.

Yours truly,
E. A. COAPMAN,
Brockport Service Garage.

This letter was answered at length on Sept. 10 by the Editor of MOTOR AGE, as follows:

Editor Advises Dealer to Keep $300 at Home

Chicago, Sept. 10, 1925.

Mr. E. A. Coapman,
Brockport, N. Y.
Dear Sir:

I am especially glad to give you the best advice I am capable of in this case.

You say that in order to do business with this buying corporation and get the benefit of low prices on accessories you must deposit with the corporation $300 in cash and leave it there as long as you buy from this concern. I wonder why that requirement? It sounds to me like a shoe string concern trying to raise capital to do business on. If you and a hundred or so other retailers in your part of New York State would advance $300 apiece to your leading automotive jobber you would furnish him with a wonderful amount of ready cash for working capital upon which he would not have to pay a cent of interest and maybe he, too, would be able to give special low prices.

You have not given me very many details upon which to base an answer. You do not say how much lower you could buy from this corporation than from any reputable jobber. You do not say how complete a line of accessories and equipment you will be able to buy from the corporation. You do not say what assurance, if any, you have that the corporation will return (or be able to return) your $300 in case you desire to pull out of the arrangement.

These are among the points that you should consider before making your decision.

You do not state what volume of business you do or what proportion the $300 deposit bears to the monthly purchase you probably would make from the corporation. You do not say whether or not you would be obliged to purchase goods in any certain amount or quantity to get the advantage of the low prices. I wonder if this corporation carries a complete stock of automotive merchandise from which it is prepared to ship on short notice articles for which you will have sudden demand.

If you sign up with this corporation will you have to confine your buying to it or will you be free to purchase elsewhere at your option? Are the "low prices" bona fide and applicable universally to the whole realm of standard automotive merchandise, or only to special items or unknown brands?

I assume that you are an honest automotive merchant who wants to build a permanent and profitable business on the basis of fair prices, square dealing and courteous service to the motoring public. I believe it is your desire to sell merchandise that you can stand behind with the reputation of your house. Can you do it with the merchandise and service that you would get from this corporation?

It seems to me that if I were an automotive merchant in a town like yours I would establish cordial business relations with a high grade automotive wholesaler close enough to give me prompt and reliable service, and would confine most of my buying to that source. I would make my store a valued customer of a reputable house and then I believe that I would possess every business advantage that I would need. I would look not so much for bargain prices as for the opportunity to get quick turnover on a well selected stock of merchandise at a fair profit. I wouldn't start out to be a price-cutter nor a patron of price-cutters. I would make my store trusted by the public and I would deal only with those wholesalers who command my respect and confidence.

And I would keep that $300 on deposit in my local bank as a reserve fund to help me always to take advantage of cash discounts and maintain my position as a preferred customer of a preferred wholesaler.

If I had been in possession of more details of the proposition confronting you I might have answered somewhat differently, but I doubt if my conclusion would have varied from that given here. I will appreciate it if you will enlighten me further on this proposition and tell me what you have decided to do and why.

Yours very truly,
MOTOR AGE,
SAM SHELTON, Editor.

Meanwhile the high-pressure salesman of the so-called buying corporation had been busy and had gotten the dealer's check. But the dealer was quick to realize the mistake he had made and on Sept. 12 wrote the editor as follows:

But Experience Is Still the Best Teacher

Brockport, N. Y., Sept. 12, 1925.

Motor Age,
Chicago, Ill.

Attention Sam Shelton.

Gentlemen:

I want to thank you for your interest in my behalf and for the prompt answer to my letter of last week, regarding the ———— Corporation.

The proposition of theirs is that by a dealer tying up the $300 with them he is then entitled to purchase anything that they have in the line of accessories that they handle, which is quite complete. Their prices are about 25 per cent lower than we are now able to buy through the regular jobbers. I fell for the line due to the fact that we are now getting a lot of competition from "gyp" dealers in Rochester which is only 18 miles from here.

Their salesman wrote on the back of their contract that I was to have back my $300 any time that I was not satisfied with their service. He also told me that they would be glad to have me get a report on them, and that my check would not be back here before I got this report. He immediately tried to get my check certified, but the bank called me and I told them to stop payment on it until the report came back. This made their man very mad, but he said all right. The report came back that they had $2800 in cars, $1700 in stock and that their good will was valued at $20,000. This decided me that the check would say "stopped."

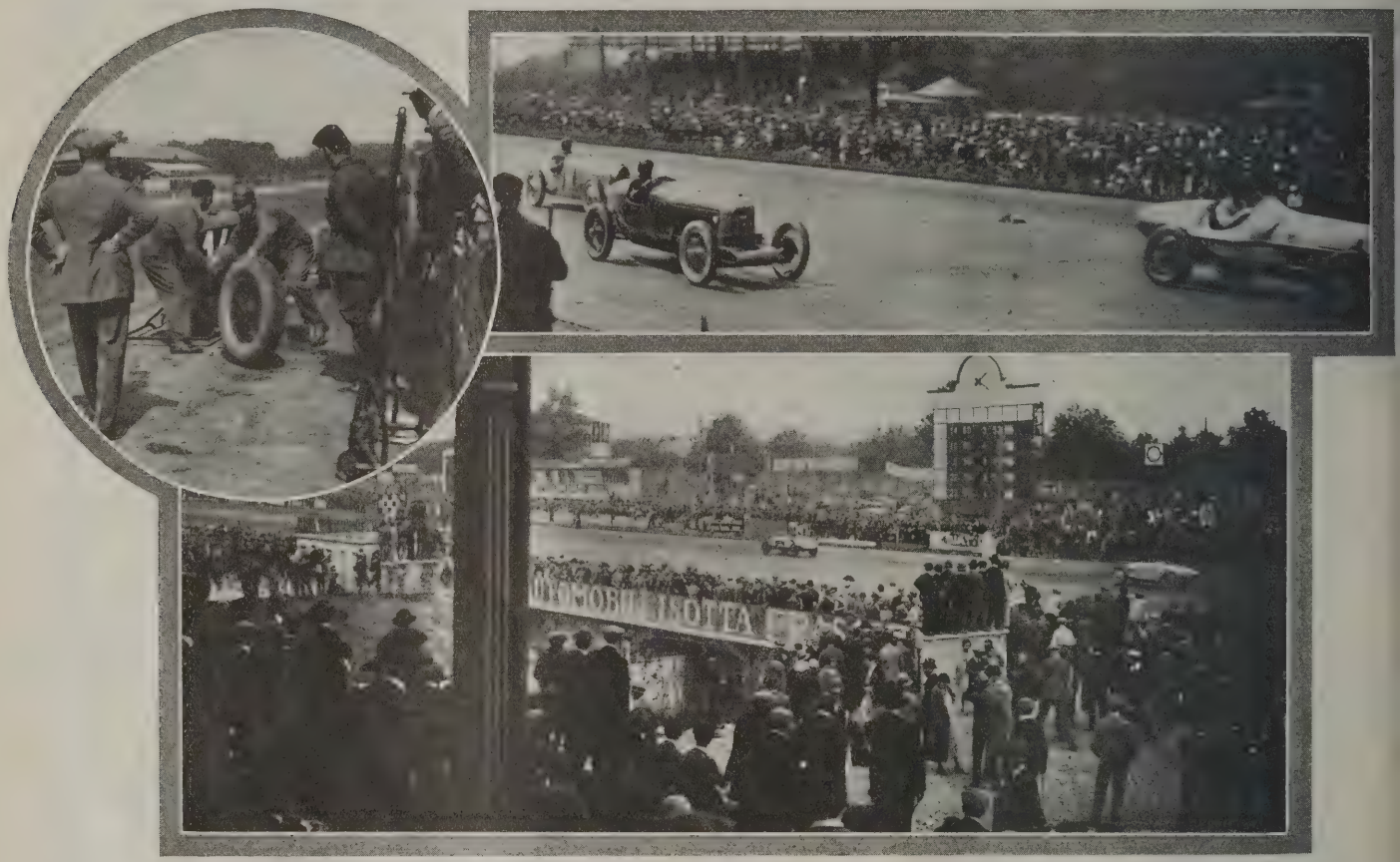
Accordingly the check was protested, and now I am wondering if there is any way that they can collect it. Their man signed the paragraph in which it states that I can withdraw at any time. I sent this on to the firm to see if they would also endorse this item so that it would be more binding, but they have not as yet seen fit to send it back as I requested.

I trust that my experience will be a lesson to other subscribers of your valuable paper.

Very truly yours,
E. A. COAPMAN.

As we have said before, profit begins with buying. It is advisable for the retail dealer to strive to obtain the best prices consistent with good merchandise, satisfactory service and honest practices, but whenever unusually low prices or extremely high profits are offered it is well to be cautious.

Italian Grand Prix Stresses Handicaps of American Driver Racing Abroad



In circle: Brilli Peri, driving Alfa Romeo to victory, stops to change tires; top: Tommy Milton in Duesenberg (on far side of track) who finished fourth despite loss of 26 mintues for repair of broken oil line; bottom: View showing crowds and the finish of the race

IF American cars failed to capture the Italian Grand Prix, held at Monza, Sept. 6, and did not succeed in bringing the world's Automobile Championship to their side of the Atlantic, they proved their right to be matched against the best in the Old World. Racing abroad presents difficulties which were enhanced in this case by the fact that the American Automobile Association does not possess an international voice.

European racing rules specify a 122-inch engine, a two-seater body 31 inches wide, with one man aboard. America races with single seater bodies. The two Duesenberg cars arrived in Milan with the assurance that they would be allowed to race with two plates, 6.6 ins. square added to their head resistance equal to that of the wider European cars. The organizers of the race, however, appear to have overstepped their powers in making this concession, and the jury insisted on 31 inch bodies being built. The rule that the two seats should be side by side was not enforced, the American drivers sat in the middle while the European drivers were on the right.

The difference between American and European rules caused friction and created a situation which needed very diplomatic handling.

The story of the race is easily told. Kreis took the lead on the second lap, but driving too fast he spun round on one of the curves, was unable to withdraw the clutch and broke the second gear in the transmission. Milton was delayed a few seconds on the starting line and had to go right through the group of slower 91-inch cars running with the 122-inch models in this race. For twelve laps, (72 miles) he trailed the three Alfa Romeos, then on the thirteenth lap caught up and passed De Paolo. Near thirty laps he was on the tails of the two other Alfa Romeos, and when the Italian cars stopped for gas and tires he went into the lead. At forty laps, half distance, Milton made his first stop for tires and gas, but on the following lap he had to stop again owing to a broken oil line to the right hand camshaft. The repair cost him 26 minutes and removed all chance of winning the race. In addition to this Milton had broken his right rear shock absorber very early in the race, and had broken the countershaft in his transmission during the fifth lap.

The twenty-six minutes occupied in repairing the broken oil line, dropped Milton from the leading position he had occupied for seven laps down to eighth position, behind all the Alfa Romeos and also in the rear of four of the 91-inch Bugattis. Realizing that he had no chance of winning, Milton took things easy from this point on and although he got ahead of the Bugattis again, with the exception of the one driven by Constantini, he did not attempt to beat the Alfa Romeos.

De Paolo, in an Alfa Romeo, never got the lead, his best position in the race being second.

There was not much competition among the 91-inch cars, excepting that provided among themselves by the four drivers of the Bugatti team. Two Chiribiris went out

(*Continued on page* 43)



Outside "Slick-up" on this order is bound to attract business

Clean Surroundings Attract Business

Slick Up for Winter Business Is Not Complete Until Outside Appearance of Dealer's Establishment Has Been Made Neat and Inviting

By CLARENCE PHILLIPS

SEVERAL years ago an interesting story appeared in one of the popular magazines under the title—"All Front and No Back." It had to do with the false manner of living pursued by a young married couple who gave all thought and money to "front."

Putting up an elaborate front, to their way of thinking, was more important than having something worth while behind the "front." All sane business men will agree they were following an illusion, that their logic was wrong and that the "front" they affected, without a proper "back," was a very poor investment.

The "All Front and No Back" theory is just as wrong in the case of the individual's or couple's living habits as it is when applied to the management of an automotive business establishment. And all sane business men will agree on this point.

At the same time the theory which prescribes "All Back and No Front" is wrong.

While it is admitted that the "back" must be maintained in the highest degree of business efficiency and "slicked up" as much as possible—while we know that the salesroom, shop and other units composing the "back" must be given religious attention in this connection—it is highly important not to forget or neglect the "front." It must be generously remembered.

Consider Appearance Details

So in the process of slicking up for winter business the show windows, front exterior of the building, sidewalk and everything outside bearing on the store's appearance to persons in the street should come in for close consideration.

The value of the neat and attractive "front" to the automotive establishment is reflected in the big sums of money spent by large and successful merchants for this purpose.

There is no other mechanical line in the country which is displayed in show window settings more attractive than those which we often observe surrounding an exhibit of automobiles.

When we speak of the automobile dealer's "show windows," we mean, of course, those portions of the salesroom display arranged to catch the eye and command the attention of persons passing along in the street. Ordinarily the automobile dealer's "show windows" constitute the front and side extremes of his salesroom, usually the front, all on the same floor level. Only rarely will you find a dealer establishment of much consequence with show windows elevated materially above the level of the salesroom floor.

Good Reason for This

Some good reasons can be found for this. Orginally the custom likely was started because of difficulties exacted by the highly elevated show window in the handling of cars. A common floor level naturally lends itself more readily to this phase of the automobile merchant's operations.

But there is another good reason for this popular arrangement bearing closely upon the necessity for a "front slick up."

Such a plan offers superior advantages for stock display. Under this arrangement the entire salesroom is, in fact, a show window—the "back" view being merely an extension of the effect beheld by the observer on the sidewalk or in the street.

The relationship between the "back" and the "front," from a "slick up" or display standpoint therefore, is very close—so much so that neglect of one is to neglect the other.

And just as the front of the show room is related in this manner to the back so is the entire exterior related to the interior.

(*Continued on page* 30)

History of Motor Car Depicted at Smithsonian

Exhibits in National Institution at Washington Include Original Productions of Many Pioneer Automobile Builders as Well as Examples of Modern Design

By H. L. COBB
Washington Correspondent of Motor Age

Washington, September 24.

A GREAT collection of automotive parts tracing the life history of the automobile is being assembled at the Smithsonian Institution, Hall of Arts and Industries, here, and eliciting the admiration of scores of automobile engineers who have visited the museum to examine the older cars exhibited there. The collection includes working models showing how every portion of an automobile motor operates, the relationship between parts and methods of lubrication. It is growing rapidly and officials expect it to be one of the most complete of the industrial groups.

The Autocar Co. has presented to the museum a 1921 model of its four cylinder truck motor, with cutaway portions and careful labeling so the layman can trace in detail every operation of the motor. The power plant is operated by an electric motor, geared down, with a wall switch so the visitor can operate it himself and stop it at any point for detailed study.

The Ford Co. has presented a full size operating model of the Ford ignition system, consisting of magneto, induction coil and commutator, operating in conjunction with a vibrator on the induction coil. In this model sparks appear at regular intervals on a graduated dial, these sparks being the same as jump the gap of the spark plug. The model is equipped with an exterior switch so the visitor may operate it.

A working model, driven by a hand crank, of half of a single cylinder of the sleeve valve type has been installed by the Willys-Knight representatives. The model includes a dial showing the various stages of the operation, such as: "Spark compression," "explosion," "exhaust opens," etc.

The Haynes Automobile Co. installed a six cylinder engine of the 1914 type, with cutaway sections showing all working parts. The motor is of 65 horsepower capacity and weighs 1,000 pounds.

Original Cars Shown

A full-size chassis and motor, with cutaways showing all working parts throughout, has been presented and installed by the Cadillac Motor Car Co.

The Autocar Co. also is represented by two beautiful ¼ scale models of its trucks, one with dump body.

In the historical section of the exhibit are a number of the original cars which occupy pinnacles in the automobile Hall of Fame. The first of these was constructed by Charles L. Duryea at Springfield, Mass., in 1892. With an old carriage body chassis, it has as a power plant a four-cycle, water cooled engine with spray carburetor and make and break ignition. Chain and sprocket drive is used, with two speeds forward and one in reverse. Steering is accomplished by an up and down motion of a long handle.

The romance of the early days of the automotive industry is being preserved for posterity in the great Smithsonian Institution, a national museum, at Washington, D. C. The accompanying article describes the scope and purpose of this historical exhibit. The exhibit includes some of the first motor vehicles made in the United States in the days of experimental pioneering.

One of the first Cadillacs, of the vintage of 1903, has a post of honor. This ancient machine has a single cylinder engine, of 5 by 5 in. bore and stroke, mounted horizontally, giving 10 horsepower. Planetary transmission is used, with two speeds and reverse.

Elwood Haynes is represented by a one horsepower car built by him at Kokomo, Ind., in 1893-94. On its initial trip, July 4, 1894, it developed a speed of six to seven miles per hour. It is the gift of the late Mr. Haynes.

A rotating gas engine was used by Stephen M. Balzer in his model, constructed in 1894.

The original Oldsmobile, built by R. E. Olds at Lansing, Mich., which made a speed of ten miles per hour with four passengers on its maiden trip in 1896, is one of the interesting exhibits. It has a one-cylinder six horsepower plant.

Another interesting car was that built in 1901 by Louis S. Clarke, former vice president and consulting engineer of the Autocar Co. This car was driven from Ardmore, Pa., to the automobile show in Madison Square Garden, New York City, on December 11, 1901, making the ninety-mile trip in six hours and fifteen minutes. It is thought to be the earliest American shaft driven gas automobile. It is equipped with sliding gear transmission, giving two speeds and reverse.

In another part of the museum is a collection, now only partially completed, showing the development and construction of the modern pneumatic automobile tire. An operating model of the type of machine used in weaving fabric carcasses for the pneumatic tire has been installed.

Some Regular Skid Chains Fit Balloon Tires

In announcing its full line of non-skid chains for balloon tires, the American Chain Company points out that special size chains are not necessary for all tires of the balloon type.

It is pointed out, for example, that a standard Weed chain intended for a cord tire 31x4 can be used properly on a balloon tire 31x4.40. Likewise, the car owner may use cord tire chains, size 32x4½ on 32x4.95 balloon tires; 33x4½ cord chains on 33x4.95 balloon tires, 34x4½ chains on 34x4.95 balloons, 33x5 cord chains on 33x5.77 balloons, 34x5 chains on 34x5.77 balloons, and 35x5 chains on 35x5.77 balloons.

All other sizes of balloon tires require regular balloon tire chains although a dealer or car owner may fit 32x6.00 balloon tires with 33x6.00 balloon chains, or a 30x4.75 tire with 31x4.95 chains, simply by trimming the side chains down to the required size. Tire chains for sectional sizes are similar for all diameters, it is pointed out, except for length and number of cross chains.

It is also interesting to know that 4-inch cross chains can be used on 4.40 balloon tires, 4½ cross chains on 4.75 tires, 4½ cross chains on 4.95 tires and 5 in. cross chains on 5.25 and 5.77 balloon tires.

Timken Adds 1½ Ton Truck Axle to Its Line

OF interest to the manufacturers of small buses and 1½ ton truck chassis is the latest model of standard axle to be put into production by the Timken-Detroit Axle Company, Detroit, Mich. Known as type 5620, the new full floating bevel gear axle provides for a total weight allowance, including load of 7,000 lbs. on the rear wheels. Throughout, the axle is characterized by its sturdy oversize construction which harmonizes with factory statement that the axle was especially designed with a particular view to withstanding the exacting service expected of the faster commercial vehicle of today.

Designed for use with pneumatic tires only which allows a 57 in. tread with 2 in. spokes, axle 5620 is constructed with integral spring seats for mounting overslung springs 2½ in. wide and providing 39 in. spring centers using two ⅝-in. spring clips on each spring. In the form of bosses on the spring seats provision is made for the attaching of radius rods.

The housing or body of the axle is a steel stamping of the banjo type formed of ¼ in. stock and having ends of 3⅛ in. diameter which are reinforced by heavy seamless tubular sleeves. Bolted to the front face of the housing which mounts the differential carrier unit is the pinion shaft, drive gear and differential assembly. The differential case assembly to which the drive gear is riveted, is carried on two Timken tapered roller bearings of ample capacity with readily accessible adjustment for the slight wear that will take place.

To prevent possible destruction of the gear teeth gearing momentary overloads which tend to force the gear and pinion teeth out of mesh, a safety device in the form of a large adjusting screw is mounted on the carrier at the back of the drive gear and is set at the factory to have .005 in. clearance with the gear. This screw is threaded into the case and provided with a lock nut.

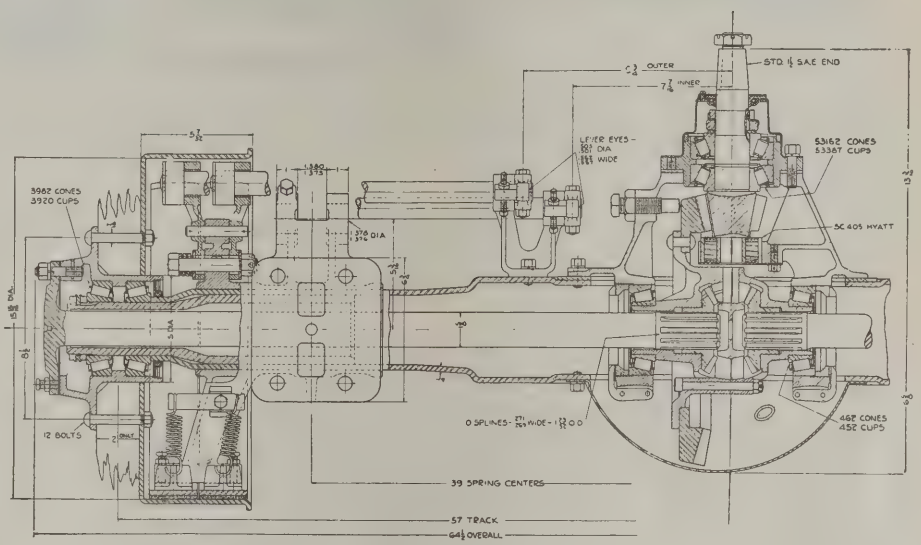
Bearings are provided directly in front and in back of the pinion teeth providing a straddle type of mounting making for exceptional ruggedness. Two Timken tapered roller bearings of the same size are mounted in front of the gear each having ample capacity to handle the full thrust, with one bearing taking the forward thrust and the other the reverse thrust. The rear bearing, a Hyatt having a radial load only, is of the straight roller type and permits an "in" and "out" adjustment of the pinion without any bearing adjustments. To take up bearing and end play of the forward bearings special adjustments are provided.

Gears which are of the helical bevel type made of chromium vanadium steel, with teeth carbonized and hardened are dimensioned with a pitch diameter of 12 3/5 ins. and tooth face 1 11/16 in. Adjustment of the pinion is accomplished by shims between the pinion cage and carrier face while the pinion cage and pinion shaft assembly are readily detachable by removing six cap screws.

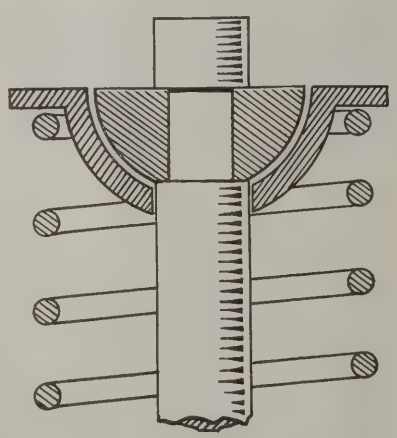
Mounted side by side on each drum, the emergency and service brakes are of the internal expanding band type. The size of the drums is 15 13/16 in. in diameter and 2¼ in. wide which permits their being submerged in 20 in. base rims when it is desired to use dual tires.

Axle shafts of 1⅝ in. diameter having upset driving flanges and made of high carbon nickel chromium steel provide a full floating type of drive. The axle shafts are designed to withstand a portion of the wheel's skid thrust load through the driving flange while the load at the inner end of the axle shaft is taken by Timken tapered roller bearings and mounted on the differential case. Consisting of two Timken roller bearings of equal size and capacity, the wheel bearings are mounted on each housing sleeve and held in position by adjusting nuts which are locked by a washer.

Malleable iron hubs, drilled for twelve 7/16 in. diameter hub-bolts for 2 in. wide wood spokes and stamped steel drums of 7/32 in. stock with reinforcing flange, are supplied as standard equipment. The axle, complete with hubs, flanges, bolts, nuts, wheel bearings and brake drums, weighs 445 pounds, not crated.



Cross sectional view of Timken axle made especially for small buses and 1½ ton trucks



Ball and socket construction of Elliot Valve spring retainer

Race Driver Develops Valve Spring Retainer

Frank Elliot, well known race driver, is a student of the car as well as the track, and in analyzing the trouble caused at times by valves operating at high speed and under the strain of heavily compressed springs, he has conceived the idea of a ball and socket type of spring retainer which would eliminate most of the side thrust.

The thrust of a conventional spring is never exactly parallel to the valve stem, the result being that the stem is pushed sideways, so that there is excessive wear on the stem and guide. The illustration shows Elliot's retainer, this being put on the market by Elliot Brothers, 331 E 33rd St., Los Angeles, Cal. The ball is split in two parts and is fitted into a groove at the tip of the valve stem.

Foursome Roadsters and Brougham Round Out Gardner Line for 1926



Left: The foursome roadster on the eight-cylinder chassis, a new addition to the Gardner line for 1926. This body style also is made on the 6-cylinder chassis. Center: Gardner Anniversary Sedan on 6-cylinder chassis, listing at $1,595. Right: New brougham on 6-cylinde chassis which lists at $1495

Adjustable Steering Wheel Is New Feature of Roadsters—13 Body Types on Six and Eight Chassis Comprise Company's Offerings

GARDNER Motor Company's 1926 line as finally rounded out and as it now stands contains an offering of thirteen different units mounted on the six and eight chassis. Six of these units, designated as Model 6-A, are on the six cylinder chassis while seven of them, designated as Model 8-A, are on the eight.

The 1926 line besides including the Gardner Company's Fiftieth Anniversary Sedan, which was introduced about a month previous to formal announcement of 1926 models, takes in one new body type on both chassis, the Foursome Roadster, and a five-passenger brougham on the six. The Foursome Roadster on the six lists at $1595 f. o. b. factory while the one on the eight lists at $1995. The new brougham on the six lists at $1495.

As now constituted the Gardner line is as follows:

Model 6-A (Six Cylinder)

Ship. Wt.	Pass.	Body Style	Price
3070	5-p	Touring	$1395
3200	5-p	Brougham	1495
3210	4-p	Foursome Cabriolet	1845
3030	4-p	Foursome Roadster	1595
3280	5-p	Anniversary Sedan	1595
3300	5-p	De Luxe Sedan	1895

Model 8-A (Eight Cylinder)

3350	5-p	Touring	1995
3510	5-p	Brougham	1995
3480	4-p	Foursome Cabriolet	2245
3350	4-p	Foursome Roadster	1995
3620	5-p	Anniversary Sedan	1995
3620	5-p	Sport Sedan	2295
3600	5-p	De Luxe Sedan	2495

No effort was made by Gardner to bring about radical mechanical departures for its 1926 list of passenger cars. In fact, save for the appearance of the new body types mentioned the only changes are in minor refinements and a wider choice of colors. With the eights the company now is furnishing an ornamental radiator emblem in the form of a silver Griffin which is featured in the Gardner coat of arms. The emblem has proved quite popular with dealers since it was first brought out and there have been many calls for it on sixes on which models, however, the emblem is not offered as standard equipment.

The Gardner product, generally speaking remains substantially as it was, the big element in the factory's 1926 program being to bring the price of the closed car down more to the level of the open car price without making a sacrifice in closed car quality. The company's Anniversary Sedan on the eight now lists at the price of the eight touring. The five passenger brougham on the six lists at just $100 more than the six touring.

Gardner's newest body units, it is explained, contemplated list prices from $200 to $300 higher than those in the current table before these new model introductions, a lowering of the original figures being decided upon to meet conditions obtaining as a result of the recent movement of price reductions. At the same time, it is declared the downward revision of these figures was made without eliminating any equipment or qualities originally contemplated.

The five passenger brougham which now appears among the Gardner sixes is a short-coupled four-door body job having a full front seat instead of the divided seat according to popular practice in such types of body. The finish is two-tone lacquer, trimmings are ribbed velvet. Hardware conforms to the high standard obtaining in Gardner's highes priced jobs. The instrument board also conforms to the Gardner standard, al units being under glass, the instrument including a heat indicator and a gasolin gage. There is a one-piece windshield operating with a rotary lift, a satin rea window curtain and other modern fea tures. The rear end of the front sea is cut away to provide extra leg room

Equipment going with the five pas senger brougham is as follows: Auto matic windshield wiper, cowl lamp nickeled radiator, balloon tires, natural wood wheels, trunk rack, dome light rear vision mirror and a transmissio lock.

Adjustable Steering Wheel

One of the interesting features of the Foursome Roadster, which is offered o either the six or eight chassis, is its adjustable steering wheel, so arranged that, by use of a wrench the driver ca easily raise or lower the wheel over a playing space of two inches. This makes it possible for the driver to elevate o lower the wheel when it interferes with clear vision of the road ahead and to fix the position of the wheel for purposes o greater comfort and convenience. Gard ner finds that the feature has a strong merchandising appeal.

This roadster also has a two-tone finish, nickeled radiator, nickel-trimmed lamps, cowl lamps, five Disteel wheels and a spare tire, snubbers all around bumpers front and rear, nickeled wind shield frame. There is a rumble seat and the top can either be let down o entirely removed at the driver's discre tion. The upholstery of both the front seat and the rumble seat is in machine buffed Spanish leather in a color to har monize with the body finish. There is a

compartment behind the main seat for the storage of tools and light luggage.

Gardner's Anniversary Sedan, which as previously stated, was really introduced some time before the formal announcement of the 1926 line, is proving the outstanding body of the entire list from the standpoint of popularity. This applies both to the six and the eight. The unit has been extensively described previously in this magazine and the trade is more familiar with it likely than with the other later Gardner additions. Standard equipments with the model are as follows: Transmission lock, snubbers, front and rear; balloon tires, Disteel wheels, automatic windshield wiper, stop light, large nickel-trimmed lamps, indirect non-glare lighting, cowl lamps, one-piece ventilating windshield operated by rotary lift, cowl ventilator, rear-vision mirror.

Closed Car Production Heavy

The Gardner Company's production at present is running nearly 90 per cent closed cars, although there is a big demand and an outlook for a growing demand for the Foursome Roadsters. The company expects September's business to set a new record and looks for no tapering off in production until about November 1. September will go down, it is said, as the biggest month of the year. The big sales stimulus of the season is said to have come through the popularity of the eight-in-line cars in addition to the influence of intensive national advertising. Production has increased at the Gardner plant steadily since last April.



The Gardner Eight Anniversary Sedan, listing at $1,995, the same price as the touring car. This model and the Six are proving the company's most popular body offerings

More Profits From Merchandising

Many excellent merchandising suggestions are offered in the book prepared by Edward A. Filene under the title of "The Model Stock Plan—More Profits From Merchandising." The author is president of William Filene's Sons Company, operators of the large and highly successful department store in Boston, who is well qualified to speak on the subject of retail selling. While much of Mr. Filene's book deals with department store fundamentals he offers ideas in general for the merchandiser which any retail dealer would find interesting. Some of the principles he enunciates are especially applicable to the business of retailing automotive accessories.

One of these sections relates to the planning of the store's buyer, the following being some of the "main facts" which Mr. Filene says the buyer has to draw in in this important phase of the work:

"Statistics showing what was sold of each class of merchandise in previous seasons—this is the history that enters into the making of the plan.

"Statistics of what is currently selling—the facts by classes and amounts of merchandise gathered day by day.

"Records showing the kinds of merchandise that customers are calling for and that cannot be supplied from stock.

"Information, presented in statistical form or otherwise, as to what competitors are selling that you do not have in stock.

"Early data regarding merchandise offered or to be offered by manufacturers or wholesalers.

"What is selling in other cities or abroad.

"Information as to the probable purchasing power of the community as compared with commodity prices."

The purpose of "The Model Stock Plan," as dealt with in this work is "to have the right goods, at the right time, in the right quantities, and at the right prices. "The Model Stock Plan" is discussed extensively.

Mr. Filene's book is published by the A. W. Shaw Company, New York, Chicago and London. The price is $2.50.

Lincoln Chassis 14 in. Longer Than Standard Now Available



Three-quarter view of the Lincoln chassis with a special body for ambulance use. The chassis is 14 in. longer than the standard

THE Lincoln Motor Co. division of Ford Motor Company is now producing a chassis 14 in. longer than standard to meet the existing demand for a high powered chassis suitable for mounting ambulance, police patrol and funeral coach bodies.

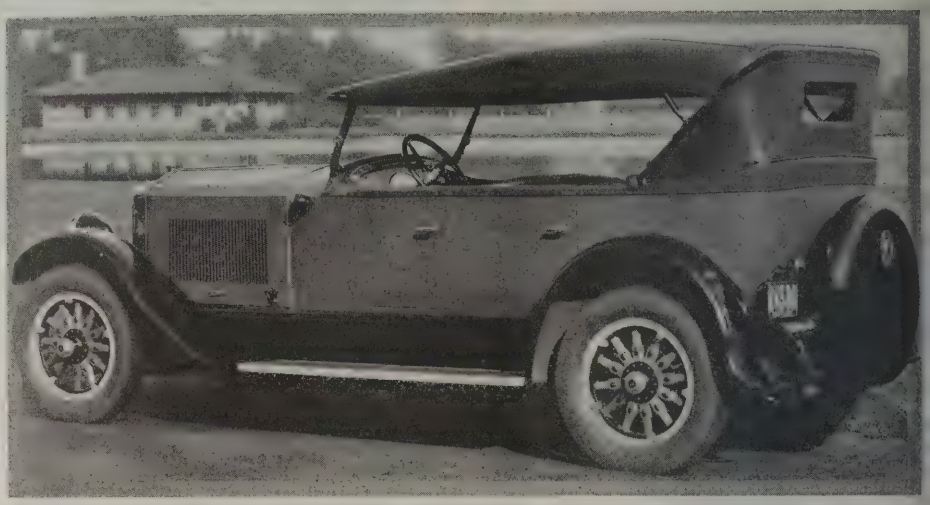
Except for the changes necessary to the frame, propeller shaft and brake rods, the 150 in. chassis is identical with the standard 136 in. model. The price of the new chassis alone is $3,800 while complete with ambulance body it lists at $6,800.

The bodies for the funeral coaches now being built by the coach makers are in keeping with the high quality of the "standard" bodies, having identical style of design and appearance and same completeness of appointments. According to the factory engineers, the new chassis is not designed or recommended for heavy bus work or the operation of fire pumps.

Raised Body Panel Marks New Diana Phaeton



Raised panel forms arrowhead on hood of new Diana phaeton



Photograph of new Diana phaeton showing how raised panel is carried all the way around the body

Displaces Moulding and Forms Arrowhead on Hood — Seats Are Extra Wide and Sides Are High.

MOON Motor Car Co. has started production on the new five passenger phaeton "arrow head" model of the Diana which sells for $1895 f. o. b. factory. Deliveries will begin soon.

A number of unique ideas have been incorporated into the design of the phaeton. The moulding which has been so prevalent on so many makes of cars during the past few years has disappeared entirely and a raised panel, different from anything seen before, has been substituted. This effect is achieved by offsetting the body panels at approximately the same location formerly occupied by a moulding and eventually working this offset over the cowl and hood and forming an "Arrow Head" with its apex at the rear end of the radiator shell. The arrow is not terminated at this point but spread out into a three-quarter inch line running down the front edge of the hood, giving a distinctive appearance at this point.

The European tendency to raise the body sides, which give the appearance of a passenger sitting in rather than on the car has been followed, the result being a considerably lowered appearance. though as a matter of fact the head room in the body remains unchanged.

The general thought in designing the phaeton was to compose a series of fully rounded and freely flowing lines with the entire elimination of any sharp corners or breaks which might cause the eye to falter for a moment. The recent trend to widen automobile bodies to the fullest extent possible has also been followed with the result that both the front and rear seats of the phaeton are unusually roomy and will seat their full quota of passengers with ease and comfort.

The method of carrying the raised panel around the rear corners and back of the body of the Diana is unique. Beginning at a point slightly behind the rear door the offset panel tapers out to a greater width due to the fact that the bottom edge remains parallel with the chassis frame while the top edge curves upward in a gradually rising curve to give the proper height for the rear seat back, thus causing the offset panel t vary in width from one-half to fou inches at its widest point at the bac of the car.

The body is done in two tone "Duco, the offset panel being finished in sag green while the lower part of the bod and hood is in soft French gray, thi color combination being neutralized by green stripe about one-quarter of an inc wide which runs along the raised portio of the body and hood.

The equipment of the phaeton includes Lockheed hydraulic four-wheel brakes "easy park" cam and lever type steerin gear, one piece ventilating windshield heat indicator on the instrument boar and a light control lever on the steerin column.

Another feature of the phaeton whic is now standard on all Dianas is th Diana statuette on the radiator cap.

Campaign Letter Goes to Physicians

Harold W. Booth, sales manager of the Willys-Overland St. Louis branch in St. Louis recently conducted a direct-by-mail advertising campaign addressed to all members of the medical profession in St. Louis. All letters of the campaign were individually signed and mailed as first class postage.

A specimen letter follows:

"Dear Doctor:

"If you could have built a car that would fully meet the requirements of your arduous profession, wouldn't the specifications read something like this?

"Two-passenger. enclosed (of course), non-rumble construction, leather upholstered, wide doors, big rear window, one piece windshield, cowl ventilator, side door to rear compartment for instrument case (or golf clubs), "effortless" steering and gear changing, engine with no vi bration at any speed, a car of dignifie appearance, with a permanent lacque finish, and (most important) the lastin quiet that is only found in Knight sleeve valve engines.

"Briefly, those are the specifications o the Willys-Knight Coupe. We have thi Professional Coupe on our floor and ex tend you a cordial invitation to inspect it Another car that has been driven a littl is ready to prove our claims as regard performance.

"May we have the pleasure of showin you this car that might almost hav been created to fit your specifications Truly, its design spells "Custom-Built."

Yours very truly,
WILLYS-OVERLAND, Inc.,
Retail Sales Manager."

Shows Indicate Rapid Radio Expansion

Business for Next Five Months Should Exceed That of Corresponding Period Last Year

Greater Values Now

MAKING due allowance for the high enthusiasm generated by two big national expositions and several affiliated events of scarcely less importance in New York this month, there is good reason to believe that the next five months will develop more radio business than for the corresponding period last year. That may appear to be the usual reaction to the stimulus such affairs produce, but there seems to be a firm basis for the prophecy freely made as the season opens.

The most obvious reason is the greater range of popular appeal in the new products, some of which were shown for the first time at one or both of the expositions, and few of which have been widely distributed thus far. The new receivers include important though not revolutionary refinements in their internal construction and a decidedly striking improvement externally. Some rather sensational developments in vacuum tubes were shown. The list of accessories has been increased also, among them many battery eliminators, chargers, etc., while parts and kits for home construction continue to be shown in considerable number, despite the tendency in some quarters to consider this market completely dead.

There is general agreement, wherever manufacturers, wholesalers or retailers assemble that the refinement in exterior appearance of radio receiving sets will be the major factor in extending the market this season, resulting in the purchase of sets by a vast number of people to whom even the more attractive of last year's receivers did not especially appeal.

Summed up, the radio industry again exhibits several points in common with things automotive, which must have been self-evident to automotive men who visited the expositions at the Bronx Armory and Grand Central Palace, New York.

Among these are the greater values this year, for products have been improved and the prices reduced in a majority of instances; the probable expansion of installment plan sales due to the advent of the more expensive console models, and the likelihood of the "trade-in" phase developing to an important point.

The three big events were the Fourth Annual National Radio Exposition which opened Sept. 12 at Grand Central Palace and closed Sept. 19; the Second Annual Radio World's Fair, official Radio Manufacturers' Association show, which ran from Sept. 14 to 19 at the 258th Field Artillery Armory in the Bronx, and the Radio Industries' Annual Banquet, which took place in the ballroom of the Hotel Commodore on the evening of Sept. 16.

Both of the radio shows occupied more floor space this year than last, had more exhibits and were well attended. While no accurate figures were available, it was generally accepted that the shows were both successful from a merchandising point of view. Reports were current that actual orders placed were in excess of those placed either at Madison Square Garden, where the First Radio World's Fair was held last year, or in last year's show at the Palace.

Columbus Show Date

THE second annual radio show at Columbus, O., will be held at the Memorial Hall, November 7 to 14 inclusive under the auspices of the Ohio Radio Show Co., and the Columbus Daily Dispatch. The Ohio Radio Show Co., consists of M. A. Pixley, president of the Erner & Hopkins Co., large radio and electric dealers, Lee M. Boda and Robert F. Boda. The large hall in which the display will be held will be artistically decorated and the arrangements will be in booths. All of the latest radio sets and supplies will be displayed. Already a large number of manufacturers and dealers have announced their intention of exhibiting their products. Robert F. Boda, is general manager.

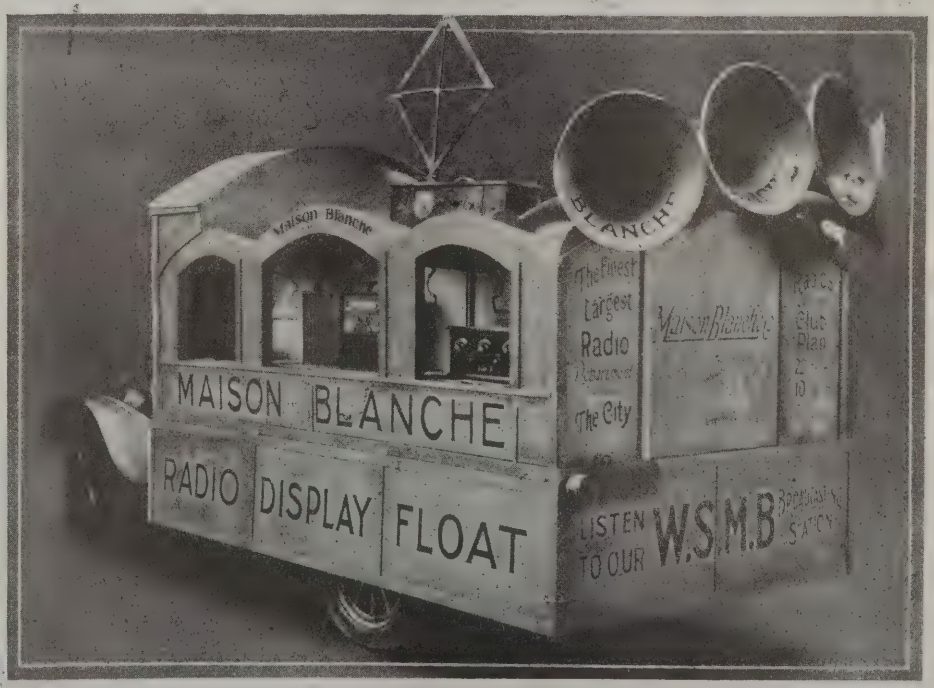
Indianapolis Radio Show

INDIANAPOLIS, Sept. 26.—Indianapolis is experiencing its first Radio Show in an exhibit put on by the Broadcast Listeners' League of this city. Practically all of the distributors of leading radio lines have exhibits and several of the wholesale accessory dealers who also handle radio are participating in the affair. The show is staged at the Cadle Tabernacle and after the first night the crowds began to grow until capacity houses appear billed for the remainder of the week. Leading distributors with displays of sets report good business prospects are being listed at afternoon and night shows, and that a considerable amount of actual sales will be developed by the show. Many distributors report that growing retail organization throughout the state will make new retail records this fall and winter.

Radio Dealers Named

ATLANTA, Sept. 26.—Sam D. Katz, manager of the Automotive Sales & Service Co., 10 E. Harris St., Atlanta, distributors of the Splitdorf Radio line, advises that the company is now appointing dealer agencies in the Atlanta territory to handle the new line of modern receivers now being put out by the Splitdorf company.

Equipped to Sell Radio Sets



This truck is used by a large department store in New Orleans to sell radio sets. By means of a powerful receiving set and four loud speaking horns this truck makes radio programs audible over wide areas. Salesmen accompany the truck

MOTOR AGE'S PICTURE PAGES



RARIN' TO GO. Just before the start of a 15-mile-an-hour-dash at Huntington Park, Cal. A 1902 Oldsmobile, an 1897 Sears-Roebuck and a Maxwell of more recent vintage participated. The Oldsmobile, entered by Leslie R. Lumley, Huntington Park dealer, won.

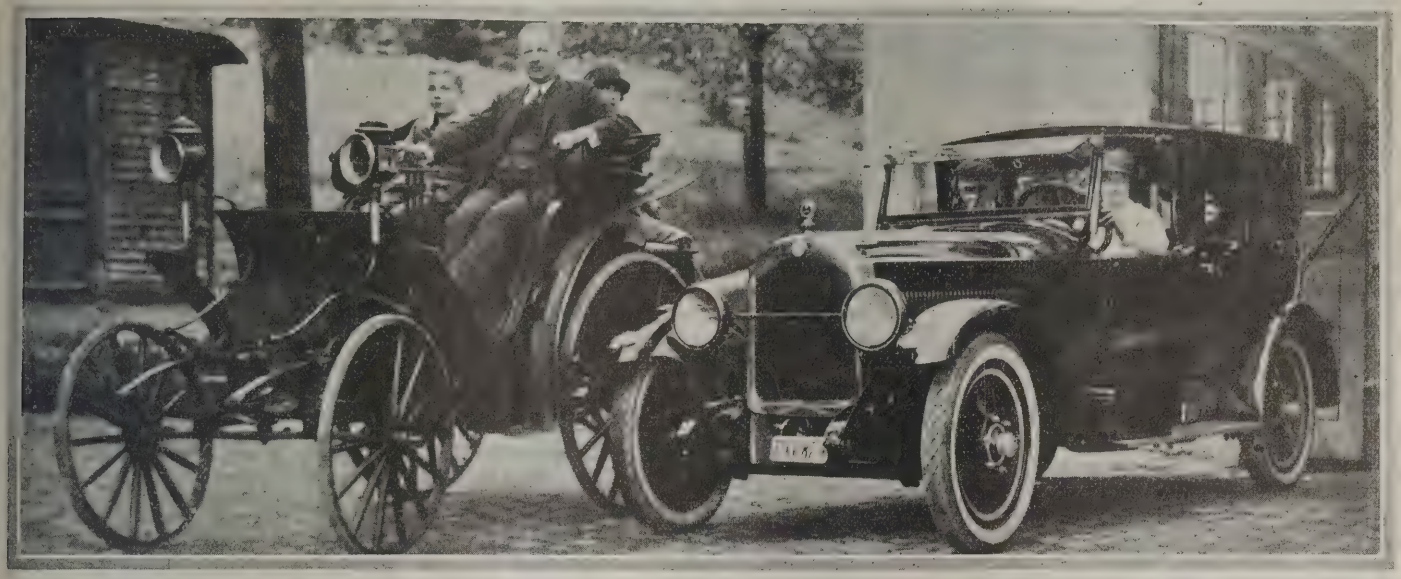


FLIER MAKES 302 MILES AN HOUR IN AIRPLANE. Lieut. Alford Williams, U.S.N., is shown standing before the new Curtiss pursuit plane in which on Friday, Sept. 18, he flew 302 miles an hour at Mitchel Field, Long Island, N. Y.



WIDEAWAKE PUBLICITY. H. O. Harrison Co., Hudson-Essex distributors, San Francisco, "cashed in" on the evolution discussion. The pilot of the 1909 car wore a "monkey suit," while the 1925 coach carried a live monkey as a passenger.

OF AUTOMOTIVE INTEREST



THE MARCH OF PROGRESS. Baron Liebieg of Czecho-Slovakia at the guiding stick or handle of an automotive Methuselah. The baroness is at the wheel of her Studebaker Six limousine. The picture was furnished by E. & J. Frolich, automobile dealers at Prague.



ANOTHER CONTEST. Whether Youngstown's place in the sun should be based on steel making or feminine pulchritude is difficult to decide after seeing Miss Mildred Moore who represented the Ohio City at the Atlantic City Beauty Pageant.

DETROIT TO ANTWERP — DIRECT. Consignment of Rickenbacker cars being loaded for shipment at Detroit on the Belgian S. S. "Nico." This method, rather than shipping by rail to the seaboard, saves time and money, according to factory representatives.



A "ONE-LUNGER" CLIMBED PIKES PEAK. Roscoe Butcher of Wichita, Kans., seated in his motor car of 1902 vintage, which recently chugged its way up the famous peak. The climb was made in four hours, and the car went into low speed only once—at the start—staying there and not being changed for the entire distance.



The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Axle Pumps Grease Into the Transmission

Q—We wish to ask if you have ever met this experience. We have a party who has a model K-45 Buick and he complains that when he puts transmission grease into the rear axle that within a few days this grease is in the transmission case. The construction of this Buick is such that there is a path for grease from the rear axle to the transmission but one would never expect it to travel in that direction. We would be pleased to know if you have ever met this condition before and what is the cure. We have not examined this car, but thought we would write first and see if you could offer an explanation.

The owner claims that he has many times taken the grease out from the transmission case and returned it to the rear axle only to have it return to the transmission case again. He has to keep a special leather cover over the shift handle where it comes from the transmission case in order to prevent the grease from coming out all over the floor. He claims that the transmission case will fill so full that when he opens the cock that the grease will run out with a force indicating that it is under pressure slightly. We thank you for any suggestions that you may make about this peculiar action. —Baender Engineering Co., Parsons, Kansas.

Looseness in Pinion Bearing

There is apparently some looseness in the pinion bearing which allows the pinion and drive shaft to work back and forth, thus producing a pumping action. On this model Buick we understand that immediately in front of the pinion in the rear axle is a large washer. The rotation of the bevel ring gear will tend to throw grease in all directions and if this washer moves forward there is a possibility of grease being thrown behind it. As the drive shaft moves back and forth the washer will move forward and force the grease up the torque tube. The remedy would appear to be in correcting this condition of end play. We are told however, that it also helps to drill a $\frac{3}{16}$ in. hole in the top of the torque tube about half way from the axle to the transmission. This is said to relieve the vacuum to some extent and prevent the pumping action. It is also said that a hole drilled in the gear shift lever housing immediately over the transmission will also relieve conditions. However, if there is pressure in the transmission it would be our personal opinion that this would merely afford an outlet for the grease. We think the remedy is worth trying however, for it is simple and it would be no great job to plug the holes if the results are not as anticipated.

MOTOR AGE'S READERS' CLEARING HOUSE INDEX

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Radiator testing with water pressure 9-10-25-p27
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STUDY THE CONSTRUCTION

Q—Will you please print in the MOTOR AGE a blue print of the water pump, oil pump and distributer and explain how to take the water pump off of the Continental engine in a Davis motor car.—Harold A. Bogart, Sweet Valley, Pa.

We regret to advise that we do not have a drawing which shows the construction you refer to. We understand, however, that there is no difficulty encountered in removing the water pump. The drive comes through the generator and through a universal coupling to the pump. It is necessary to disconnect the hose connections, take the bolts out of the coupling and loosen the pump and remove it. We believe that the average mechanic would have no trouble in doing this, merely by observing the construction employed.

Welded Brake Drum on a Ford—Will It Do?

Q—Last winter in overhauling a Ford we brazed a small crack in the brake drum. Since then this car has given trouble with the brakes holding and frequent adjustments of the brake bands seem necessary. Other garage men maintain that it is impossible to braze or weld a brake drum and get satisfactory results afterwards, even if the surface of the drum is smooth and the drum is perfectly round. We have welded many of them and have never had the least bit of trouble before. We would like to know what you think of this and what experience other MOTOR AGE readers have had.—Baender Engineering Co., Parsons, Kansas.

If a welding or brazing job is well done, the surface is smooth and the drum is turned so as to be perfectly circular, we can see no reason for a job of this sort giving trouble. We do not recall that this question has come up in the Clearing House section, at least for the past three years, so we hope that other MOTOR AGE readers will let us know if they have had similar experience. Perhaps one reason for replacing a drum that is cracked, instead of welding or brazing, is that the comparatively low cost of Ford parts, makes it advisable to replace those which are worn or broken instead of trying to repair them.

This may account for the practice of other garages in replacing a cracked drum. rather than having a good engineering reason for doing so. We believe that the type of service to which the car is subjected and the way it is driven will have much more effect on the frequency with which brake adjustment is necessary than any theoretical condition of this sort. We recently saw a case where a Ford car in perfect condition went down a hill about four blocks long. The oil level was about half way between the lower and upper pet cock. The application of the brakes down this fairly steep hill for four blocks was sufficient to necessitate readjustment when the car reached the bottom of the hill. In this case the brake drum was in perfect condition, but if it had been a drum which had been welded there might have been some tendency to blame the drum for the necessity of readjusting.

A TRICK IN REMOVING ESSEX PISTONS

Q—We have been looking at page 24 of the July 9, 1925 issue of MOTOR AGE and have a suggestion to offer in regard to removing Essex pistons. Where trouble is experienced with the No. 2 piston it is well to remove the No. 1 piston first and then the No. 2 can be slid forward and taken out past the No. 1 crank pin.—L. R. Young, 44 Market Street, Muskegon, Mich.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Ample Space and Natural Ramp? It Can't Be True!

Q—We would like to have some information on size, best arrangement and structure of a building for storage with a capacity of 100 cars on ground floor, and approximately same on second floor. On the ground floor a wash rack, a small office, ladies and men's toilet, locker space and space for minor adjustments and oil and gas service inside of building.

The second floor will be entered by a street level due to a rise in ground. There should be a stairway for attendants to go back and forth and also locker space and ladies and men's toilet. We would like also to have you advise best method of heating. The space is not limited in reference to ground space, the building will be located as at a corner.—Harold L. Kildoo, Marshall & Kildoo, 25 Line Avenue, Ellwood City, Penn.

We have been a little at a loss to know which way the ground sloped on your lot and consequently where the entrance would be to the second floor. We have assumed, for the purpose of getting started, that the street in front was level and that the lot sloped back so that by building a driveway alongside, it could be entered toward the back end or at the rear, and if this is the case, doorways may be installed at any position along the side walls, such as (C) or (D), or if it is convenient at (A) or (B), the latter would be preferred, inasmuch as these spaces do not interfere with any storage space.

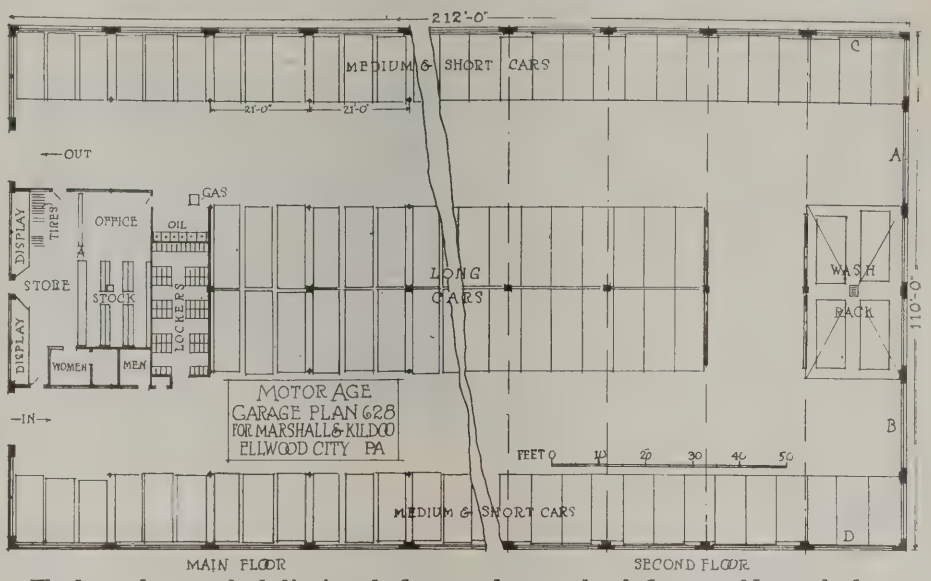
In case the ground slopes in the street upon which the building will face, it might be better to make the building longer on the frontage and not so deep. You will note that this building is divided into two 55-foot sections, each having storage on the side with an aisle space through the center. This makes an ideal storage layout, but if your street slopes as just suggested, it might be well to make the frontage consist of three or even four of these 55 foot sections, making a center entrance at one end in one section and at the other end in another section on the second floor. This latter scheme would be the better of the two since both of the entrances would be on the main street.

You will note that on the first floor, the space is divided up by columns which support the second floor, these columns being spaced 21 feet on centers. This measurement is used because it makes a good liberal storage space for three cars and will allow for a 12 by 12 or even 14 by 14 concrete column. In order to gain space, however, we would suggest that you use pipe columns filled with concrete which will not be more than inches in diameter, and will allow just that much more space between the cars. On the second floor the cars are spaced so that each has 6½ feet. Here the use of trusses will avoid the necessity of columns, although the columns may be used as on the first floor, if desired. We would suggest that you use the second floor for your minor repairs and adjustments where the light will be better and where space can be more easily arranged, especially if you do not use the columns on the second floor. We have shown a room for lockers on the first floor, but believe that a better way is to have lockers built into the wall at each car space.

The windows on the side wall should occupy only the upper one-third of the wall space, so that they will not interfere in any way with the lockers. We have not shown a stairway, but it may be installed almost anywhere, preferably near the office.

Our building as laid out will hold approximately 200 cars, depending somewhat upon the amount of space used in repair and other features.

The heating may be either steam of the direct type with coils along the outside walls and ceilings, or may be a combination of direct steam with some sort of hot blast which will also help in ventilating.



We have shown only half of each floor as the completed floor would merely be a repetition of the half. 50 ft. units instead of 55 ft. could be used but if you expect a reasonably large number of large cars we would recommend the larger measurement

THE STUFF THAT GRIDS ARE MADE OF

Q—Is the grid of a storage battery made of pure lead or is it made of a composition of metals? If so, is there any difference in the positive and negative grid? —J. W. Stratton, R. 4, Box 339, Springfield, Mo.

The grid of a storage battery is made of lead and antimony. The antimony is added to give the grid the stiffness which the pure lead does not have. There is no difference between the grid used for positive and negative plates. The difference is in the paste.

Trouble May Be in Trough

Q.—We have a sport model Hudson, year of 1921. This engine has been rebored by a local garage but since that time has scored No. 1 cylinder on two different occasions. One mechanic says that the oil pressure or the oil pump plunger must be changed according to the size of the motor which has been bored to .020 oversize. We have examined this motor for oil pipes, for being plugged up and have found everything in first class shape. The writer has never, in all his experience, changed the oil system because the motor has been rebored. Cooke & Paul Garage, 116 Exchange street, Freeport, Illinois.

It is not necessary to increase the oil pressure on any engine solely because the cylinders have been enlarged by reboring or grinding. In the case of this particular car it may be that the trough or scoop of the No. 1 rod is deranged. The trough may be in such a condition that it is leaking or so deep that the oil level is not sufficient to touch the dipper on the connecting rod. The dipper also may be deranged, broken off, or too short.

With regard to oil pump it is advisable if the car is to be driven at high speed for long drives to increase the stroke of the oil pump to about 3/32 of an inch. A later model sub base for the oiling system has been provided and we understand that this can be installed on the 1921 cars. It may be secured from any authorized Hudson dealer and its installation is recommended.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Test With One Piston Left Out

Q.—I have encountered a knock in an Essex four, that I cannot take out. It sounds like a loose connecting rod but I have tightened them, fit new pins and aligned rods. By shorting No. 3 plug the noise disappeared. I have lapped an oversize piston in the cylinder. Have changed rods and pistons around in different cylinders, but knock is always in No. 3 cylinder. I have examined cylinder for ridges or any chance to strike. Any information you might give will be appreciated. Main Garage, Kenton, Ohio.

It is possible that you have a loose piston in the No. 3 cylinder. Lapping of aluminum alloy pistons with ordinary abrasive is not recommended and it is possible that the process left the piston with more clearance than it had originally. We would suggest that you very carefully micrometer the cylinder bore at several points to see if it is uniform in diameter and without taper or ridges and if it is you can then try the piston in the cylinder testing it with a feeler gage to determine the approximate diametral clearance. If the clearance is in excess of .007 for the old style piston it will cause piston slap. The new style split skirt pistons may be fitted to as close as .003.

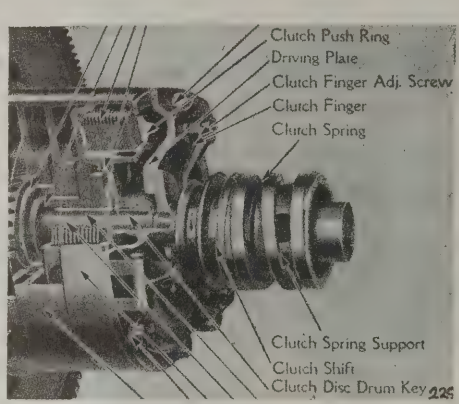
As a last resort we might suggest that you remove the connecting rod and piston assembly from the No. 3 cylinder and operate the engine to see whether or not the knock is still present. If the removal of the piston shows that the knock has been eliminated it would indicate that the noise is caused from some part of the assembly and only cut and try methods of testing each part of the assembly will give the ultimate location of the noise.

It is also advisable to check the amount of clearance between the piston pin and the piston boss when the pistons are at normal operating temperature. If the pins are fitted to what would be considered a good fit when cold the expansion caused from engine temperature will usually give piston pin knock after the engine has warmed up. We assume that you have checked these points and are aware of the conditions mentioned and if our suggestions do not enable you to cure the trouble, we would appreciate hearing from you again.

CLUTCH ADJUSTMENT MEASUREMENTS

Q.—I find in one of my instruction books on the Ford car where it says when the clutch is properly adjusted there should be 13/16 of an inch space between the lower side of the clutch and the drive plate. I am not sure that I understand what this means and will you kindly explain it. Kentucky Mountaineer.

The instruction book which mentions 13/16 of an inch dimensions should have read "between the lower side of the clutch shift and the clutch drive plate." The clutch shift is shown at Fig. 229 and by studying this and also the drive plate of



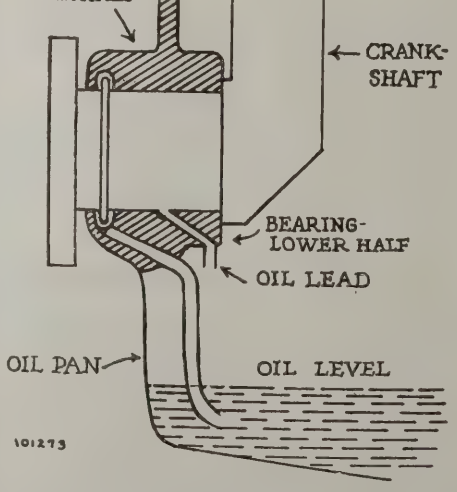
The Ford Clutch

the clutch you will understand that when the clutch spring is compressed to about 2 inches it will give the distance of 11/16 at the points mentioned in your other instruction book.

Curing Rear Mains That Leak Oil

Q.—We have an Oakland six 1920 model which gives trouble, due to a stream of oil running out of the rear end of the rear main bearing. The return hole through the bearing cap is open and we have cleaned out the holes in the crankshaft and cleaned out all the oil lines, but this does no good. Can you suggest a remedy. —Hoosier Repairman.

We are showing a sketch of a method which has been found to be effectual on one car and should prove effectual on the car in question. At the rear of the rear main bearing both in the upper half and in the cap a groove is cut. On most



Method of keeping oil out of the flywheel housing

engines a groove of this sort already exists and a raised portion of the crankshaft known as the oil slinger rotates in this groove. The trick in making this effectual, however, is to connect from the bottom of this groove a pipe which will run to a point below the oil level in the crankcase. Capillary action causes the oil to drain back into the crankcase more effectively than would ordinarily be the case.

What Should the Oil Pressure Be?

Q—At the Myers Garage we have recently become engaged in a disagreement. The question is about the oil pressure in the engine of a Buick 24-44 or Master Six roadster. One opinion is that something should be done when the oil pressure gets down to 3 or 4 or 5 or 6 pounds when driving at a speed of 40 miles an hour. The other party contends that as long as any pressure is showing it indicates the pump is working and that there is nothing to worry about. The bearings are tight and the pressure does not go down until the oil gets hot. Who is right? Would it do any good to use heavier oil? These heavier oils keep the pressure up to 9 and 10 pounds.—E. W. Clark, Pawnee, Okla.

The pressure should be about ¾ pound for each mile per hour. That is at 40 miles per hour you should have from 25 to 30 pounds pressure on the gage. Depending on the mileage which the car has gone it is possible that the pump gears need replacing. Wear at the teeth or side play will allow leakage of oil so that the pump does not operate efficiently. This is indicated when you say that it works fairly well with heavier oil, but does not work when the oil is light or when it becomes thinned out. You say that the bearings all fit properly, but unless you have tested these by forcing oil through the system you are not sure. The pump should be disconnected and oil forced through the system to see how it comes from the various bearings.

If it drips slowly from each one, the fit is correct, but if there is a flood of oil from any one bearing it indicates that that one is improperly fitted, and also accounts for the loss of pressure. We assume of course, that you have checked to see that the oil screen is clean. The party contending that any pressure at all shows the system to be O. K. is thinking of the type of engine where a pump forces oil into a series of troughs and connecting rods dip into these troughs. With this circulating splash system it is correct that any pressure on the gage shows that the pump is functioning. In a pressure lubrication system however, where oil goes to the main bearings and then through the crankshaft to the connecting rod bearings, it is necessary to have a higher pressure.

Clearing Up Electrical Trouble

EDITED BY A. H. PACKER

Test Bench a Necessity in Electrical Work

Q—We wish to build a complete electrical testing bench for garage use for testing automobile starting motors, generators, magnetos, lights, spark plugs, ammeters and coils.—Geo. H. Ainge Tool, Die & Machine Works, Springfield, Ohio.

Most garages find that they can utilize their time to better advantage in developing their own business rather than in trying to build specialized equipment of this nature. However, for those who wish to build up testing equipment we are publishing a diagram which takes care of generators either 6 or 12 volt. It would be necessary to purchase a suitable driving motor together with vise for holding the generator.

Can Be Mounted on Vertical Board

All of the equipment shown can be mounted on a vertical board at the back of the test bench. Only two switches are used, a two-pole double-throw and a single-pole single-throw, as indicated. Instruments that are suitable include an ammeter, which should be a 30-0-30, and a voltmeter, which can be a 0-15 meter. A 6-volt and a 12-volt cutout also are required. When you have a generator which does not have a cutout on it you leave the switch at the right open. Then you throw the double-pole switch to the left for a 6-volt generator and to the right for a 12-volt generator. This not only connects up the battery properly but also connects the proper cutout into the circuit. The two wires shown connected to the binding post are used to connect to the generator.

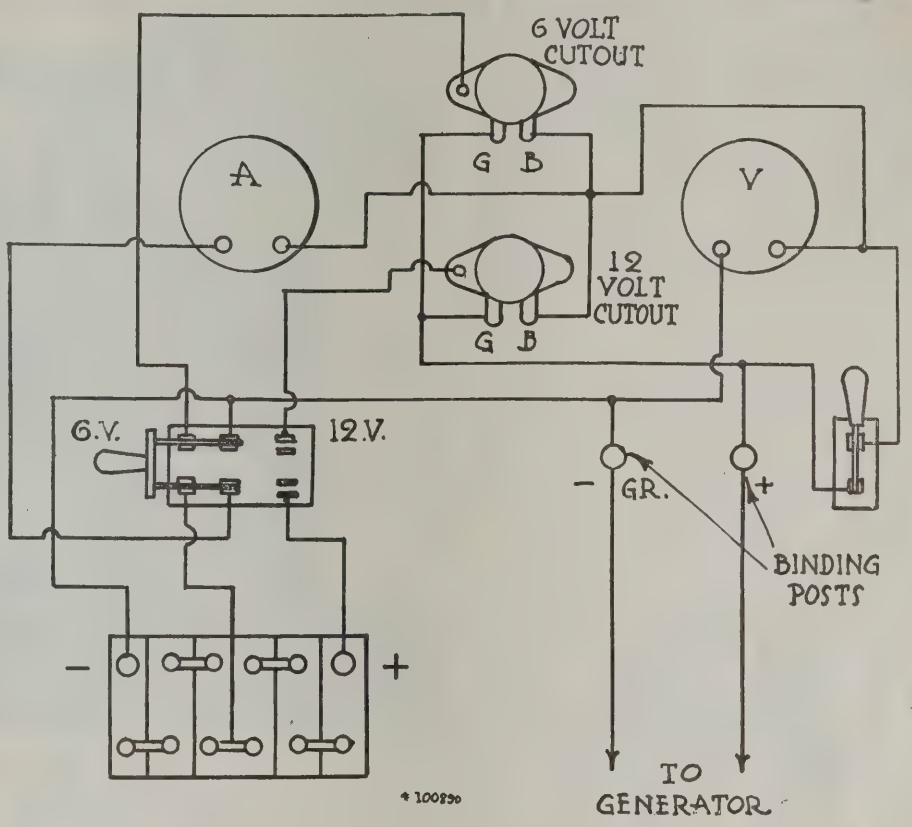
These wires would go on the two terminals on the generator, or if you have a grounded generator with only one terminal, then one wire goes to this terminal and the other wire goes to the frame of the generator. If the generator already has a cutout mounted on it or in it, you do not need the cutout on your test bench. You then close the single-pole switch at the right, which shorts these out. If you want battery current to test with, you merely close the single-pole switch at the right and use the two wires that are on the binding post. Using these wires for checking an ignition coil, for example, you will have the ammeter reading the amount of current that the coil takes.

The voltmeter is so connected that it will be reading about 6 volts or 12 volts, depending on which way the left-hand switch is thrown. As shown on the diagram the negative binding post is indicated as the ground terminal. This is all right for testing any generator.

Some generators, however, when installed on the car have the positive instead of the negative grounded. As a precaution, therefore, it is well to close the cutout points once by hand after the generator has been installed on the car. On the other hand, if you happen to know that a certain generator is used on a car where the positive terminal is grounded you can of course reverse the leads on your test bench, connecting the positive terminal to ground and the negative terminal to the live terminal on the generator.

If only occasional work is done a starting motor test may be dispensed with. If the armature turns freely and the brushes and commutator are in good condition and the starting motor will rapidly attain a very high speed it is quite likely to be O. K. Many test benches, however, provide for measuring the current and pounds pull on a lock torque test.

When it comes to magnetos the best test is to give the coupling a quick turn and see if the magneto fires in the safety gap. If not, it needs more or less work which usually necessitates tearing the magneto down. Spark plugs are tested with any ignition system by opening the plug gap or by putting insulation such as mica between the points to make the spark jump at least $\frac{3}{16}$ in. Coils are tested by connecting with a battery and interrupter so that the connections are the equivalent of the ignition circuit on the car. Ammeters are tested in series with a correct meter.



Circuits for testing 6 or 12-volt generators

TESTING BY ELIMINATION—A RELIABLE METHOD

Q.—What would cause the ammeter hand to vibrate on a Dodge Brothers car? The generator has been checked but we are not sure about the brushes. If the wrong third brush is installed in this car would it cause this trouble? D. C. Slick, The East Granite City Garage, Granite City, Ill.

The third brush should be black in color and the two main brushes should be yellowish indicating that they have more copper than carbon. If the brushes are incorrectly installed the main brushes which carry heavy current will have high resistance and the third brush which should have a high resistance will have such a low resistance that it will cause arcing, at the commutator. Whether this would produce vibration of the ammeter hand or not is another question.

We would suggest eliminating the cutout from the circuit by running temporary wiring from the generator to the ammeter and another wire from ammeter to battery, or you could use a separate ammeter and battery on the running board for test purposes. If the combination cutout switch and starting switch is not in good condition it may be that the points are flashing and burning and the cutout armature is vibrating back and forth. If you eliminate the car wiring, you will know whether the trouble is there or in the machine itself.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Electrical Flat Rates Bring More Shop Profits

"WHAT should I charge to repair a Ford generator?" one MOTOR AGE subscriber wanted to know. Another one asked if there were any flat rates put out like those prepared by some of the automobile manufacturers. It is a burning question, for with flat rates on mechanical overhaul operations sweeping the country, the question naturally arises, "Why can not electrical repairs also be made on a flat rate basis?" The answer is that they can.

Electricians familiar with the general nature of the work to be done can readily establish their own rates to suit prices in their locality. The start can be made with the units on the car most frequently serviced, and with the unknown cars still on a time basis. Then as experience is gained additional jobs on other cars may be added to the list.

Suppose the overhaul of a certain generator takes the average mechanic in a certain town three hours and the customary rate is $1.25 per hour. Then the average charge would be $3.75. Sometimes the mechanic working faster might turn out the job in less time, giving the customer better service at a reduced price, while if he worked slower he would give worse service at a higher price; obviously not a fair basis.

On the other hand let us suppose that $3.75 is established as a fair price on that job and car owners and shop men learn to accept this price as reasonable. What then are the chances of profit? The speedy electrician doing the job in two hours will earn for himself or the shop, $1.87 instead of $1.25 per hour and if paid in proportion to the work he does will have a chance to earn more. With an extra incentive he will speed up and develop short cuts so that each job will be more profitable than before.



THINGS THAT HELP FLAT RATE

The contact man is the all important factor in flat rate. He must not only be very familiar with the car or cars in question, but also able to intelligently write the repair order and above all able to meet the general public

Keeping a Flat Rate File

Chicago, Ill.

To the Editor of MOTOR AGE:

I have been saving the flat rate forum. Have you any idea as to how I could file them to readily locate the chart covering any particular car at a moment's notice? I am also interested in the articles on electrical trouble shooting and like to keep those articles separate and read them at leisure.

I tried this. I took two old thick MOTOR AGE copies that had over 260 pages, divided them into 10 pages for each letter of the alphabet and started to file, Buick, page 20, Cadillac, 30, Dodge, 40, etc. Then when I started to cut I found it spoiled the "Clearing up electrical troubles" as they were on the other side. For example, in the September 3, 1925, issue, page 27, electrical troubles are destroyed by cutting out No. 29 MOTOR AGE Flat Rate Forum for Dodge Brothers. Was thinking if No. 29 had been placed on page 24 instead of page 28, it would have been better as the picture pages don't mean anything after the first glance. I want to be able to turn quickly to Chevrolet, Dodge Brothers, etc., in a book on the desk to quote prices for the required operations on any car.—G. I. DeVault.

We quite appreciate the difficulty you are up against in cutting up the various copies of MOTOR AGE to save certain pages.

Perhaps a solution would be to not paste the pages down, but retain them in a loose leaf binder and make an index of the contents on the back of the page, that is, the ones relating to the electrical questions of the Reader's Clearing House, so you could refer to them when necessary. This would give you a flat rate book, which normally would be used as such, but which still would contain the information on other subjects you desired.

MOTOR AGE'S FLAT RATE FORUM

No. 33

FLAT RATES FOR FRANKLIN MISCELLANEOUS ENGINE OPERATIONS

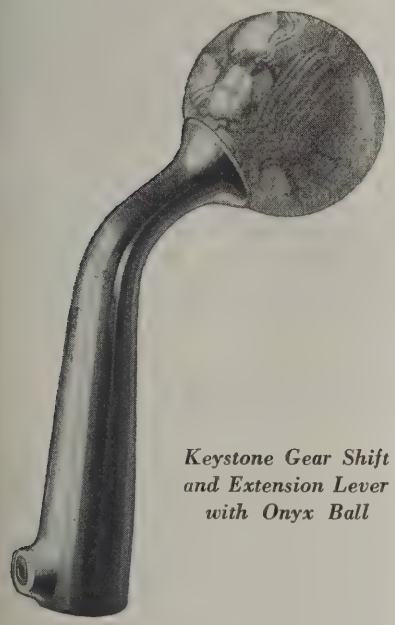
Manufacturer's Official Designation		Charge
10-703	Tune engine	$ 3.65
10-705	Clean engine	2.20
10-704	Oil change	1.50
10-719	Oil pump. Inspect, adjust and install new gaskets	5.54
10-730	Valves. Oil and adjust	1.18
10-731	Scrape carbon and kerosene grind valves. (Includes oil change)	7.71
10-727	Grind valves and clean carbon. (Six cylinders.) Includes tune engine	20.68
10-726	Valves. Grind (free up) and clean carbon. (One cylinder)	4.56
10-732	Valve walking beam (exhaust). Install new	2.66
10-711	Crankshaft and connecting rod bearings. Take up	21.55
10-738	Timing chains. Install new. (½ in. pitch)	13.15
10-737	Timing chain. Adjust	.85
10-756	Clutch. Install new. (Brown-Lipe to replace standard series 10 types)	46.10

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Keystone Gear Shift Extension Lever

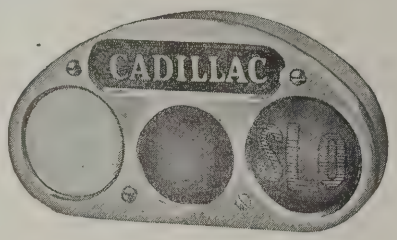
THE Norlipp Co., 568 West Congress Street, Chicago, Ill., recently introduced the Keystone gear shift extension lever. One of its main features is the fact that the ball is self locking so that it cannot be removed. The extension lever is securely locked into position by means of a set screw, making a firm joint. In the groove in the thread of the lever ball a ratchet spring is placed so that when the ball is screwed on it is permanently protected from theft. The extension lever is nickel plated and made to fit gear shifting levers of all cars in the various types or groups. A chart is supplied indicating by number the type of extension lever used on the desired car. Price, without ball, $1. With 1⅝ in. onyx ball, $2.75. With 1⅞ in. onyx ball, $3.



Keystone Gear Shift and Extension Lever with Onyx Ball

Glare-Sun Roller Shade

CLARMAX Manufacturing Company, 5353-57 N. Western Avenue, Chicago, offers the trade what it calls the Glare-Sun Roller Shade which shields the driver and other occupants of the car from the glare of sun, bright lights or snow. The Glare-Sun Roller Shade is installed similarly to a window shade and operates on the same principle. It is said to be adjustable to every angle to satisfy the eyes. A rubber suction holder at the bottom prevents the shade from flapping. This device is made in a standard size of 12 in. in green and is priced, complete with fittings, at $2.75. Special sizes are made to order at an extra charge of 40 cents per inch.



Four Features in Beacon Lamp

Cut shown above

COMBINING the features of a stop signal, tail light, reverse light and a car monogram the Beacon Standard No. 650 has been placed on the market by the Beacon Motor Lamp Manufacturing Company, 1243 West Third Street, Cleveland, Ohio. The left hand light is white, the middle light red and the right hand light is green. Centered over the top is the monogram unit. List price, $5.50.

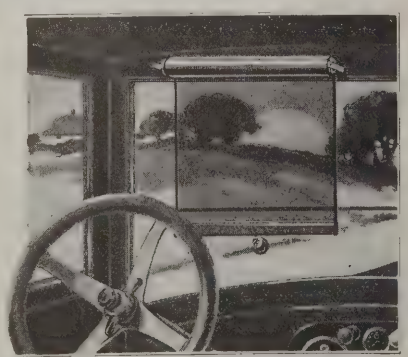
Let the Customer Know What It Is

The accessory store's shelves, counters and cases display a wide variety of items. The proprietor of the store or the experienced clerk knows all of these items by sight, just what they are and what they are for.

But what about the average customer who wanders through the store inspecting the stock?

His knowledge of the accessory stock is limited. While he might have developed interest in some device through the reading of advertisements or comment of other motorists there is a big chance he would not recognize the appliance in the store's display case should he run across it.

An identification label of some sort on the item would facilitate matters for him immensely and maybe lead to a sale which otherwise would be lost. If the article does not easily identify itself—label it.



Glare Sun Roller Shade

The Platelite

AS suggested by its name the Platelite is a road light and license plate holder combined. It is made of heavy compressed aluminum, the lower portion or plate holder being a solid piece and the upper section containing the lighting unit which is shaped like a kidney to cover the blinding glare of the bulb and obtain other benefits. This lamp, it is said, will project a beam of light spreading over the entire road for a distance of from 200 to 300 feet, waist high, and below the line of vision of the on-coming driver. The construction of the reflector and specially designed lens throws the light not only on the road but on roadside ditches and turns. The Platelite retails for $7.50 and is made by the American Automatic Devices Co., Chicago.



The Platelite

Sport Model French Trumpet Horn

WHILE the Sport Model French Trumpet Horn can be used on all models of open and closed cars it is designed particularly for use on sport types. It is made of brass and entirely nickel



Sport Model French Trumpet Horn

plated, with a very high polish and Duco finish. Colorings are green, grey, blue, brown. orange and maroon, A black enamel bracket is furnished. This horn will make a shrill trumpet-like sound with a slight pressure on the bulb. It is made by the Mid-City Auto Devices Company, 1430 South Michigan Avenue, Chicago, and lists at $4.

Descriptions of Additional Accessory Items Will Be Found on the Following Page.

Clean Surroundings Attract Business

(*Continued from page* 15)

If it is good business to present an attractive inside picture it follows that the substance in which the jewel is set should be made to do its full part as background.

Slick up to the best of your ability on the inside in preparation for winter business—and then give the best of your slicking up talents to the outside. While it is wrong to have "All Front and No Back" the "back's" full efficiency is dependent upon the efficiency of the front and outside surroundings.

In slicking up the front begin with the outside surroundings. If there are any unsightly rubbish piles or other eyesores affecting the picture—start out by removing them. The dealer establishment with an adjacent vacant lot has an asset in this lot now and then but the danger is that the vacant lot will be permitted to harbor hideous sights that do anything but strengthen the show room's setting. Rusted wrecks of used cars on the lots amount to just so much actual sales resistance.

Clean up the lot, if one is there, and clean up generally as a starter. Take a tip from the practice of large filling station operators. They have the idea when it comes to outside slick-up. Only a few days ago a filling station in a small city was observed which was against a neat latticed background, the lattices being painted white and trimmed in green. The purpose of the lattice work was to hide ugly views over which the station has no other control. The entire area between the lattices and the street had been covered with white crushed rock—not that cars would use all this space—but to further the neat and clean appearance of the station and its surroundings.

Filling stations, we might say, do business entirely with a "front" with no "back" to worry about, and the result is they have gotten the outside slick-up down to an art. They know the selling influence of the slicked-up establishment. They know the patron would prefer to go to a tidy, attractive stand for his gasoline than to one of the other sort.

The same sort of sales psychology applies to the prospective automobile buyer, or the prospective buyer of accessories or maintenance. In fact, human beings in this particular are very much alike. In trading of any sort we find ourselves naturally gravitated toward the more inviting business institutions.

It should be needless to remark that clean windows are vital in a slick-up program, yet there are automotive establishments that neglect their windows more or less. Shops perhaps are the worst offenders regardless of the fact that clean windows will let in more needed daylight and more business. Cleanliness on the noticeable exterior of the shop should prevail as well as on the interior, especially where there are rear and side drives along which shops often permit accumulations of junk and other unsightly things.

Out in front there may be some signs to think about. Signs that are hopeless eyesores should come down. Others should be slicked up, possibly treated with fresh paint. If electric, dead bulbs should be replaced. A sign is a business help but the slicked up sign helps business more than the one which looks ancient or mangy.

And speaking of paint there are many places where it might help the appearance of the outside and outside surroundings. Maybe the front of the building needs a freshening up with paint. There might be gas pumps, greasing racks or other service appliances on the sidewalk which paint would help. The next door neighbor often enters into the problem and it might help matters if he could be induced to do some touching up with paint and general slicking up.

Without a doubt the "slicked up" front will help get business. But the work of front slick up is not complete without general slicking up on the outside. It is well to remember that the prospective buyer is more likely to enter the store with slicked up front and slicked up outside surroundings than the store of the other type.

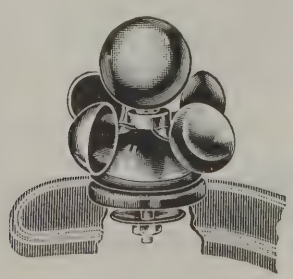
THE MARKET'S NEW OFFERINGS

(*Continued from page* 29)

The New Rotascope

Cut shown below

THE Wiggler Co., of Buffalo, N. Y., has put on the market a new type of rotascope. Originally the rotascope was designed to fit on the radiator cap. It was found that this interfered with temperature indicating devices so in order to remove this objection the rotascope has been adjusted so it can be put on the fender if preferred. The device consists of four cup-shaped disks, finished with bright red enamel and highly polished nickel. When the car is moving the breeze sets the disks in motion producing a colorful effect. Weight, about one pound. List price, $2.50.





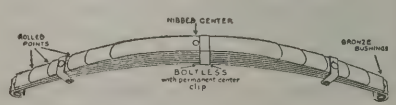
Common Sense Ventilator

Common-Sense Window Ventilator

ANNOUNCEMENT was recently made by Ackerman-Blaesser-Fezzey, Inc., Detroit, of the introduction of the Common-Sense Window Ventilator for closed cars. This ventilator, made of sheet steel and treated to prevent rusting, fits into the upper portion of the window. As it is placed outside the glass, raising or lowering the window is not interfered with. Louvres or air holes are spaced to offer maximum ventilation without permitting rain or wind to enter the car. Installation can be accomplished by the owner by removing the three strips that hold the glass in place, inserting the ventilator and replacing the strips. Stock sizes are made for all standard closed cars. Price, $1.75 per pair.

Perfection Front Springs for Fords

FEATHERED edges, bronze bushed eyes which prevent freezing of shackle bolts, boltless center and quick and easy installation are some of the points offered for the Perfection Spring for the front of Ford cars, manufactured by the Eaton Axle & Spring Company, Cleveland, O. The leaves of this boltless spring are held in place by steel straps at the center. Deliveries are offered in seven, eight and nine plate sizes.



Perfection Ford Spring

EDITORIAL

Facts About Time Payments

A VALUABLE service will be rendered the automotive industry by the survey of credit terms being made by the National Association of Finance Companies. There has been too much wildcatting among finance companies. We have gone through a period of cheap money and hundreds of new companies have started in the business of financing automobile sales. In their eagerness to get a large volume of business quickly many of these companies have offered extremely liberal terms.

The National Association of Finance Companies now proposes to classify and sum up the experiences of the various companies with terms of varying liberality. The result should be a reliable indication of basis upon which the business can be conducted safely and soundly.

It is very much to the interest of the dealer that finance terms be stabilized on a sound basis. It doesn't help the dealer to sell cars on what is equivalent to a rental basis. Cars that do not stay sold return to plague the dealer even though the repossession may be by a third party and not by himself. The dealer's interest is in seeing that cars are sold on a basis that will keep them sold. Common sense, if given a chance to exercise itself, will dictate these terms.

Flat rate will knock L out of the flat purse.

Salesmanship in the Service Station

ENTIRELY too many service shops are lacking in either the inclination or ability to properly sell their services. There recently came to our attention an instance in which complete lack of salesmanship proved costly to a dealer's service department. A customer whose car had done a good many thousands of miles in the two years it had been out took it in to have the engine put in good condition. He was prompted to do this by the fact that an annoying piston slap had developed. His chief object was to have the noise removed because generally the engine was still operating in a creditable manner.

The service foreman dismantled the block and said he thought two new pistons would cure the trouble. The owner told him to go ahead. After this work had been done and the engine reassembled the service foreman found the slap still existed. He took the engine down again and renewed the other two pistons and rings. The owner was perfectly willing to pay for the complete new set of parts and their installation, but not the extra operation of taking off and replacing the cylinder head and pan the second time.

But that was not the end of the trouble. There was still a bad slap in the engine and the car came back. This time the trouble was traced to worn valve stems. It was necessary to install a complete new set of valves, but here again the service department could not properly charge for the operation of removing and replacing cylinder head and grinding in the valves, for the old valves had been ground and charged for the first time the head was off. The owner was willing to pay for the valves and the operation of installing them minus the grinding.

The moral here is that the service foreman in the first place should have sold the owner on the idea of fitting a complete new set of pistons, rings, pins, valves, and other necessary parts. But actually no effort was made at any time to sell a complete job. The effort rather was to see how little work the shop could get by with. As it turned out the owner paid for a rather complete engine overhaul, including parts, but the shop lost heavily on the labor end of the job through having to do so much duplicate work for which it could not properly charge.

The owner in this case would readily have authorized the complete job for which he ultimately paid and the shop would have saved money, if the least bit of salesmanship had been used.

Shut off profit and shut up shop.

Keeping Busy This Winter

THE automotive jobbers of New York state, 100 per cent strong, have decided to carry on a special campaign this fall and winter for the purpose of helping car dealers and garages keep their shops busy during a period when there is usually a normal decline. The movement is a worthy one and should be followed in other sections of the country.

One phase of the campaign will be the encouragement of dealers in the direction of having all used cars on hand fixed up before they are offered for sale. It is believed that this fixing up will make these vehicles more marketable at better prices and will provide the service shops with a great deal of profitable work and furnish an outlet for a great amount of parts and supplies.

At the same time the practice of reconditioning used cars before offering them to the public helps to hold the good will of the car buyers and is a good thing for the whole industry.

It pays to be a preferred customer.

Let's Stay Slicked Up

THE slicked up store is such a satisfaction to the owner and such an attraction to customers that it would pay to keep it that way all the time. And it's not much of a job after it has been done once. A little attention daily is all that is necessary. But it must not be neglected. Only a few days of neglect will allow the slickest place to run down and become shabby and then it is a real job to bring it back. A few minutes a day will keep the store slicked up.

Trade Outlook Is Highly Favorable

Good Tone to New Car Sales Almost Everywhere in Country

Used Vehicle Movement Satisfactory on Average but Spottiness Marks Time Selling

NEW YORK, Sept. 26.—Generally excellent new car sales, reasonably satisfactory movement of used cars in most parts of the country and a spotty situation as regards time payments and repossessions—that is the picture of the automotive retail condition as the industry enters the Fall season.

Reports from every section of the country show that new car sales have been very good almost everywhere, September totals exceeding those of August in many cases and falling materially below August in practically none. Some areas had a marked slowing up in new cars business during the first week or ten days of September, but heavy buying in the middle of the month compensated for the early slump. Coupled with these very favorable records of September business come highly optimistic and apparently well found opinions that October also will show results which will compare favorably with those of August and September.

Dealers Press Factories

Used car stocks seem to be in pretty good shape all over the country, although reports from Texas and parts of Ohio indicate that the number of used cars in dealers' hands is rising despite reasonably active market in the used vehicles. New cars stocks, of course, are low, with many dealers pressing their factories for deliveries.

The very active new car market and the satisfactory used car situation, when coupled with the decrease in factory schedules which is taking place in a good many cases, combine to make the current automotive outlook highly favorable. The indications are that most factories are not being misled by the size of immediate demands into thinking that this peak pressure from the retail field will continue indefinitely. Consequently, there are strong evidences to indicate a steady balance between production and consumption will be maintained throughout the fall and winter whatever turn the retail sales curve may take.

Spotty Time Sale Situation

Underlying this excellent situation, however, is a somewhat spotty times sales situation.

Telegraphic reports from many correspondents indicate that the credit situation is thoroughly satisfactory or improving. Such statements, for instance, come from Milwaukee, Louisville, Canton, St. Louis, Toledo, and Birmingham. But to offset these favorable reports are others from such centers as Los Angeles, Charlotte, N. C., Philadelphia, and other centers indicating that repossessions are on the increase.

More Mail Routes Motorized

WASHINGTON, Sept. 26.—Motorization of 498 new rural free delivery routes has been announced by the Post Office Department, bringing the total number of mail routes, now covering the United States to 4,228. According to the report of Postmaster General Harry S. New, just issued, on June 30 this year mail was delivered on 45,189 rural routes, as compared with 44,760 on June 30, 1924. Rural mail routes in the United States have an aggregate length of 1,223,391 miles, and serve 6,508,178 families, or 30,351,618 individuals.

Paige-Detroit Company Will Cut Funded Debt to Million

DETROIT, Sept. 26.—Directors of the Paige-Detroit Motor Car Company at their meeting Friday, after considering the company's strong cash position and favorable business outlook, decided to anticipate the redemption date of $500,000 of the company's outstanding serial gold debenture notes by calling for payment Dec. 1, this year, the block of notes which would fall due June 1, 1926.

The company, on Dec. 1, this year, will also retire $500,000 of the notes coming due at that time. Of the originally authorized issue of $3,000,000 dated March 1, 1924, and maturing $500,000 June 1 and December 1 to June 1, 1927, the company already has retired $1,000,000 of notes as they fell due.

Under the terms of the note issue they are callable by the company on any interest date at 108 and accrued interest before June 1, 1925, at 102 and interest before June 1, 1926, and at 101 and interest before June 1, 1927.

"Our company has had a very successful year, and business is continuing in record volume," says President H. M. Jewett. "The company is in an exceptionally strong cash position and the directors decided it would be wise to call the notes maturing in June next year, for payment with those coming due December 1, this year. This will reduce the company's funded indebtedness to $1,000,000, no part of which will fall due until December 1, 1926.

DICK IS SERVICE MANAGER

FLINT, Mich., Sept. 26.—R. H. Mulch, vice-president and general manager of the Flint Motor Company, announces the appointment of Joseph R. Dick, as service manager. Mr. Dick has had wide experience in service work with several other prominent manufacturers of automobiles.

4-Cylinder Willys-Knight To Have Four Wheel Brak

Equipment Will Be Similar to Th on Six and at No Added Cost

TOLEDO, Sept. 26.—Four wheel brak similar in operation and construction those employed on the six cylinder mod announced Jan. 1, 1925, will be fitted the four cylinder Willys-Knight ca effective Oct. 1, it was announced tod by Willys-Overland, Inc.

All models on the smaller chassis w be regularly equipped with the ne brakes and included in the present l price, there being no extra charge f the front wheel brakes.

On the Willys-Knight cars, the intern front wheel brakes are different fr any design employed on domestic ca at this time. From the brake ped pressure is transmitted by a rod co nected to a lever which is pivoted a bracket attached to the front ax Pull rods from the floating equalizer the bracket are connected with univers ball jointed yokes, the latter carryi rollers in the brakes proper in the fro wheels.

The operating rollers are placed wedge shaped spaces formed by t curved portion at the lower ends of t two cast aluminum brake shoes. Wh the brakes are applied, the rollers a drawn in toward the center of the fro axle thus forcing the shoes outward a providing the necessary braking effo on the drums.

RICKENBACKER TO EXPAND

NEW YORK, Sept. 26.—A minority i terest in the Rickenbacker Motor Co., Detroit, has been purchased by Noyes Jackson, members of the New York a Chicago Stock Exchanges, and W. Jackson, of Chicago, and A. G. Boes of New York, are to be added to the boa of directors. The seven present directo are department heads in the Ricke backer organization, and heretofore banking interests have been represent there. The company announces that th step will mark the beginning of a ra expansion program, the first step which will be the amalgamation of body concern with the Rickenback Motor Co.

NORTH EAST HOLDS MEETING

ROCHESTER, N. Y., Sept. 28.—Nor East Service, Inc., opened its annu branch managers' convention here tod at the general offices of North East Ser ice, Inc., in Rochester. A special featu was the attendance of the managers the North East foreign branches inclu ing those of Toronto, London and Pa offices. Further development of t North East service policy to meet the i creasing demands will be planned at th time.

Meeting at N. A. C. C. Office Starts Fight on War Tax

Representatives of Every Branch of Industry Confer to Plan Campaign

WASHINGTON, Sept. 26.—Representatives of all automotive interests marshalled their forces here this week at a meeting held in the offices of the National Automobile Chamber of Commerce for the purpose of launching a winning fight in the Sixty-ninth Congress for the elimination of all war excise taxes, which include those on motor vehicles, parts, tires and accessories.

The representatives found themselves in perfect unanimity in the belief there should be no compromise but that all the taxes which have so long been a drag on the industry should be speedily killed. Decision was reached that each automotive group should work out its own line of action in its own way with specific attention to the particular phases affecting it.

Those in attendance at the meeting reported that they are gratified to learn through conversations within the past few months with members of Congress that there is a very general appreciation on the latter's part of the justice of the demands of the automotive industry. It was the consensus that the arguments for the elimination of the war taxes this winter will get a more receptive hearing than they have in the past.

It was reported at the meeting that representatives of all of the automotive groups have requested time when the house ways and means committee meets next month which no doubt will be granted.

Foreclosure Suit is Brought Against Lexington Motor Co.

INDIANAPOLIS, Sept. 26.—Suit to foreclose a $1,500,000 mortgage against the property of the Lexington Motor Company of Connersville has been filed here in the Federal Court by the Central Union Trust Company of New York, as trustees for the holders of first mortgage sinking fund gold bonds of the company. In the complaint the trust company sets out that interest payments due last year and this year on the bonds have not been met, an amount which runs to $56,250 for each six month period since March, 1924, when the first semi-annual payment was due.

In Connersville another foreclosure suit was filed against the Ansted Engineering Company which formerly made the motors for the Lexington car. This suit is to foreclose a mortgage of $1,000,000 on Ansted Engineering Company property which was originally held by the Lexington Company to secure repayment of ten promissory notes given by the engineering company to the Lexington concern. Later this mortgage was assigned by Lexington to the Central Union Trust Company at the time the Lexington company negotiated its mortgage to the trust company.

The Lexington Company since April, 1924, has operated under a receiver appointed by the Federal Court at the time the interests first got into serious difficulty. Receiver William P. Herod has been operating the plant on a small production schedule. The Ansted Company is in the hands of Receivers Hyatt L. Frost of Connersville and Arthur Dixon of this city. It is understood here that one possible outcome of the suit will be steps toward a reorganization, though it also is understood that some previous attempts to reorganize the interests have so far failed of success.

A. H. Rosenberg Heads Central Finance Credit Association

CHICAGO, Sept. 26.—A. H. Rosenberg, vice-president of the Motor Car Securities Corp., was elected president of the Central Automobile Finance Credit Association, with headquarters in Chicago, at the annual meeting. The Central organization is an association of auto-



A. H. Rosenberg

mobile finance concerns, whose members write an aggregate of more than $1,000,000,000 a year. It is affiliated with the National Association of Finance Companies.

Other officers elected were S. J. Steinberg, vice-president; A. J. Deutschman, secretary; John B. Perlee, treasurer; J. L. Nau, R. A. MacDonald, H. M. Lilly and John H. Little, directors.

Mr. Rosenberg was a member of the board of directors before being elected to the presidency

LANE TOURS WEST COAST

OAKLAND, Cal., Sept. 26.—Ralph S. Lane, president, and D. M. Sweeney, field supervisor of United Motors Service, are on tour of the Pacific Slope, having spent several days in September in Oakland. Expansion of service stations throughout the country is being arranged, according to Lane.

S. A. E. and N. A. C. C. to Hold Joint Meeting Oct. 9-10

Chicago Convention Will Stress Subject of "Preventive Service" in Operation

CHICAGO, Sept. 26.—Trouble prevention will be the keynote of the Society of Automotive Engineers and National Automobile Chamber of Commerce joint meeting, Hotel La Salle, Chicago, November 9-10.

The joint meeting with the Society of Automotive Engineers, which is the third annual event of this kind, will have much to do with what is sometimes called "preventive service," directing attention to the precautions that should be taken and the things that should be done to prolong satisfactory car operation and defer inevitable repairs that wear eventually entails.

There will be morning and afternoon sessions on each of the two days, the first and last being in charge of the N. A. C. C. Service Division. The S. A. E. will be responsible for the Monday afternoon and Tuesday morning sessions

The Automotive Equipment Association show will be held that week at the Coliseum, and a conference with members of that association and the factory service managers will be held Wednesday morning following the official service convention.

Rochester Business Is Good In All Lines During Month

ROCHESTER, N. Y., Oct. 1.—Business in the automotive industry in Rochester and vicinity continued to hold good during the past month and prospects for the next 30 days point to a slight increase in all lines. The new car situation is especially good with practically all dealers reporting more orders than they have cars to fill.

The used car business is holding up well but this end of the business is expected to fall off during the current month. Stocks of new cars are small while the used car stocks are reported as not abnormally large for this time of the year.

General business conditions vary, some sections of the territory being prosperous while in others there is considerable unemployment. On the whole however, the situation is a healthy one for the automotive trades. Accessories, tires, trucks, replacement parts and electrical equipment are all in good shape with bright prospects for the next 30 days.

MICHIGAN ENGINEERS TO MEET

DETROIT, Sept. 26.—The Michigan Engineering Society has arranged its annual convention to take place in Grand Rapids October 28 and 29. The dates were set to enable the members to attend the first annual Good Road Show of the Michigan Association of Road Commissioners and Engineers.

Kissel Adds Three New Features to All Models

Oil Purifier, Air Cleanser and "Gas-co-lator" Now Standard on Both Sixes and Eights

HARTFORD, Wis., Sept. 26.—The Kissel Motor Car Company, Hartford, Wis., announces as standard equipment on all models, three new features: dual oil purifying system, air cleanser and gasoline purifier.

The most important of these is the adoption of the dual oil purifying system which was added only after a series of exhaustive tests extending over a period of months.

The system has the resemblance of a vacuum tank. It draws contaminated oil from the crankcase and removes dilution, abrasives and sludge, and sends it back on the job cleaned.

The air cleanser has been standard equipment on Kissel Eights for some time, and owing to its successful performance it is now installed on Kissel Sixes as well, making it standard equipment on all models.

The gas purifying system known as the "Gas-co-lator" removes all dirt, grit and water from gasoline, and Kissel engineers claim it will do much in eliminating motor trouble previously caused by impure gasoline finding its way into the carbureter.

The new features are being added at no extra cost on cars now being delivered from the factory and Kissel dealers in all sections are being equipped to install them on previous Kissel models at a nominal charge where owners desire them.

Auburn Production Reported Heaviest in Firm's History

TOLEDO, Sept. 26.—The Auburn Automobile Co., whose plant is located at Auburn, Ind., has reported its largest production in history of the company during the last week.

The production has averaged 50 cars a day for the week, which is 25 per cent increase over any previous seven-day period, according to E. L. Cord, vice-president and general manager.

Unfilled orders continue to increase and there appears to be no immediate prospect of production keeping pace with the demand for the new Auburn models in the opinion of plant officials.

FORD PLANT OPERATING

MILWAUKEE, Sept. 26.—The Milwaukee plant of the Ford Motor Co. is operating at capacity again after a seven-week shutdown necessitated by preparations of introducing the new line of improved models. H. M. Buckley, manager of the Milwaukee branch states that a daily output of 200 cars per month through the fall and winter months is contemplated.

PEERLESS REINCORPORATES

CLEVELAND, Sept. 26.—Formal action was taken Tuesday at Richmond, Va., to transfer the assets of the Peerless Motor Car Company, the operating company which is an Ohio corporation, to the Peerless Truck and Motor Company, the holding company and a Virginia corporation. With this done, the Peerless Motor Car Corporation is to be formed as a successor to the Peerless Truck and Motor Company, which will be dissolved. The new company will be a Virginia corporation but licensed to do business in Ohio.

Exhibitors at A. E. A. Show Have More Space This Year

All But Few of Numbers Already Contracted—Drawings Held in Chicago

CHICAGO, Sept. 26.—Drawings of space for the annual show of the Automotive Equipment Association were held this week in Chicago, with the result that only four small spaces on the main floor were left open for members who did not have their space already contracted.

The show this year will be held in the Coliseum, as usual, November 9 to 14. Every space in the main building, the North Hall and the South Hall, with the exception of the four, is now taken by the manufacturing members of the association and the trade papers. A total of 220 exhibits has been contracted.

Last year there were 229 exhibits, all placed on the main floor of the Coliseum, while this year space requirements were so great that it will take the main floor and both North and South annexes to house the 220 displays.

Exhibitors who require space after the four small sections are contracted, will use the balcony, officials of the show say.

All but 40 of the members of the association have already contracted for their space, thus assuring the association that the exhibition this year will be the greatest thus far held.

NEW CADILLAC DEALERS

DETROIT, Sept. 26.—New dealers appointed by the Cadillac Motor Car Co. include:

Jones Mercantile Company, Canton, Ga.; Roy W. Milligan, Miles City, Mont.; Leo J. Dettling, Ann Arbor, Mich.; Logan Buick Company, Logan, W. Va.; Williamson Motor Company, Williamson, W. Va.; Wilbur Johnson Company, Kokomo, Ind.; F. M. Nelson, Panama City, Fla.; Park Motor Car Company, Lyndhurst, N. J.; Central Louisiana Motor Car Co., Alexandria, La.; Chapman Motor Inc., Plattsburg, N. Y.; N. B. Haney, Ada, Okla.; Spurgin Motor Company, Fairfax, Okla.; Cass Motor Company, Bloomington, Ill.; Wirt-Carter Motor Company, Tucson, Ariz.; Monnett Motor Company, Walla Walla, Wash.; Steuben Motor Company, Corning, N. Y.; W. M. Lofland, Norwalk, O.; DeForest Buick Company, Sharon, Pa.;

September Business Shows Gain Over 1924 in Chicag

Crop Conditions Cause Upturn i Rural Sales — October Expected Good

CHICAGO, Oct. 1.—September in th Chicago automotive trade showed a muc greater volume of business than Septem ber a year ago. Factory production wa sustained at a high level in all the Illi nois plants. Distributors and dealers especially those who are showing nev models, or whose product is selling a a lower price, report their Septembe business as good as, if not better than any other month this year.

Many distributors and dealers starte the month slowly, but the last two week have shown decided improvement, and number of them see in October the great est sales possibilities of the year.

Crop conditions throughout the rura districts in the Chicago trade territor are excellent and a consequent large volume of rural sales is now appearin and is expected to grow during the com ing month.

Some dealers are reporting that de livery is a problem. Delivery of the new Ford models has not started in volum as yet, but the factories are putting forth great efforts to get the new cars on th road as fast as possible.

The used car situation is distinctly favorable with the greater number o dealers entering the fall and winter sea sons with the smallest stocks in years Replacements are good, tires good, and time payments excellent.

Parts and Equipment Men See Big Autumn in South

ATLANTA, Sept. 26.—Stocks carried by the automotive and equipment jobber in the principal southeastern cities fo the fall and early winter trade are re ported by salesmen representing th northern manufacturing concerns an larger manufacturers' agents in this ter ritory to be the largest they have bee in the past four or five years at this time of year, with virtually all of these job bers apparently looking forward to on of the most active fall and early winte seasons in the history of the industry in the Southeast.

Both parts and accessory sales the las month have been very active in all part of the South, and there is every indica tion, jobbers in Atlanta advise, that they will continue so well into the fall months The holiday season is expected to be by far the best it has ever been in this dis trict, so far as accessory business is con cerned.

This, as stated, is true of a majority of the principal southern cities, infor mation at hand from larger jobbing firms in Atlanta, Jacksonville, Memphis, New Orleans, Nashville, Knoxville and Bir mingham.

Survey to Determine Sound Automobile Finance Terms

N. A. F. C. Sends Questionnaire to All Companies Handling Such Paper

CHICAGO, Sept. 26.—An extensive survery is being conducted by the National Association of Finance Companies to determine what are fundamentally sound credit terms in the time payment plan of selling automobiles. To get the facts, C. C. Hanch, general manager of the association, has sent a questionnaire to all companies known to be in the business of financing automobile sales.

At the same time Mr. Hanch announces that the annual meeting of the association will be held in Chicago Nov. 17 and the conclusions from an analysis of the returns of the questionnaire will be made public at that convention. The detailed program of the convention has not been completed, but will be finally arranged at a meeting of the convention committee in Chicago Oct. 6. It is probable that more than one day will be taken for the convention.

Finance companies that answer the questionnaire are assured that no details of their individual businesses will be made public, but only the average facts determined from an analysis of all the returns.

Among the questions asked are:

Average loss per repossessed car which had twelve equal monthly payments.

Average loss per repossessed car which had 16 to 18 equal monthly payments.

Average loss per repossessed car which had balloon note or more than eighteen equal monthly payments.

On new cars, the percentage of repossessions when down payment was one-third of cash price or 30 per cent of time selling price, when down payment was 25 per cent of time selling price, and when down payment was less than 25 per cent of time selling price.

On used cars, percentage of repossessions when down payment was 40 per cent of cash price or 37 per cent of time selling price and when down payment was less than 37 per cent of time selling price.

Percentages of used car paper handled.

Percentage of total used car paper which is handled with recourse.

Percentage of paper calling for more than 12 equal monthly payments.

Percentage of paper with 35 per cent or less down on used cars and with 25 per cent or less down on new cars.

The association management is especially desirous of having complete returns from all companies engaged in automobile financing so that when the average conclusions are made known they will be turly representative of the whole country and will be of value to the industry.

CHRYSLER VISITS FRANCE

DETROIT, Sept. 26.—Walter P. Chrysler, president of the Chrysler Corporation, sailed today for Havre and Paris and before returning to America October 17 will visit Saint-Didier in Paris, distributors of Chrysler cars in France, and the nineteenth International Motor Exhibition organized by the Society of Motor Manufacturers and Traders, Ltd., in connection with the Royal Automobile Club, at the Olympia in London. J. E. Fields, vice-president in charge of sales, and Fred M. Zeder, vice-president in charge of engineering, of the Chrysler Corporation, sailed ahead of Mr. Chrysler but will return with him.

Builds Apartment for Baby Families Only

Walter O. Briggs, president of the Briggs Manufacturing Company, Detroit, one of the world's largest manufacturers of closed automobile bodies, plans the immediate erection of a large, 16-family apartment building to cost $500,000. It is to be located in Detroit on a frontage of 245 feet on Covington Drive and construction is to start immediately. The singularity of this plan lies in the fact that these thoroughly modern apartments are to be rented only to families who have babies under five years old, the plan designates that this unusual venture is to be operated on a non-profit producing basis for the owner.

ZIMMER IS PROMOTED

NEW YORK, Sept. 26.—L. M. Zimmer has been appointed general sales manager of the Linde Air Products Company, manufacturers of oxygen, and of the welding gas division of the Prest-O-Lite Company, Inc., manufacturers of dissolved acetylene, succeeding L. M. Moyer, who resigned August 1. Mr. Zimmer entered the employ of the Linde Air Products Company nine years ago as a junior salesman and has steadily risen in rank. Most of the time he has represented the company in the Central West, coming to New York early in 1924 to act as assistant general sales manager.

CLYDESDALE RECEIVER NAMED

TOLEDO, Sept. 26.—The Commerce Guardian Trust & Savings Bank has been named receiver for the Clydesdale Motor Truck Co., of Clyde, following filing of a petition here in federal court by the Continental Motors Corporation of West Virginia. Judge John M. Killits also named P. R. Taylor, a local attorney, as special master to hear claims. It is declared in the petition that the company is apparently solvent with assets of $598,549 and indebtedness considerably less than that amount.

AUTO-LITE DIVIDENDS

TOLEDO, Sept. 26.—The directors of the Electric Auto-Lite Co., have declared the regular $1.50 quarterly dividend on common stock of the company payable October 1 to holders of record September 21. Several new accounts have been taken on by the company.

Battery Manufacturers Are Enthusiastic at Convention

Steps Taken to Increase Efficiency of Organization — New Members Admitted

NEW YORK, Sept. 26.—Cooperation was the keynote of the meeting held by the National Battery Manufacturers' Association at Hotel Roosevelt. Enthusiasm marked the sessions, four new members were admitted and several other steps taken to increase the efficiency of the organization. About 60 members attended and the convention was the best ever held.

The rating of the Society of Automotive Electrical Engineers was adopted for automobile batteries as standard for the association members. Radio battery ratings were also adopted.

Dan H. Kelly of the U. S. Light and Heat Corp., president of the association, presided. One of the most interesting discussions was that by A. G. Hancock of the Home Insurance Co., who described a new insurance policy for rented and loaned batteries. This policy, offered at a low rate, covers fire, theft, loss and lightning casualty on land or water. Although no official action was taken on this subject, it aroused keen interest among the manufacturers and was offered for their consideration in connection with their own service stations.

The necessity of gathering and formulating statistics for the industry was pointed out by Commissioner O. B. Towne and it was voted to start in a small way to collect statistics on certain agreed upon items, for the purpose of providing a more accurate understanding of the actual condition of stocks on hand, number of batteries manufactured and the number sold.

Alfred Reeves, secretary of the N. A. C. C., discussed the Federal excise tax on automobiles, particularly from the standpoint of the parts and battery manufacturer. Arrangements are being made to have a representative of the association in Washington when this subject comes before the taxation committees of Congress.

These new members were admitted: Westinghouse Electric and Manufacturing Co., Lyons Storage Battery Co., W. F. Price Battery Supply Co. and Pioneer Storage Battery Co

A committee was appointed to study the matter of creating a cred.it department and committee chairmen reported.

NORTON RESIGNS FROM G. M.

PONTIAC, Mich., Sept. 26.—S. V. Norton will resign October 1 from the position of service manager of the General Motors Truck Company at Pontiac, Mich., which he has held since 1920. For fifteen years prior to his connection with the Truck Division of General Motors, Mr. Norton was with the B. F. Goodrich Rubber Company, Akron, as manager of truck tire sales, and in other executive capacities. His future plans have not been announced.

All Automotive Lines Show Gains in Texas Territory

Accessory, Parts and Equipment Business Declared Best of Year

DALLAS, Texas, Oct. 1.—All automotive lines were looking up in Texas and parts of Oklahoma, Louisiana, New Mexico and Arizona in September.

Automobile distributors and dealers said sales were above the August mark for new cars while the business in used cars was increasing. Practically all dealers are carrying light stocks and in some instances it was difficult to obtain certain models. Medium priced cars were selling briskly. The lower prices machines were moving in large numbers. Distributors were hustling to keep dealers supplied with these makes.

The accessory, parts and equipment business was the best for the year. The accessory jobbers have had trouble in supplying demands for lighting equipment, lens and reflectors due to operation of new headlight law. Distributors are behind with deliveries and retailers are pushing them for stocks. All automobiles in Texas probably will not be equipped to meet requirements of the law before November 15. The business in these lines was the heaviest in the history of concerns handling them.

Accessory jobbers are putting on new salesmen and automobile concerns are taking on new men to solicit business. Advertising in all lines is persistent and sales campaigns are being pushed energetically.

The tire trade was normal. High prices and necessity for many sizes caused many retailers to carry limited stocks. Taken as a whole, however, the trade was said to be normal with the outlook some better.

SIX WHEEL CO. TO EXPAND

PHILADELPHIA, Sept. 26.—The Six Wheel Co. is preparing to extend its truck building operations, hitherto on a limited scale. The former manufacturing plant of S. S. Emerson, recently acquired by the company, will be available for the truck building, and a new plant will be erected on a five acre site. The Six Wheel Co. is a subsidiary of the American Motor Body Corp., of which Charles M. Schwab is chairman. The corporation has sold its Detroit body plant to the Chrysler Corp., as was announced previously.

TEXAS TITLES GAIN

AUSTIN, Tex., Sept. 26.—Motor vehicle registration in Texas continues to increase at a rate which shows that the automobile and motor truck trade is in a most flourishing condition, notwithstanding the drouth that has caused a crop failure in a big scope of the central and southern parts of the state. From January 1 to September 15 a total of 818,787 motor vehicles were registered. This was about 19,000 more than for the whole of last year. It is expected that the total registration for 1925 will reach 1,000,000 as there is usually a heavy buying of automobiles and motor trucks during October, November and December. The number of automobiles registered up to September 15 was 549,400, motor buses 3,056, tractors 238, motorcycles 2,480, commercial vehicles 78,254, transfers 183,359.

GERMANS HAVE NEW CAR

WASHINGTON, Sept. 26.—The Automotive Division of the Department of Commerce learns by cable that the German firm of Schmidt and Benzdorf G. m. b. H., of Mannheim Baden, Germany, has introduced into the German market a small car named "Mops." This machine is of a three-wheel design and is equipped with a two cylinder four stroke valve in head motor with three speeds forward and one reverse. At this time the car is only produced in one model, a single seater, two-passenger car and is priced at 2400 marks including electric starter, storage battery, top, electric lights, clock, speedometer, windshield, tools and an extra wheel with tire. In view of the low price for this machine it is believed that a good demand will be created.

Sparks-Withington Adds 50 Cents to Extra Dividend

CLEVELAND, Sept. 26.—An indication of the prosperity enjoyed by the automobile accessory industry in this city is given in the eight months' report of the Sparks-Withington Co., manufacturers of Spartan horns and other auto accessories. Directors have increased the extra dividend from 50 cents to $1 a share.

This will make $5.25 that the company has paid this year; $1 in January; $1.25 each in April and July and $1.75 to be paid October 1 to stockholders of record on September 22.

Earnings for the eight months of the present year that ended August 31 before taxes and dividend, amounted to $435,988 as compared to $195,111 in the corresponding period last year. These earnings show that about $11.40 a share has been earned in the eight months period after allowing for preferred dividends.

The current assets of the company amount to $1,087,279 while the current liabilities are but $53,000. The book value of the stock is $42.50 a share.

FORD RUSHES OUTPUT

DETROIT, Sept. 26.—All efforts at the Ford plants at Highland Park, Ill., Dearborn and River Rouge are being centered in turning out the improved models recently announced by the company. Getting the different models to future owners is the one thing uppermost in the minds of the workers and officials alike. Deliveries are now being made to those who placed their orders with various dealers in the Detroit area and while the number of unfilled orders is the largest in the history of the industry, those at the factory expect no trouble in making deliveries once the assembly line gets at top capacity.

Toledo Plants Continue to Increase Car Production

Employment Shows Gain of 1,014 in Week Bringing Total Above Last Year

TOLEDO, Sept. 26.—Automotive plants in Toledo continue to show an upturn in business with a gain of 1,014 employes in the last week for a total of 25,547 now at work in 51 plants which report in a weekly census on employment conditions.

This is compared with 16,286 at the same time last year.

The entire year of 1925 promises to be the most evenly balanced in the automobile industry ever experienced in Toledo. Practically all plants have kept going at the same pace throughout the year with only slight trends away from the normal. September will be a big month in automotive production and October may surpass the present month. Willys-Overland has set a schedule of 26,000 cars for October. President John N. Willys says the company can sell all the cars it can turn out in the next 60 days and plans to run at top speed.

Electric power consumption is at a new high peak in Toledo and volume of general business has registered a gain of about 15 per cent over what it was a year ago.

Boston Dealers Report Big Sales Increase in Month

BOSTON, Oct. 1.—Motor car sales in Boston and the outlying sections have taken on a new lease of life with the passing of the vacation season and the salesmen are on the jump with a new impetus now. Distributors say that while the first few days of the month were inactive there has been a noticeable quickening in the last 10 days. Being able to get deliveries now has been a helpful factor after all the announcements the past few weeks.

This seems to be due to the general improvement in trade conditions. The building trade strikes have been settled. There is a better tone to various textile work. The shoe trade shows improvement. The state bank commissioner shows in his report that there are many more millions in the bank than formerly.

Dealers in used cars and accessories say business is fair with indications showing a tendency to go up.

FIAT OUTPUT GAINS

WASHINGTON, Sept. 26.—The Automotive Division of the Commerce Department is informed by consular dispatches from Italy that the Fiat is busier than ever and is declared to be turning out 150 cars daily as compared with an output of 120 reported the latter part of June by the consul in Turin. According to a Turin business weekly, "L'Informasions Industrials," the rate of production in 1926 is expected to reach 500 cars daily, when work on the new light model 509 really gets under way.

New Car Business Healthy In Salt Lake City District

Used Automobile Stocks Are Slightly Above Normal—Deliveries Hinder Some

SALT LAKE CITY, Oct. 1.—There is every reason for optimism here regarding the automobile business in the next few months. Crops are well above normal with ready markets for everything at excellent prices. Added to this is the satisfactory condition of the manufacturing and mining industries of the state while the tourist business, now drawing to a close, has been better than ever before.

Automobile men, with scarcely an exception, describe business right now as being in a healthy condition. The new models and lower prices have stimulated much interest. Used cars are giving a few dealers cause for concern. There are more used cars in the city at this time than there should be. Used cars of the open class unless in good condition are becoming somewhat of a drug on the market owing to the growing popularity of the closed models.

Few dealers seem to be overstocked with new cars, while not a few are finding it difficult to get all they can sell; this being especiaaly true of those having new models or lower prices to offer. An officer of one big firm said today that they were refusing to accept any trade except for good clean merchandise which they could offer at a fair price to the used car buying public, and this policy was keeping their used car stocks down to the lowest possible point. Some firms discontinued trade-ins entirely a short time ago because of large used car stocks on hand.

OAKLAND SPEEDS OUTPUT

PONTIAC, Mich., Sept. 26.—Retail sales of Oakland cars for August were the highest for any month so far this year and 34 per cent greater than the best previous August in the company's history. Production at the Oakland factory is being stepped up to meet the increased demand and during the remaining months of this year will be at peak.

FIFTEEN DRIVERS SIGN

CHARLOTTE, N. C., Sept. 26.—Fifteen automobile race drivers have signed contracts to participate in the November 11, Armistice Day, 250-mile race on the one and one-fourth mile speedway here for a purse of $10,000, according to a telegram to Osmond Barringer, manager of the speedway, from Fred Wagner, official starter, at Altoona, Pa. These drivers are Jerry Wonderlich, Jim Hill, Leon Duray, "Doc" Shattuc, Bennett Hill, Frank Elliott, Harry Hartz, Phil Shafer, Fred Comer, Bob McDonogh, Earl Cooper, Batten, Hepburn, Devore and Spooner. Wagner's telegram said "I shall obtain contracts from Milton, DePaolo and Kreis upon their return from Italy."

Baby Carriages May Carry Lights

MILWAUKEE, Sept. 26.—Baby carriage "drivers" as prospects for automotive equipment loom up on the horizon following discovery by Milwaukee attorneys that literal interpretation of city ordinances would necessitate headlights and tail lights on baby carriages. The ordinance which opens up the new "market" says among other things:

"No vehicle shall be used on the streets of Milwaukee between the hours of sunset and sunrise unless on such vehicle, there shall be a lighted lamp, lantern or other means of lighting, said lights to be visible at a distance of 200 feet."

Discovery of the potential market came when a motorist nearly ran down a woman pushing a baby carriage in a Milwaukee park. During the altercation which followed the woman advised him to choose his route more carefully while he in turn suggested hanging some lights on the perambulator. Speculating on the necessity for this latter maneuver he consulted his attorney, resulting in discovery of the ordinance quoted.

NEW FLINT BRANCH

CINCINNATI, Sept. 26. — A factory branch has been opened by the Flint Motor Company at 1042 Gilbert avenue and the Flint company will handle its own cars in the Cincinnati territory hereafter. The branch is to be in charge of J. M. Finlayson, as manager with W. E. Kuhn in charge of retail sales and B. J. Thill in charge of service. The Flint distribution here was formerly in the hands of the Herschede Motor Company which recently took over the Peerless agency in this territory.

NEW PEERLESS DEALERS

CLEVELAND, Sept. 26.—New dealers appointed by the Peerless Motor Car Co., include:

Charles H. Fisher, Amsterdam, N. Y., Beverley Hills Peerless Sales, Chicago, West Side Peerless Sales, Chicago, General Sales and Service Company, Chicago Heights, Ill., Automotive Sales Corporation of Connecticut, Hartford, Morton Lown, Kingston, N. Y., H. H. Cassabaum, LaSalle, Ill., and Al Ahart Auto Sales, Waukegan, Ill.

NEW MOON DEALERS

KANSAS CITY, Sept. 26.—Carl L. Zellor, recently appointed zone manager of the Moon Motor Company, with headquarters at Kansas City, has appointed the following new dealers in his territory:

George W. Sweircinsky, Belleville, Kas.; Corder Service Station, Corder, Mo.; James Crook, Chanute, Kas.; M. H. Broschinski, Goodland, Kas.; Hughes Motor Co., Joplin, Mo.; Leonard Motor Co., Leavenworth, Kas.; St. Joseph Track & Tractor Co., St. Joseph, Mo.; C. S. Rarick, Lawrence, Kas.; Hodgins & Geis, Wichita, Kas.; Southwest Motor Co., Springfield, Mo.

Survey Shows Automobile Driving Cost 5.85 Cents Mile

Street Car and Bus Patrons Pay Slightly Less—Taxis Much Higher

WASHINGTON, Sept. 26.—The cost of driving a private automobile, assuming an average load of 1.9 passengers per vehicle is estimated here as 5.85 cents per passenger mile. It is further shown that regular street car riders pay the street car companies 2.44 cents for every mile they travel; regular bus patrons pay 3.66 cents per passenger mile; while the Washington taxi rate averages 23.9 cents per passenger mile.

These averages represent the day in and day out experience of approximately one-half of the working population of Washington, says Maj. William E. R. Covell, assistant engineer, commissioner of the Public Utilities Commission, under whose supervision the traffic and transportation survey has been made in the national capital by McClellan and Junkersfeld, Inc., New York, at the expense of the North American Company.

The extent to which Washington automobile owners use the streets as all-night garages was brought out during the survey by a careful count made by the police department. On the night of the checkup, no less than 18,000 of the city's 85,000 registered cars were found to have no other roofs than the stars. Police estimate that on ordinary fair nights during the summer months between 25,000 and 30,000 motor vehicles are parked on the pavements.

G. M. LTD. DEALERS MEET

TORONTO, Sept. 26.—At the banquet convention of 350 dealers and distributors of Ontario and eastern Canada of General Motors of Canada Ltd., R. S. McLaughlin, president, stated that General Motors of Canada, Ltd., would shatter its production record this year by building 50,000 motor cars. C. F. Kettering, president of the General Motors Research Corporation, and acknowledged authority on the scientific side of the automobile industry, gave an address. Jack Beaton, general sales manager, presided.

GETS CONTINENTAL PARTS

TORONTO, Sept. 26.—Continental motor parts for all Continental built motors have been made available to service men this month through an arrangement effected by the Hall Gear and Machine Co. Ltd., Toronto. In addition to other standard parts the Toronto Company has secured exclusive distribution of Continental built parts for servicing all makes of Continental motors in the territory east of Winnipeg, Man. At the same time exclusive distribution in the eastern half of Canada, including the Maritime Provinces has been secured for the Timken-Detroit axles, Morse Silent chains, Borg and Beck clutches and Spicer joints.

September Better Than Last Year in Northern California

Dealer Stocks Low and Delivery Presents Problem in Some Makes

SAN FRANCISCO, Oct. 1.—Sales in central and northern California and Nevada for the first week in September showed a slight drop from those of August, but picked up thereafter and the remaining three weeks of the month showed an increase of approximately 22 per cent over those of September, 1924. Early rains, receipts and distributions of considerable sums tof money for the fruit crops, and the growing conviction in the mind of the public that there will be no more price-reductions prior to the New Year, lowered the sales resistance materially in this territory, all of which is tributary to San Francisco.

Dealer stocks are low, and there has been some delay in getting cars in some of the lower-priced models. This has led to a movement among the dealers for the establishment of co-operative warehouses, in which several dealers, merchandising cars of about the same price, could combine to reduce storage charges.

Equipment dealers have had a better month in September than any previous similar period since 1922, owing to the large number of old cars rebuilt and retained by their owners, during August and the earlier part of September, before the majority of the price cuts on new cars went into effect.

Used-car dealers are complaining that the recent price reductions have seriously cut into their business, and a number of the smaller dealers in second-hand cars only are closing out their stocks, or combining with the larger dealers.

Trucks are moving slowly in the smaller towns and in the agricultural districts, but are about holding their own in the cities.

SMILEY MANAGES BRANCH

FORT DODGE, La., Sept. 26.—Bert Smiley, former electrical shop proprietor here, is moving to Los Angeles, where he will establish a branch of the American Gear Company, handlers of gear replacement parts for all models of cars. The company has 14 brances and Mr. Smiley is becoming financially interested in the concern as well as general manager of the Los Angeles branch.

Three New Buildings Will Be Added to Overland Plant

TOLEDO, Sept. 26.—Preparing for a big increase in production next spring the Willys Overland Company here is now going forward with its improvement plan which includes the building of a new forge shop, new heat treating plant, and warehouse now under construction. The program will involve between $2,000,000 and $3,000,000.

The forge shop will be 750 by 75 feet and will be erected at the rear of the Kinsey Manufacturing Department. The heat treating plant will be 570 by 75 feet. The power plant will be completely remodeled with new 500 horsepower boiler capacity and modern stoker equipment.

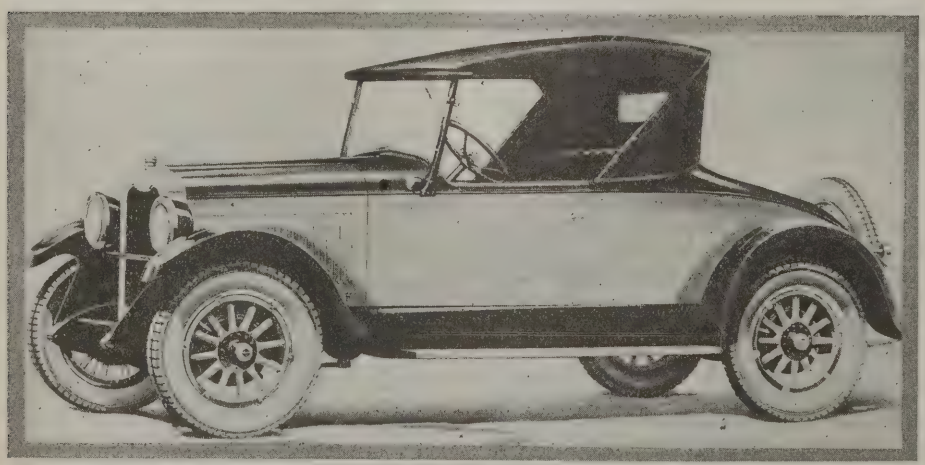
Plans for the structures are being prepared by the engineering department of the company and will be in the hands of contractors in a few days. Necessary pilings for some of the building footings are being put in by the plant construction department. There are nearly 12,000 men at work in the plant and additions are expected to be made to keep production at a high level during the rest of the month.

NEW GARDNER DEALERS

ST. LOUIS, Sept. 19.—Gardner Motor Co., Inc., has added the following dealers to its organization:

C-S Motor Sales Co., Buffalo, N. Y., H. W. Nicholson, East Whittier, Cal., L. D. Powell, Racine, Wis., W. J. Dunker Co., Ludell, Kas.

New Oakland Roadster



New two-passenger roadster which has been added to Oakland six series, listing at $975

Conservative Trading Marks Des Moines Used Car Sales

Accessories, Replacements and Radio Sell Better in September Than Any Month

DES MOINES, Oct. 1.—New car business has been slower during the last two weeks of September. It is doubtful if the car registrations for September will equal the new car sales for the corresponding month of last year. Three conditions are held responsible for the poor showing of the last thirty days. The usual seasonal decline in business has affected sales as has the approach of the fourth quarter for registrations.

It is pointed out that many prospective buyers are waiting to take advantage of the decreased registration fee which is effective October 1. The third reason given for the fewer sales during September is that Ford dealers have been able to make but few deliveries.

Used cars are moving more slowly. Dealer stocks are low and conservative trading prevails. Dealers are determined to enter the winter season with a minimum of used cars on hand.

General line jobbers are reporting excellent business in all lines. For the jobber of accessories, equipment supplies and radio, September was the best month of the year. Due to a lack of anticipation on the part of dealers, jobbers are having difficulty in filling orders in some lines. This is especially true on radio and the shortage will undoubtedly become more acute before the winter is over. Radio business promises to be better than ever before. The business is already 30 days ahead of last year.

NASH DEALERS EXHIBIT

ST. LOUIS, Sept. 19.—St. Louis County Nash dealers took advantage of the County Fair held recently at Upper Creve Coeur Lake to show the products of the Nash Company. Their exhibit included the Ajax and eight models of the Nash. An Ajax chassis stripped of its body expressly for the exhibit and an Ajax motor, stripped for examination were on view. The dealers taking part in the exhibit were: Briggs-Nash Service Co., Affton, Mo.; Hensiek-Nash, University City; Heintz-Nash, 8100 Ivory Ave., Cardonelet; Nartman's Nash Service, Carondelet; St. Louis-Clayton Auto Co., Clayton, Mo.; Eicher & Son. Nash Co., Wellston, Mo.; Lamb Motor Co., Vanita Park.

MARYLAND TITLES UP

BALTIMORE, Sept. 19.—Maryland's automobile registrations will exceed 240,000 by the end of this year, according to estimates made by the license bureau here. So far 224,970 licenses have been issued as compared with 195,429 during the same period last year. The cars in use at the end of the year, it is estimated will represent one for approximately every six of the 1,449,000 inhabitants in the State. The total of registrations will be almost double what it was in 1920.

Leading Rubber Firms Plan To Ban Spring Date Policy

Companies to Ship Only Such Quantities as Can Be Readily Absorbed

AKRON, O., Sept. 26.—A canvass of the leading rubber factories in this district indicate that practically all of them are preparing to abandon the spring dating policy, which in the past has been used to bolster up automobile tire production during the winter months and late fall. If any companies do so they say it will be on a very limited scale.

In previous years manufacturers began soliciting their dealers for orders as early as October. Shipments were actually made in November, December, January and February, but the orders were dated forward into the spring months, which meant that the dealer did not have to pay for his tires until April, May or June, when the theory was that part of the stock, at least, would have been sold.

Abandonment of spring dating is designed primarily to conserve the limited stocks of crude rubber, the intention being to regulate the demand so that raw materials would be used only in manufacturing tires which would go directly into the hands of consumers. In other words it would prevent an artificial demand being created, and it is believed the slowing up in production will allow depleted stocks of rubber to be replenished to some extent.

Over-production, which has been one of the great evils of the tire industry, will not be so apt to occur because of the elimination of spring dating.

Dining Car Buses Latest Innovation on West Coast

SAN FRANCISCO, Sept. 26.—Operation of through dining-observation-car motor coaches between San Francisco and Los Angeles will be inaugurated September 15 by Pickwick Stages, Inc., according to official announcement by this corporation, which adds that these are the first dining-car automobile stages ever operated in the world.

The two cars so far built are on exhibition in San Francisco, and four others are being constructed in the Pickwick shops here. One stage will leave San Francisco at 7 a. m., every day, and one from Los Angeles at the same hour, arriving at their terminals, 468 miles distant, at 9 p. m., of the same day. The fares, both one way and round trip, are approximately the same as railroad fares between the two cities, exclusive of the Pullman and observation car fees on the rail lines.

The new coach is divided into three sections—observation, smoker and buffet kitchen. There are twelve moveable reclining seats in the observation compartment, and eight in the smoker, giving the stage a capacity of 20 passengers. A button in the side of the coach at each chair, furnishes means of calling the steward and luncheon and dinner is served on small removable wall tables, which can be set up beside each chair.

The Pickwick company announces that it plans to put a number of these coaches in operation between the larger cities of the Pacific coast, until, by this time next year, one may travel in them from Vancouver, B. C., to Tia Juana, Mexico.

County Has Fewer Clocks Than Cars

Macomb, Ill., Sept. 26.—McDonough county possesses more cars than watches, according to summaries of the assessors' books published here. The assessors listed 4,143 cars and 3,881 watches and clocks. There were 3,064 carriages and wagons in the county.

Champion Builds Two New Closed Bodies for Fords

ST. LOUIS, Mo., Sept. 26.—Champion Body Co., 3147 Locust boulevard, has introduced two new bodies for Ford cars, the Champion sport sedan and the Champion coupe.

The bodies are of hardwood and steel, finished in baked enamel with quarter panels and roof of soft construction to avoid closed car rumble. Doors are 28½ inches wide with up-to-date hardware and fittings, windows are raised and lowered with mechanical lifts and the windshields are of the one-piece type. Ventilators in cowls, sun visors, full crown fenders and mahogany instrument boards are features.

The sedan has a combination gas tank and trunk at the rear while the coupe has a gas tank and a roomy luggage compartment at the hear. The body has been lowered ten inches without sacrificing headroom, adding to the appearance and avoiding any suggestion of top heaviness. The sedan body sells for $360 and the coupe for $295.

NEW AUBURN DEALERS

AUBURN, Ind., Sept. 26.—New dealers who have recently been added to the Auburn organization include:

Bland's Auto Exchange, Springfield, Mass.; Wilshire Motors, Los Angeles; General Auto Shop, Appleton, Wis.; Calvin R. Smith, Marion, Ind.; Badger Garage, Wausau, Wis.; Auburn Sales Co. of New Jersey, Union City, N. J.; F. P. Rocco & Co., San Pedro, Cal.; Superior Motor Sales Co., Cleveland, O.; Eben Lesh & Carl W. Vicker, Huntington, Ind.; Norfolk County Motor Corp., Sharon, Mass.; Craddock Motor & Supply Co., Medford, Mass.; J. E. Dare, Harrisburg, Pa.; Foust Brothers, Hughesville, Pa.; Bazak Motor Co., Chicago, Ill.

CINCINNATI CO. ELECTS

CINCINNATI, Sept. 26.—At a reorganization meeting of the board of directors of the Cincinnati Electrical Tool Co., the following officers were elected: Joseph Wolf, president and treasurer; R. K. LeBlond, vice president; Edward G. Schultz, secretary.

Financial Details of Yellow Cab-G. M. Merger Completed

Directors of New Truck & Coach Mfg. Co. Announce Plans Following Board Meeting

DETROIT, Mich., Sept. 26.—Financial operations incident to the recent merger of the Yellow Cab Manufacturing Company and the truck division of the General Motors Corporation are announced by directors of the Yellow Truck and Coach Mfg. Company, the new holding corporation. The merger was announced July 7.

A stock dividend of $15,000,000 in 150,000 shares of 7 per cent preferred will be distributed among holders of the 600,000 shares of class B stock, of record October 2, at the rate of one share of preferred for every four shares of B.

A new issue of 800,000 shares of $10 par common was authorized for delivery to the General Motors Corporation, in payment for the assets transferred to the new company.

The present preferred stock, consisting of 6,750 shares of $100 par value, owned by the Chicago Yellow Cab Company, will be retired at a price not stated.

The July 31 balance sheet of the Yellow Truck and Coach Mfg. Co., giving effect to the financing announced today, with the exception of new preferred issue, shows assets of $36,662,989.71, with a surplus of more than $16,000,000.

CANADA G. M. HEADS MEET

OSHAWA, Ont., Sept. 26.—Following the resumption of the McKenna duties, which means a great deal to the export business of General Motors of Canada, Ltd., came the visit of E. R. Reilley, managing director General Motors Ltd., London, England, and J. S. Castle, his assistant. These men visited Oshawa for the purpose of conferring with the executives of General Motors of Canada, upon export problems.

RAINBO PATENT BOUGHT

CHICAGO, Sept. 26.—D. W. Blanc, owner of the Sterling Auto Devices Company, 2016 West Lake street, has acquired through purchase from Nels B. Lundahl, Chicago, the patent on the Rainbo Dash Lamp Cap, which is now being marketed by the Sterling Auto Devices Company in connection with the Rainbo Accessories Company

NEW REPUBLIC DEALERS

ALMA, Mich., Sept. 26.—According to an announcement by the Republic Truck Sales Corporation, new dealers have been appointed during the past few weeks as follows:

Dakota Auto Sales Co., Bismarck, N. D.; Buffalo Republic Truck Sales Co., Buffalo, N. Y.; Des Moines Republic Truck Co., Des Moines, Ia.; Service Motor Sales Co., Mandan, N. D.; T. L. Parker, Salt Lake City; Lind Automobile Co., Twin Falls, Ida.; Paige-Jewett Co., Houston, Tex.; T. L. Bowers, Toledo; Republic Sales Co., Wilkes Barre, Pa.

Along Automobile Row

DENVER.—The newly organized Locomobile Agency of Colorado has opened for business. Leo Cullen, the president, is a brother of the senior partner of Cullen-Thompson Motor Co., distributors of Chryslers.

MEMPHIS.—Burt-Overland Motor Co. has leased a place near its former home for the growing Memphis business. This will double the company's space by adding 13,000 square feet.

GALESBURG, Ill.—The P & M Motor Company, for the last 17 years dealer and distributor of Willys-Overland motor cars, has changed to Hudson-Essex.

MOLINE.—Ground has been broken and the foundation is well in for a new combination automobile show room and garage building under course of erection on Moline's main thoroughfare, Fifth Avenue. When completed the building will be occupied by the Service Motor Company of which Julius Gottlieb of Rock Island is president. This company has agencies for the Star, Durant and Flint cars.

DENVER.—Tom Savage, Inc., who has had the Gardner agency in this city for a number of years has added the retail Oldsmobile agency to his business.

DES MOIN5S.—E. G. Matthews, for many years prominent in automotive fields in this section of the state, has been named Urbandale dealer for the Ford. This brings the Des Moines Ford agencies back to their original number, three. The Herring Motor controls the downtown sales district and the Jensen Motor the Highland Park agency.

MINNEAPOLIS.—The J. N. Johnson Co., Inc., a pioneer tire sales organization, has leased a building at 1110 Harmon Place for its sales and repair work. The new place gives much more room for display and service.

BOSTON.—The Connell & McKone Company, New England distributors of the Gardner car, has announced that it has appointed Frank P. Anthony Company, 7 Brighton Avenue, for several years MacFarland distributor, its retail distributor for the Gardner line in Boston and vicinity.

DENVER.—Lewis B. Skinner, who has had the Jordan agency here, has resigned from the Denver Auto Dealers' Association and has retired from the automobile business. He will make his home in Tampa, Fla.

SPRINGFIELD, Mo.—Dillon Brothers Garage Company has taken over the Packard automobile agency for this district. Cars will not be displayed on the floor until Dillon Brothers move to their new building on January 1. The M. & W. Motor Company formerly had the Packard agency.

BOSTON.—The Boston Oldsmobile Company has appointed Alfred Reid, the former race driver, and formerly with the Leghorn Motors Company, that handled Gardner until recently, as used car manager.

DENVER.—The Denver Motors Company has taken the downtown agency for the Star and Durant line.

CLEVELAND, O.—C. W. Fields, formerly manager of the Flint branches at Pittsburgh, St. Louis and Flint, has been made manager of the Lakewood Walter F. Wright Co. branch here. He will sell Chrysler cars.

SAN ANTONIO.—Tex.—The Auto Radiator and Body Works at 610 West Travis Street is one of the latest automotive concerns in San Antonio. George E. Norris and Ed Hudspeth compose the new company.

WILMINGTON, Del.—A new building is to be erected at the northwest corner of Eleventh and Washington Streets for the Studebaker Sales Company, of which H. H. Harper is president. This will give the company much more room than it has in its present location.

MOOSE JAW, Sask.—The Superior Motor Co., Ltd., Durant and Star dealer of this city, is removing to larger quarters where it will have greater facilities for handling increased business.

AKRON.—The Mankin-Ferris Automobile Co., distributor and dealer for Studebaker cars in the Akron territory, has broken ground for a $150,000 garage and show room at Market and West Streets. The building will be 76x130 feet and three stories high.

CHICAGO.—The Irving Park Flint Company, 4140 Irving Park Boulevard, announces a change in its corporate name to the Fine-Thomas Motor Sales. It will handle the Reo instead of the Flint hereafter.

DES MOINES, Ia.—The Gibson Motor Car Company has been incorporated by William Gibson, president; T. R. Storey, vice-president, and Fred C. Hurst, secretary-treasurer, to handle the Cleveland Six in this territory.

MILWAUKEE.—Verbanataz-Boll, Inc., a new dealer firm, has been appointed Chrysler community dealer in Milwaukee and has established headquarters at 1914 North Avenue.

EAST MOLINE, Ill.—B. M. McKinzie has opened a Hudson and Essex agency in the Square Deal garage and made arrangements to provide service department for his patrons. Mr. McKinzie was with the Warren Sales and Service the last year and for three years prior to that with Horst & Strieter.

SALT LAKE CITY.—W. R. Cram, formerly a salesman for the Intermountain Motor Car Co., Salt Lake City, Utah, has organized the Cram Motor Car Co., headquarters of which will be in the Sugar House section of Salt Lake City. He will handle Star and Durant cars as an associate dealer.

CHICAGO.—The C. Hollenbeck Motor Sales Co., 6244 South Western Avenue, has been appointed dealer for Reo cars. Charles C. and William J. Hollenbeck are associated in the firm.

CALGARY, Alta.—Snell Motors, Ltd., has been appointed authorized dealer in Calgary for Oakland cars.

DETROIT.—Art T. Robins has been made manager of the East Side Overland Company, Lansing, which has just opened a sales and service branch at the corner of Michigan and Larch Streets. Mr. Robins is a veteran of the Lansing Automobile Road.

ST. LOUIS.—A used car salesroom will be opened by the factory branch of Willys-Overland, Inc., at 2926-28 Locust Boulevard in the building formerly occupied by J. M. Lederer & Co., Willys-Knight and Overland dealers.

WILMINGTON, Del.—Carl Nagle, a pioneer automobile man here, has become sales manager for the Delaware Nash Motor Co., Inc.

MILWAUKEE.—E. A. Drott, E. H. Groth, and Joseph H. Kerber who recently purchased the King Motor Supply Co., of Milwaukee, have changed its name to the Replacement Parts Corporation and have entirely reorganized the company. Headquarters have been moved from 131 Oneida street to Sixteenth and Wells streets. Changes in stock have been made and the company now specializes in crankshaft bearings, piston rings, pistons, bushings, valves, gaskets and similar parts.

CHICAGO.—H. Paulman & Co., for twenty-three years distributors of Packard automobiles in Chicago, after October 1 will be engaged in the real estate business, selling Chicago and Florida lands. Henry Paulman and Joseph V. Lawrence are the members of the firm. Offices will be maintained at 332 South Michigan Avenue.

VANCOUVER, B. C.—Motor Drome, (L. McLeod) proprietor, has opened a new garage at 1378 Broadway West. This firm handles Hudson and Essex cars.

DETROIT.—Reo Motor Car Co. branc building on East Michigan avenue, Lans ing, has been remodeled which will giv it more display space and greater accom modation for looking after the needs o Reo owners.

BUFFALO, N. Y.—Charles S. Dussing Ford salesman for the last 10 years, for merly with the Allen Street Garage, an Edmund Riselay, Ford dealer, is now man ager of Buffalo's Used Ford Car Market 854 Genesee street.

VANCOUVER, B. C.—Willis-Kingsle Motors, Ltd., Studebaker dealer, is nov occupying a new modern garage which i one of the most up-to-date in Weste Canada.

MILLERSBURG, Pa.—The Utica Cycl Supply Co., of Utica, N. Y., has been ap pointed a distributor by the Millersbur Reamer & Tool Co., makers of "Smooth Kut" reamers and has moved into a nev three-story home.

MINNEAPOLIS—M. L. Martin, 2006 Com merce street, Dallas, Tex., has been ap pointed southwestern representative of th Paraflector Company, it is announced a the headquarters of the company here Mr. Martin will have the states of Texas Oklahoma, Louisiana and Arkansas.

MILWAUKEE.—New equipment to han dle all automotive electrical trouble i motor cars has been installed by th Economy Auto Electric Service of 352 Six teenth street, Milwaukee, formerly th Economy Battery & Ignition Service. Th company has recently been appointed a authorized Westinghouse battery servic station.

CLEVELAND, O.—L. A. Dall, of the Dal Motor Parts Company, manufacturers o pistons, is again devoting full time to th affairs of the company, after having spen the last year with another one of hi interests.

CHICAGO.—Dave B. Brim, owner of th Parkview Motors Company, Chrysler deal er, has closed his public garage at 302 West Grand avenue and is converting th building into a factory as an addition t the plant at Grand Rapids, where "Dee Bee" enclosures are manufactured.

INDIANAPOLIS.—J. F. Minthrone ha been appointed retail sales manager fo the Indianapolis-Flint Company with plan at 962 North Meridian street and will hav charge of retail sales at the factory branc here.

SALT LAKE CITY.—A. Burt Martinson formerly of the Highway Motor Co., Poca tello, Idaho, has been appointed travelin salesman for the Intermountain Motor Ca Co., Salt Lake City, Utah, to handle th Flint car.

AKRON.—Arthur O. Roberts, at one tim assistant advertising manager of the Veli Motors Corporation, has joined the Mille Rubber Co. advertising staff.

DEL RIO, Tex.—M. E. Woolf, Hudson Essex dealer at Del Rio is erecting a nev home for his business at a cost of $25,00 The building will be two-stories high. Th first floor will be used for sales and servic rooms for Hudson and Essex and the uppe floor as a hotel.

ROCHESTER, N. Y.—The Ford sales an service station and garage, operated a Perry, near here for years by Watkins an McKurth, Inc., has been purchased by syndicate of Perry, Geneseo and Rocheste business men. The sale includes all o the real estate, new cars, parts and tool now in stock.

DETROIT.—David Clamage, genera manager of the Republic Truck Sales Co has announced the removal of his firm t larger quarters at 282 to 284 Milwauke avenue, Detroit.

GENOA, Ill.—E. W. Lindgren, who ha been Ford agent here for some time, ha given up his contract, but will continue t handle Ford parts and accessories. H has taken on the Hudson-Essex cars.

With the Associations

Durham, N. C., Has Association

DURHAM, N. C., Sept. 26.—With every local agency except one represented, Durham automotive dealers organized the Durham Automotive Trade Association. Officers were elected to serve until January 1 and it was decided to hold bi-weekly sessions with the next meeting scheduled October 2 at 1 o'clock at Forest Hills club.

S. P. Alexander, of the Alexander Motor Company, was named president, and A. M. Worth of the Worth Motor Company, was selected as secretary-treasurer. Committees will be announced at the next meeting by President Alexander and a more permanent organization effected.

From the outset it was agreed that too many rules and regulations have proved fatal to automotive associations in Durham in the past and the present organization was effected with idea of being a vehicle for bringing competitive interests together every week or so for a frank, open discussion of problems peculiar to the automotive industry.

A resolution adopted at the summer convention of the North Carolina Automotive Trade Association at Wilmington recently protesting against excise tax on automobiles was unanimously approved.

Harry Clendenin, president of the North Carolina Automotive Trade Association, and C. W. Roberts, secretary-treasurer of the state organization, both of Greensboro, addressed the meeting and aided in perfecting organization of the local association.

Detroit Season Opens

DETROIT, Sept. 26.—With the coming of fall, the Detroit Auto Dealers' Association has resumed its monthly meetings. The first of the fall meetings was held at the Book-Cadillac hotel in Detroit. Walter J. Judd, president of the association, presided with Douglas Malloch, noted humorist, as the principal speaker of the evening.

Concentration Protested

GREENSBORO, N. C., Sept. 26.—The North Carolina Automotive Trade Association has formally requested automotive financing companies to cease assembling cars at central locations, even bringing them from other states, after possessing them to satisfy claims, according to C. W. Roberts, secretary of the association, whose office is located here. It was explained that this concentration and later sale tends to demoralize the used car markets of such concentration points. The association suggested that the finance companies resell the cars at the towns where the dealer made the sale.

Jaywalking Is Attacked

CHARLOTTE, N. C., Sept. 26.—Jaywalking, a national evil, the direct cause of unnumbered hundreds of fatal traffic accidents, is epidemic throughout the United States because pedestrians "just didn't think," according to C. W. Roberts, of Greensboro, N. C., secretary of the Carolinas Automotive Trade Association and secretary of the Carolina Motor Club, the largest organization of motor car owners in the South. Mr. Roberts is conducting a "safety first" campaign, which is under the active direction of C. T. Matthews, whose staff is proving the claim of the Motor Club's executives that the jaywalking menace can be removed to a large extent by nothing more drastic than merely influencing the public to "think."

Denver Branch Organized

DENVER, Sept. 26.—Members of the Denver Automobile Dealers' Association have just completed the organization of the Denver Used Car Managers' Association, as an auxiliary of the main body. Tom Braden, secretary of the dealers' association, is temporary secretary of the new organization, which will elect permanent officers at its first monthly meeting.

It is planned to hold these meetings at the various places of business of the members at regular intervals, and to have particular members responsible for each program, as well as to have informal discussion of trade problems. Letters have been sent to member firms, giving the name and phone number of one member from each firm, who will be available to answer calls and give reliable and definite information on values in used cars of the makes handled by his firm.

In this way it is hoped that a greater feeling of confidence will be developed in used car information acquired from each other, and the used car market in Denver thus be put on a more satisfactory basis than has been the case in the past, where such information was secured in a haphazard manner, and often from salesmen who had no particular interest in taking pains to make accurate replies to inquiries from other firms.

Minneapolis Show Dates

MINNEAPOLIS, Sept. 26.—The Minneapolis Automobile Trade Association has selected February 6-13, 1926, as the dates for the annual automobile show, which will be in the Overland building across the city limits of St. Paul. Harry E. Wilcox is manager.

Milwaukee Automotive Merchants Picnic



Here is one group at the annual picnic of the Milwaukee Automotive Merchants. Happy? Of course

MILWAUKEE, Sept 26.—Every branch of the automotive industry in Milwaukee, including automobile dealers, accessory manufacturers, jobbers wholesalers and service station executives was represented at the Milwaukee Automobile Dealers' Association annual picnic, at Lakeside Hotel on Pewaukee Lake, near Milwaukee. One of the days features was a baseball game between passenger car and truck dealers; another was a golf tournament and another a big booster dinner and community sing which closed the picnic. W. B. Achen, president of the dealers' association was in charge.

Hudson-Essex Passes High Output Mark of 200,000

Production Increases From 60,000 in 1922, 88,000 in 1923 and 128,000 in 1924

DETROIT, Mich., Sept. 26.—More than 200,000 Hudson and Essex cars have been manufactured to date this year, according to figures released this week by the Hudson Motor Car Co.

This total of six cylinder cars—the largest number of sixes ever produced in a similar length of time in the history of the industry—is growing at the rate of 1200 cars a day. With the autumn season still ahead, it seems assured that this year will be recorded as one of the most sensational successes ever scored by any concern.

The growth of Hudson-Essex in recent years may be judged from the fact that production was 60,000 cars in 1922; that it increased almost 50 per cent to 88,000 in 1923; and that it added 50 per cent to this enlarged total by scoring 128,000 in 1924.

Now, with 200,000 cars already manufactured and with business booming at an unprecedented rate, it seems that 1925 will double the business done in the 1924 season.

Ford May Enter Textile Industry in N. Carolina

CHARLOTTE, N. C., Sept. 26.—An impending invasion of the textile manufacturing industry of the South by Henry Ford was seen by leading figures here when reports gained wide circulation that the Detroit automobile magnate was engaged in negotiations for the purchase of the Loray mill, at Gastonia, near here, which is valued at from $6,000,000 to $7,000,000.

Confirmation of the report is lacking, and executives of the mill, one of the units of the Manville-Jenckes chain of mills, declined to discuss the report. These executives did not deny the negotiations are in progress however.

It was understood that Edsel Ford made a visit to the mill a fortnight ago, and offered $6,000,000 for it, after surveying the property. It was reported the Manville-Jenckes Corporation, of Pawtucket, R. I., set $7,000,000 as the value of the plant, which manufactures fabric used in the manufacture of automobile tires.

August Titles in Illinois Show 32 Per Cent Drop

CHICAGO, Sept. 26.—Registration of statistics covering new passenger cars in Illinois during August reveal that there was a decline of 32 per cent as compared with the previous month. Registrations normally are heavy in July due to the fact that many defer them until after July 1 in order to take advantage of the semi-annual license fee, a fact which probably accounts for the decrease.

Registration of Fords was 44 per cent under July, caused probably by buyers waiting to see what the new models would be. Low-priced cars (excluding Fords) declined 25 per cent from the July figures, while the losses in the medium and high-priced classes were 24 and 30 per cent respectively.

Following are the detailed figures for the first eight months of 1925:

Mo.	Fords	Low, excl. Fords	Med.	*High	Total
Jan.	4,060	2,275	5,748	808	12,891
Feb.	3,424	1,718	4,977	612	10,731
March	5,714	2,729	6,416	784	15,643
April	9,010	3,755	8,801	861	22,427
May	8,751	3,644	8,014	899	21,308
June	6,473	3,400	6,383	828	17,084
July	8,499	4,305	8,787	1,035	22,626
Aug.	4,686	3,218	6,646	720	15,270
Total	50,617	25,044	55,772	6,547	137,980

*Includes miscellaneous cars not named.

The foregoing figures were compiled from data furnished to MOTOR AGE by Robinson's Advertising Service, Springfield, Ill.

Coming Motor Events

Automobile Shows

Salt Lake City.....Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Danbury, Conn.....Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston.....Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago.....Oct. 10-17
Seventh annual Used Automobile Show under auspices of Chicago Automobile Trade Association, at Coliseum.

Dallas, Tex.....Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

Boston.....Oct. 12-17
Annual radio show in Mechanics' Building. Shelton Fairbanks, manager.

Shreveport, La.....Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

Chicago.....Nov. 5-7
Annual show in connection with convention of National Standard Parts Association, Coliseum.

Chicago.....Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

New York.....Nov. 15-21
Twenty-first Annual Automobile Salon.

New York.....Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.....Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Chicago.....Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Louisville, Ky.....Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Races

Fresno, Cal.....Oct. 3
Rockingham (Salem, N. H.).....Oct. 17
Baltimore.....Oct. 24
Charlotte, N. C.....Nov. 11
Los Angeles, Cal.....Nov. 26

Conventions

Buenos Aires, Argentine.....Oct. 3-13
Pan-American Road Congress.

Des Moines, Ia.....Nov. 12-13
Automotive Merchants' Association Convention.

Montreal, Que.....Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Pittsburgh, Pa.....Oct. 12-14
Pennsylvania Automotive Association Convention.

St. Louis.....Nov. 17-19
Annual Convention of National Tire Dealers' Association.

Montreal.....Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

New York.....Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Foreign Shows

Berlin, Germany.....Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

Buenos Aires, Argentina.....Oct. 3-13
Pan-American Road Congress.

London, England.....Oct. 8-17
Olympia Passenger Car Show.

London, England.....Oct. 29-Nov. 7
Annual Truck Show.

New Chevrolet Dealers Are Named by New Orleans Firm

NEW ORLEANS, Sept. 26.—Felix Doran Jr., sales manager of the Chevrolet Motor Company, distributing headquarters for rthe Chevrolet line in Louisiana and Mississippi, announces the appointment of Brownlee-Wells Motors, Inc., of Shreveport, La., formerly Maxwell and Chrysler dealers, as the new Chevrolet dealers in Shreveport.

The sales force has been practically doubled, the capacity of the service station increased and many unfilled orders for cars booked, according to Roy C. Wells, director of sales. Other recently appointed Chevrolet dealers, according to Mr. Doran, include:

Doucet-Chevrolet Co., Ville-Platte, La.; Red Arrow Service, Inc., Bunkie, La.; Insley Motor Co., Delhi, La.; Marion Chevrolet Co., Marion, La.; Minden Chevrolet Co., Minden, La.; Wilkins Chevrolet Co., McComb, Miss., and Collins Motor Co., Collins, Miss.

American Cars Win Seven Of 15 Major Soviet Prizes

Trucks Made in U. S. Capture Four of Five Awards in Motor Trials

WASHINGTON, D. C., Sept. 26.—In the 3,000-mile international motor trials, which have just been concluded in the Soviet Union, covering a period of 30 days, American touring cars took seven of the 15 major prizes and American trucks took four of the five major prizes, according to a cable received by the Russian Information Bureau here from the committee of award in Moscow.

Nearly 100 motor cars and 50 trucks, including the principal makes of the United States, Germany, France, Italy and Austria, and some English cars, participated in the trials. The passenger cars covered a route of 3,000 miles, from Leningrad to the Black Sea and return to Moscow, and the trucks covered 1,200 miles. Heavy rains and washouts were encountered over part of the trip. Demonstrations were given in the principal towns on the route.

The passenger touring cars were sent off in three columns or groups, prizes being awarded for each column as follows:

First prize offered by the state, for best general performance: First column, Mercedes; second column, Buick; third column, Steyer.

Prize for solidity and endurance: First column, Studebaker, second grade Cadillac; second column, Buick second grade Pierce Arrow; third column Austro-Daimler, second grade Steyer.

Prize for economy of operation: First column, Fiat; second column, Buick; third column, Praha.

Speed prizes: First column, Mercedes, second column, Buick; third column, Austro-Daimler.

Trucks, state prize for general performance, Mercedes, economy of operation, G. M. C., passing ability, White. Endurance and solidity, Pierce Arrow. Passing ability, second grade, Dodge Brothers.

Brilli Peri Wins Big Italian Race

(*Continued from page 14*)

Rather early, one of them turning over without any damage to the driver. Eldridge, the English driver, came with a car which had never been run and did not endure for more than a dozen laps. Gilles Goux took the lead of the 91-inch group and held it for 450 miles, when he was forced out with broken valves. This gave Constantini, who had been held back at the beginning by spark plug trouble the necessary opportunity to get into the lead. The fastest lap among the 91-inch cars was made by Constantini at 93.91 miles an hour, and his average for the 500 miles was 86.479 miles an hour. The fastest lap among the 122-inch cars was 3 min. 37.49 sec., equal to 104.03 miles an hour, made by Brilli Peri. During practice both Milton and Kreis had turned laps in 3 min. and 31 sec. Final results:

1. **Brilli Peri, Alfa Romeo (122 inch) ..... 5:14:33.33 (Average, 94.76 miles an hour)**
2. **Campari, Alfa Romeo (122 inch) 5:35:30.19**
3. **Constantini, Bugatti (91½ inch) 5:44:40.91**
4. **Milton, Duesenberg (122 inch) 5:46:40.46**
5. **De Paolo, Alfa Romeo (122 inch) 5:48:10.27**
6. **Fernand de Vizcaya, Bugatti.. 5:59:49.39**
7. **Foresti, Bugatti 5:55:19.55**
8. **Pierre de Vizcaya, Bugatti.... 6:1:32.7**

SQUEEKS and RATTLES

Autoepitaphs

Tom Jones has gone to heavenly heights;
He tried to drive without his lights.
Jack Hayes this busy life forsakes;
He never would re-line his brakes.
Here's all that's left of Amos Bossing;
He tried to beat it to the crossing.
No more from Brown are earthly smiles;
He took the curve at forty miles.
Ted Small has gone to his abode;
He kept the middle of the road.
Here lies our friend, poor Tony Dix;
For booze and gasoline won't mix.
Jim Henry's friends are all bereft;
He made a short turn to the left.
Ben Gray is free from earthly pains;
A rainy day—he had no chains.
Poor Bill's beneath the sod, alas!
He speeded up and tried to pass.
Now Tom has joined the heavenly band;
He tried to drive it with one hand.

—Georgia Highways.

No Alternative

We are forced to lead a fast life, as those not in pursuit of happiness are fleeing from trouble.

—Ziff's.

The scenery is that green stuff you see between the billboards.

—The Road.

The Point of View

"Before you get one," writes S. H., "they are 'those confounded autos'; after you get one they are 'these darn fool pedestrians'."

—Boston Transcript.

The supreme penalty is called for when the car carries no headlights and the driver is all lit up.

—Syracuse Herald.

Our guess is that aviation will never be thoroughly successful until the aviators can park in the sky.

—Dallas News.

Reasonable

"Why have they got that man in chains?"

"They caught him slipping."

—Ziff's.

The Lingo

A boy left the farm and got a job in the city. He wrote a letter to his brother who elected to stick to the farm, telling of the joys of city life in which he said: "Thursday we autoed out to the Country Club, where we golfed until dark. Then me motored to the beach for the week-end."

Greater Reduction in Tire Replacements Is Expected

AKRON, O., Sept. 26.—A still further reduction in the average number of tire replacements per car is expected by tire and automotive engineers in 1926, as a result of improved methods of construction, which cut the average consumption of automobile tires per car almost in half from 1917 to 1924.

The average number of tires used as replacements on each car in 1917 was 4.52, while in 1924 this figure was reduced to only 2.74 tires. This record was made, despite the fact that the average automobile in 1924 was used more than the average car in 1917.

The production of automobile tires, however, has kept on the increase, although they last longer, because of the rapid increase of automobiles in this country.

KENNEDY GOES TO EUROPE

CLEVELAND, Sept. 26.—J. A. Kennedy, "champion tire-changer of the world," brother of James Kennedy, president of the Pacific Rim Tool Co., Cleveland, sailed today for contests at the Olympic Show in London, and will later visit Holland, Sweden and other points on the Continent.

CORRECTION

In last week's issue of MOTOR AGE was a news item stating that Louis Geyler, long known in the automotive industry in Chicago, had retired from the industry, having severed his connection with the Case and Chandler companies. This was in error in that Mr. Geyler has not at any time been connected with Chandler which is now and for many years has been distributed in Chicago by Thomas J. Hay. Mr. Geyler's latest connection with the industry was as Chicago distributor for Case and Gardner.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
		"8-88"	
.....	4-p	Sport Roadster	1,975
.....	6-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	7-p	Sedan	2,550
.....	.....	Wanderer	2,400
BUICK		"Standard"	
.....	2-p	Roadster	$1,125
.....	5-p	Touring	1,150
.....	2-p	Coupe	1,195
.....	4-p	Coupe	1,275
.....	5-p	4d. Sedan	1,295
.....	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
.....	2-p	Roadster	1,250
.....	5-p	Touring	1,295
.....	5-p	Sedan	1,495
.....	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
.....	3-p	Sp. Roadster	1,495
.....	5-p	Sp. Touring	1,525
.....	4-p	Country Club	1,765
.....	4-p	Coupe	1,795
.....	5-p	Brougham Sedan	1,925
.....	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
4075	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
4155	7-p	Sedan	3,295
4240	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	.....	Phaeton	3,250
.....	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,695
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3128	5-p	Sedan 4d.	1,995
.....	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2435	5-p	Touring DeLuxe	1,025
.....	3-p	Coupe	975
2580	5-p	Sedan	895
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
.....	3-p	Coupe	1,175
.....	5-p	Sedan	1,295
3190	5-p	Sedan De Luxe	1,595
3190	5-p	Sport Sedan	1,625
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DORRIS		"6-80"	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
.....	2-p	Sp. Roadster	900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	795
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER			
		"6"	
3070	5-p	Touring	1,395
.....	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3290	5-p	Sport Sedan	1,895
3300	.....	DeLuxe Sedan	1,895
		"8"	
3350	5-p	Touring	1,995
3360	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975

SHIP. WT.	PASS.	BODY STYLE.	PRI
HERTZ		D-1	
3360	5-p	Sedan	$1,6
HUDSON		"Super Six"	
3425	7-p	Phaeton	$1,2
3450	5-p	Coach	1,2
3425	4-p	Brougham 4 d.	1,2
3675	7-p	Sedan	1,6
HUPMOBILE		"R"	
2595	2-p	Roadster	$1,2
2705	5-p	Touring	1,2
2760	2-p	Coupe	1,2
2875	5-p	Club Sedan	1,2
		"E"	
3050	2-p	Roadster	1,2
3270	4-p	Roadster	1,2
3135	5-p	Touring	1,2
3295	2-p	Coupe	2,2
3295	4-p	Coupe	2,2
3410	5-p	Sedan	2,2
JEWETT		"23-25"	
3025	4-p	DeLuxe Road.	$1,2
3015	5-p	DeLuxe Touring	1,2
3000	5-p	Coach 2d.	1,2
3150	5-p	DeL. Coach 2d.	1,2
3305	5-p	DeLuxe Sedan	1,2
JORDAN			
		Series "A"	
3330	2-p	Playboy Road.	$2,2
3340	5-p	Touring	2,2
3450	3-p	Friendly "9"	2,2
3625	5-p	Brougham	2,2
3520	4-p	Victoria	2,2
3525	5-p	Sedan	2,2
3470	7-p	Sedan	2,2
KISSEL		"55"	
3130	2-p	Speedster	$1,2
.....	2-p	Sp'dster De Luxe	2,2
.....	4-p	Speedster	1,2
.....	4-p	Sp'dster De Luxe	2,2
3530	2-p	Enc. Speedster	2,2
.....	2-p	Enc. Sp'd'r DeL.	2,2
3190	4-p	Tourster	1,2
.....	4-p	Tourster DeL.	2,2
2980	5-p	Phaeton	1,2
3170	5-p	Phaeton DeL.	1,2
.....	7-p	Touring	1,2
.....	7-p	Touring De L.	1,2
3430	4- ?p	Coupe	2,2
.....	4-p	Coupe De Luxe	2,2
3540	5-p	Brougham Sedan	1,2
.....	5-p	Broug. Sed. DeL.	2,2
.....	5-p	Brougham 2 d.	1,2
4070	7-p	Sedan De Luxe	3,2
4010	7-p	Berline Sed. DeL.	3,2
3530	5-p	Victoria	2,2
.....	5-p	Victoria De Luxe	2,2
		"75"	
.....	2-p	Speedster	2,2
.....	2-p	Speedster De L.	2,2
.....	4-p	Speedster	2,2
.....	4-p	Speedster De L.	2,2
.....	2-p	Speedster De L.	2,2
.....	2-p	Enc. Sp'd'r DeL.	2,2
.....	4-p	Tourster	2,2
.....	4-p	Tourster De L.	2,2
.....	5-p	Phaeton	1,2
.....	5-p	Phaeton De Luxe	2,2
.....	7-p	Touring	2,2
.....	7-p	Touring De Luxe	2,2
.....	4-p	Coupe	2,2
.....	4-p	Coupe De Luxe	2,2
.....	5-p	Sedan	2,2
.....	5-p	Broug. Sed. DeL.	2,2
.....	5-p	Brougham 2 d.	2,2
.....	7-p	Sedan De Luxe	3,2
.....	7-p	Berl. Sed. De L.	3,2
.....	7-p	Victoria	2,2
.....	7-p	Victoria De Luxe	2,2
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,2
3000	5-p	Touring (Enc.)	1,2
2950	5-p	Spec. Touring	1,2
3200	5-p	Sedan	2,2
3425	5-p	Spec. Sedan	2,2
		"Minute Man"	
3120	2-p	Roadster	2,2
3195	5-p	Touring	2,2
3489	7-p	Touring	2,2
3230	5-p	Lark Touring	2,2
3368	5-p	Cal. Touring	2,2
3395	7-p	Cal. Touring	2,2
3375	7-p	Royal Coach	2,2
3440	5-p	Brougham	2,2
3542	5-p	Sedan	2,2
LINCOLN			
4380	2-p	Roadster	$4,2
4595	7-p	Touring	4,2
4565	4-p	Phaeton	4,2
.....	.....	Sport Touring	4,2
4655	4-p	Coupe	4,2
4775	4-p	Sedan	4,2
4825	5-p	Sedan	4,2
4865	7-p	Sedan	5,2
4945	7-p	Limousine	5,2

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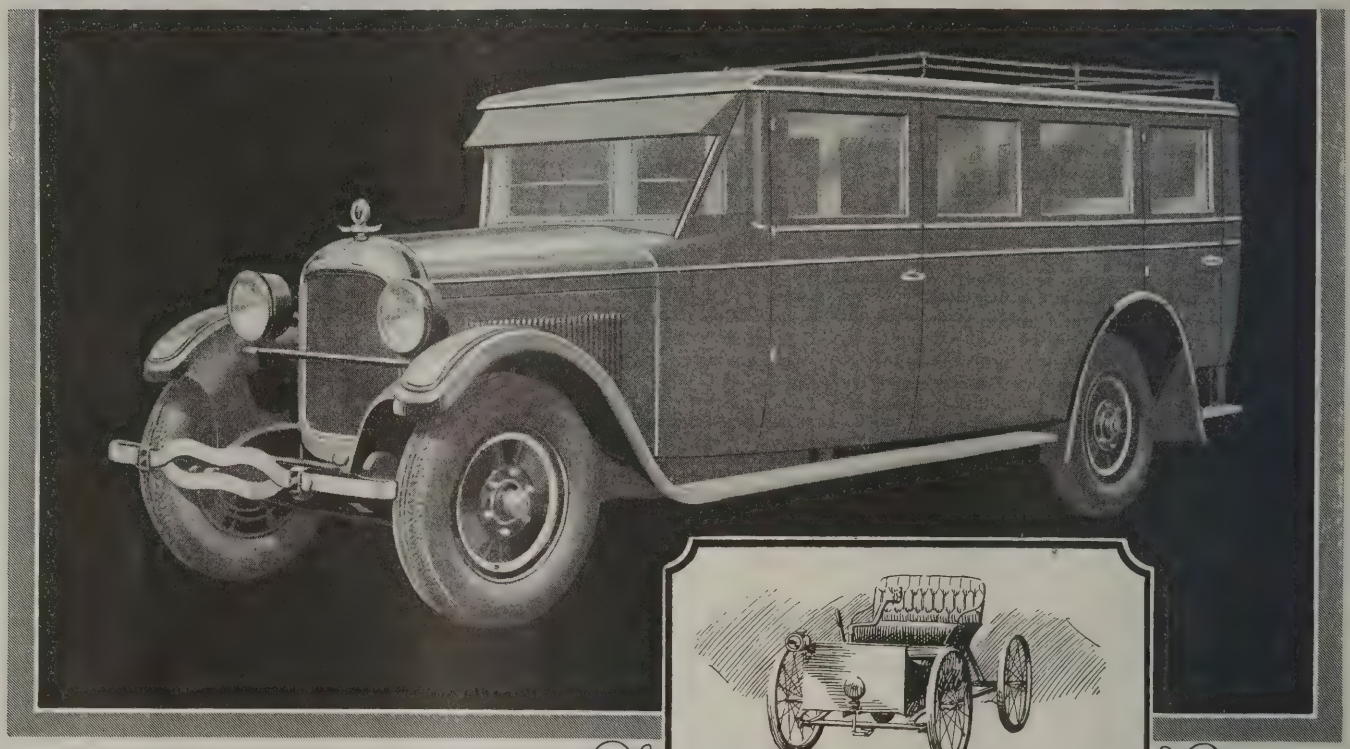
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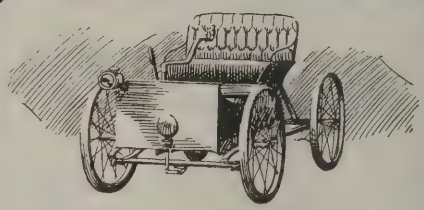
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MOTOR AGE

Vol. XLVIII | Chicago, October 8, 1925 | No. 15

Summary and Index of Important Events in

This Week's Automotive News

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SALES are booming throughout United States. Exports show decided gain and dealers are meeting used car situation satisfactorily. Page 32.

Kissel announces price reductions on various models ranging from $100 to $200. Page 32.

New Hupmobile six at popular price to be soon announced. Page 32.

Head of Moon-Diana Company is enthused over foreign trade outlook. Page 34.

Third quarter output by Stutz is more than double that for all of 1924. Page 35.

Percy Owen joins Dodge Brothers as director of foreign sales. Page 35.

Daily auction will be feature of Chicago used car exhibit. Page 35.

Automotive exports show big increase during first half of 1925. Page 33.

Classics of custom coachwork to be on exhibition in New York Nov. 15-23. Page 33.

Growth of rubber industry is reflected in new buildings. Page 34.

Effect of reduced prices for new passenger cars begins to be felt in stimulating way at Louisville, Ky. Page 43.

Demand for rebuilt used cars in California increased to point making it almost impossible to sell "as is" vehicles. Page 39.

Drouth fails to halt good progress of business in the Southeast. Unfilled orders accumulate. Page 42.

Second Annual Closed Car Salon by dealers in Los Angeles now under way. Page 38.

New car registrations in Indiana dropped 15 per cent in August as compared with July. Page 38.

Ajax to meet demand of market with factory extensions that will double present capacity. Page 38.

Report from Akron says sales of balloon casings so far this year have been more than double those of 1924. Page 37.

Many buyers on waiting lists in Texas, dealers being from 100 to 200 days behind on deliveries. Page 37.

Ford weekly purchase enrollments greatly increased by stimulus of new methods. Page 37.

General Motors announces plans for new light six priced between Chevrolet and Oldsmobile. Page 36.

Last half of year running ahead of first half for trade in Milwaukee. Page 36.

In Next Week's Issue—How to Build a Miniature Car

A Practical Trade Association Program

Member

AUTOMOTIVE TRADES ASSN OF GREATER KANSAS CITY

The Automotive Trades Association demands that members use every honorable means to uphold the dignity and honor of his vocation, to exalt its standards, to extend its spirit of usefulness and shall regard themselves as being engaged in a business in which there is a well defined duty towards the public and themselves.

Efficient Service and Skillful Workmanship
Courteous Treatment.

How Various Service Agencies in Kansas City Have Brought About Closer Cooperation Resulting in More Profit to Themselves and Greater Satisfaction to Customers

By BEN S. BROWN

THE economic justification for the existence of an automotive trades association lies in the fact that it enables its members to make more money and to render better service to the public.

At least, that is the opinion of George W. Arnold, president of the Kansas City, Mo., Automotive Trades Association. And working out this idea, the membership of this association has doubled in the past eight months, and bids fair to make another increase of fifty per cent before the year closes.

Mr. Arnold was one of the organizers of the Kansas City Garage Association, the predecessor of the present organization. He has been closely allied with the institution since its first meeting, either as an officer, or a director, or as a working member. He has had a great deal to do with its development. At the beginning of the present year he became the president of the new organization and it is growing in membership and what is more important, in influence and effectiveness as the months go by.

As Mr. Arnold is an eminently practical business man, he insists that an association of business men, even in its social features, should be practical, and be conducted in a businesslike manner. Hence it is not to be wondered at that this association is doing work which is at once efficient in its service to the public and successful in increasing the net profits of its membership.

It is a little difficult to give an accurate outline of the program of this association, for the reason that it is constantly changing—broadening—extending its scope and elevating its ideals. It began with the idea of increasing profits for its members; now it stresses the service it is to render the public, and it is finding that this is the only sure way of making more money for its members.

Starting with these ideals, the program, which is worked out in a tentative form, and will soon be put into a definite one for the guidance of the members and the information of the public, includes the following items:

1. Improvement of the members—This is fundamental, and is recognized as the first thing to be done. The making better workers and merchants out of the membership means that they will deserve more pay, and the management of the association is certain that the members will get the better returns for their work just as rapidly as they deserve them. Then the first problem is, How can we get our members to be WORTH more money to the community? The method which is worked out for the accomplishment of this end may be stated in a single word—Education.

2. Improvement in the Garages—This refers to the buildings themselves. It is insisted that attractive appearing houses will invite trade. Clean garages are not only inviting, but are money-making, in that they reduce the risk of loss by fire, and tend to reduce the cost of insurance. Better lighting systems and other items which improve the working conditions, increase production and thus reduce the cost of doing business. To improve the garages means more money in the pockets of the membership.

3. Improve the shop equipment—It is recognized that poor tools are costly at any price, and that labor-saving tools and those which are especially adapted to the work to be done are money-makers. This being true, the association insists that in order to become a member of the association at all the garage be equipped with a collection of tools which will enable the worker to do good work at a reasonable rate, and make a profit on the jobs.

4. Improve the Mechanics—In the past, the rapid development of the automotive business, and the fact that anybody who had even a rudimentary knowledge of tools

and their uses could "get by" in the business has invited many incompetent men into the industry. But the public demands a higher class of workmanship now, and it is to the interest of the garage man to furnish the best possible.

5. Give better service to the customer—This is in addition to the work of the mechanic. There is need for better merchandising and service in every department in the business. As the customer is getting it in other departments of the automobile business, he is demanding it from the trades. It is the business of the association to develop the service for the customer.

6. Standardize the service which is to be rendered to the public—The garage men themselves need to know just what service is to be rendered free, for instance. Air? Water for radiator? What? And when the services are rendered, a standardizing of prices based on the cost of the service, and the overhead cost of doing business. Also, an understanding as to just what is included in certain services to the customer.

7. The use by the garages of cost finding and accounting systems which will enable the garage man to know when he is doing business at a loss or at a profit—This is a protection to himself, and an assurance that the customer will receive his service at a reasonable price—not paying too much for one job, and too little for another. It is the only way by which a garage can be sure that it will be able to continue to do business at all.

8. The operation of a credit system by the association for the benefit of the members which will enable them to collect past-due bills, and to meet the encroachments of the dead beats which infest every community—This reduces cost to the honest customer, and makes money for the members of the association.

9. To advertise to the public that certain garages are association members, and thus guaranteeing to the prospective customer that in this garage he will find good service, courteous treatment and fair prices.

10. To secure by cooperation the enactment and enforcement of laws and ordinances which will promote the welfare of the trade and benefit the public.

The idea of expansion which controls the management of the work is shown in the change in the name of the association, made some time ago. It was originally called the Kansas City Garage Association. It became evident that if the garage men were to get the most out of the business for themselves, it would be by association with the other members of the trade. In order to include these other concerns, the name was changed to The Kansas City Automotive Trades Association. The members have been classified for work in the association into the following departments, which show the present classes of automotive men now included in its membership:

1. Garage and Repair Men.
2. Parts and Accessory Men.
3. Radiator and Fender Men.
4. Battery and Electrical Men.
5. Refinishing, Paint and Top Men.
6. Machinists.

In addition to these there has been recently made a way by which the jobbers have been admitted to membership. It was felt that the jobbers could greatly help the trades to understand many of the problems which confront them; and that it would be to the advantage of the trades to get the jobbers in touch with them so that they in turn could learn first hand how better to meet the needs of the trades. In a recent monthly meeting of the association both of these ends were realized. A jobber came to tell the members of the trades how to merchandise parts, and he gave some very valuable information. The address was followed by a discussion which centered about the problems connected with the trades meeting the demands of the public for quick service, and

A trade association starts out to help its individual members make more money for themselves.

It sees a chance to develop better service to the public by fuller cooperation.

It broadens its membership, helps other organizations, and secures cooperation from other bodies in furthering the welfare of the community.

By working out a program of service and forgetting immediate profit, the members find that they are making more money than ever.

The individual business of the association's president illustrates the principles that the association is promoting—and shows how practical they are.



Association program includes brake testing to increase business. This is the group that put the program over in Kansas City. Left to right, front row: George W. Arnold, president of Automotive Trades Association; Carlton Robb, secretary of the association; George Lockridge, Kansas City Auto Supply Co.; Ira Wilkinson, Raybestos Mfg. Co.; Ed Stewart of Trades Association; back row: Julien Harvey, director of Safety Council; Ray Barnett of the Safety Council staff; R. N. Stroup, H. S. Traine and W. M. Hackett of Johns Manville Co.

Most of the points in this program have been tried out by the Kansas City Automotive Trades Association to such an extent that it can vouch for the effectiveness of the plans in making money for the members, but some of them are just being introduced. While this is true, the successful operation of the Keystone Garage, owned by the president of the association, along the lines indicated is considered a demonstration of their practicability. Indeed, Mr. Arnold states that the adherence to this program has been the secret of his success, and the growth of his business may be taken as a typical example of the beneficial effects of such trade association activities. The story of how Mr. Arnold applied these principles to his own business will be told in an early issue of Motor Age.

the jobber was told in no uncertain language of the needs of the trades which grew out of the urgent demands of the public; then suggestions were made as to how these needs might be the better met on the part of the jobber.

The fundamental working idea of the association is that these desired ends are to be secured by education, and not by legislation. Most men will not be told by others what they must do, or ought to do, but will be glad to adopt and adapt suggestions which are made to them as to what they might do. Working on this basis, the association does not presume to tell the different departments how they are to work out their problems, but a meeting of this particular group is called, and the questions involved are discussed, and maybe a committee of members of the group appointed to investigate and report. Or they may decide to invite an expert on the particular problem to address the group. But whatever the method of procedure, the purpose is to get before the members the facts in the case, and to put up to them the responsibility of deciding what they will do in the matter.

It is usual for the group to make no formal ruling in the matter, but after the discussion, come to some understanding as to what it will be well to do, and yet leave each member to work out the solution of his problem as he sees fit, or to leave it unsolved if he shall so choose. The position taken is that it will be impossible to drive all the members into accepting the findings of the majority, and it is better to leave each free to accept and put into operation such parts of the better plans discovered by the conference as his conditions seem to warrant, hoping that with changing conditions all of the members will ultimately adopt and put into operation the methods of the best.

Many of the problems which arise are such that they affect all members of the association. In such a case, it is the policy to have these discussed at the regular monthly meeting of the associations. There is no difficulty in getting an expert to tell of these matters, for the factories usually have men who have made a special study of the subject, and are skilled in the presentation of it to an audience, and these will be sent on request with no financial obligation on the part of the association.

Recently a representative of a brake factory came and told how to merchandise brake linings. He did not say how to sell HIS brakes, but the suggestions were applicable to any and all brakes, and what he said was of benefit to every member of the association. On another occasion motion pictures illustrated how spark plugs were made, and how they were to be repaired; and other interesting and valuable information concerning them was presented. Hydraulic brakes was the subject of another lecture. At another meeting the topic was "Lubricati —How to Sell It."

To create a favorable attitude on the part of the me bership, the meetings are opened with a dinner, and leave a pleasant recollection of the event, the progra closes with an entertainment of some sort. Added to the monthly meetings are special social events, the prima purpose of which is to promote good fellowship, and get the members to realize that they are all friend cooperators in the big job of keeping the cars of t public running satisfactorily, and not rivals who w prosper in proportion as they cut one another's throa or tear down one another's business. Indeed, the theo on which they work, and the idea constantly stressed that their real competitors are the men in other lines business who are trying to get the money that shou legitimately go into the tills of the members of the aut motive trades.

The manner in which the association is attempting educate the public, and how these attempts result in i creased business for the trades, is illustrated by Bett Brakes Week, which was held in June of the present ye

The idea of holding brake test week in Kansas Ci was first presented to the association by President Arno The cooperation of the Johns Manville Company w secured, and the district manager, H. L. Faust, manag of the automobile department for this district, gave eve assistance possible in promoting the scheme. At t suggestion the Safety Council of Kansas City was ask to join in putting over the "Week" in a big way.

In conjunction with the Safety Council the cooper tion of the Police Department of the city was secure and it helped in advertising the event, passing out 5,0 steering-post cards to motorists, and furnishing poli protection at all the Test Stations during the week.

The Park Board gave permission to use certain stree for the test—in fact these streets were closed for traf and dedicated to the tests during the whole week. T Board further assisted by placing twelve large signs the boulevards directing motorists to the test statio

Through the Safety Council several men from t garages of the public utilities were secured to help at t stations. Also, the council was helpful in securing pre publicity, and mailed out from its office several thousa letters and posters announcing the tests.

Jobbers Furnish Clerks

The men for the operating detail were drawn from t membership of the Automotive Trades Association, pri cipally, although a few men were obtained from the Fo agencies and other dealers. Each of the principal supp jobbers furnished men to act as clerks, etc., during t week. The Johns Manville Company furnished three m for the entire week.

President Arnold, Secretary Stewart and Executi Secretary Robb, of the association, were on the j throughout the entire week. During the week, Preside Arnold gave a radio talk, which was broadcasted by t *Kansas City Star*.

As a result of the Better Brakes Week on trade, Pre dent Arnold made this report to the association membe at a later meeting:

"Business picks up as a result of Better Brakes Wee My own shop shows an increase of over $50 a day over la month, of which the most is brake work. I know abs lutely of at least a dozen cars of my customers that we sold re-line jobs as a direct result of the brake test, al of a number of other jobs that were driven in for bra service. Our average re-lines per day now are from thr to five, where last month the average was about one a da I have sold other work also as a result of the tests.

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Safety Experts See Hopeful Traffic Signs

Spirit of Optimism for Solution of Motor Vehicle Problem on Streets and Highways Pervades National Safety Congress

By SAM SHELTON

ALTHOUGH the prevention of motor vehicle accidents on streets and highways continues to be one of the chief concerns of safety organizations everywhere, there was a distinct hopefulness displayed at the Fourteenth National Safety Congress at Cleveland that better traffic conditions are on the way which should result in an improvement in the accident ratio. The Congress opened Monday, Sept. 28 and continued throughout the week.

Confidence and conviction on the part of the public that the traffic problem can be solved has taken the place of the despair and hopelessness that seemed to surround this subject a few years ago, in the opinion of Thomas P. Henry, president of the American Automobile Association, whose paper on Safety and the Automobile was read before the Public Safety section of the Congress. This is the basis of Mr. Henry's optimism.



Edward S. Jordan, president Jordan Motor Car Co., who addressed National Safety Congress on "The Automobile and Safety"

An aroused popular interest in the problem and definite progress by public agencies in relieving traffic congestions were the grounds upon which Col. A. B. Barber of Washington, D. C., based his hopefulness. Col. Barber, who delivered an address at one of the sessions and entered into the discussions, is a director of the National Conference on Street and Highway Safety, the organization formed by the Hoover committee on safety.

Aroused public opinion apparently is working in two directions, according to the views and reports of various officials and safety experts at the convention. One is toward the comprehensive and uniform regulation of traffic throughout the United States and the other is toward providing better and more modern physical facilities to carry the traffic.

On the point of more comprehensive and uniform regulation the Congress went on record through the adoption of a resolution favoring the licensing of drivers, "whose qualifications to operate motor vehicles shall have been determined by mental tests and practical demonstrations conducted by competent and honest examiners." The revocation or suspension of such licenses should be provided for, the resolution stated.

Another resolution stated: "It is important that uniform traffic regulations shall be formulated and adopted. Traffic movement should be considered as a state and local problem of engineering importance."

Uniform System of Marking

An important step taken by the Bureau of Public roads looking toward uniformity of traffic conditions was announced by E. W. James, chief of the division of design of the bureau. This was the adoption by the joint committee appointed by the Secretary of Agriculture of a uniform system of marking United States highways throughout their length in as many states as they may pass through. This committee has designated certain interstate highways in the Federal Aid system as United States Highways and these roads are to carry the same numbers and uniform markings from beginning to end.

For marking these roads Mr. James' department has designed a completely standardized set of number plates, direction and distance signs and warning signals. The warning signals designate curves and turns, schools, railway crossings, hills and the like. Each signal has a distinctive shape and symbol in addition to the word, "turn," "hill," or other instructional word. It was the sense of the Safety Congress that the universal adoption of these markers on all state highways would be a great help to safety because drivers would soon learn to recognize their meaning at a glance.

It was felt, also, that uniformity in this respect would pave the way for certain other standardization in both traffic rules and road design that would be of tremendous value to all motorists and incidentally to the automotive industry.

Mr. Barber stated that at the next meeting of the National Conference on Street and Highway Safety, which probably will be held in December, the commission of the various states on uniform laws will submit proposed legislation to bring about uniformity in the United States in the registration of motor vehicles, the licensing of drivers and the use of roads.

Tendency to Widen Roads

Some of the physical improvements which are rapidly being worked out to facilitate traffic, especially in and near the large cities where congestion has been at its worst, were mentioned by Mr. Henry. Among these were the widening of intersections, rounding of corners, repaving of streets not now used because of poor pavement and elimination of grade crossings. Mr. Henry also mentioned the tendency to build new roads and streets wider and widen old ones wherever possible.

Frank F. Rogers, State Highway Commissioner of Michigan, told how that state is building a great boulevard with two 40-foot roadways between Detroit and Pontiac. He showed lantern slides depicting the progress of this great enterprise. Other lantern slides showed the methods generally used now to build paved roads with sufficient right of way and grade to enable widening to at least double capacity when traffic demands.

Means of avoiding motor vehicle and highway accidents were discussed by speakers of national prominence, among them being Rear Admiral William S. Sims of the United States Navy; John Barton Payne, chairman of the Central Committee of the American Red Cross, and Edward S. Jordan, president of the Jordan Motor Car Co.

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Bamford Rebuilds Instead of Repairing



Walter Bamford in his working clothes. His chief assistant is at the left

Car Owners Can't Buy Make-Shift Jobs o Superficial Repairs in This Successful Smal Town Garage—$5 Offer for Dissatisfied Cus tomer Goes Begging

By LOWELL R. BUTCHER

SOME years ago, a young garage owner at Colo, Iowa, read an article in MOTOR AGE on the subject of motor reconditioning. The writer pointed out the possibilities for profit in the rebuilding business, making the statement that the majority of cars brought in for overhaul should be rebuilt rather than repaired. Walter Bamford, the garage man, thoroughly agreed with the writer. Car owners around Colo are average car owners. They like to instruct the mechanic as to the repairs or adjustments to be made on their cars and they howl just as loud as the average owner, when the car fails to perform after the "cobbling" is finished.

The war came to interrupt Mr. Bamford's plans, but he parked the reconditioning idea in the back of his head, determined that some time he would operate a shop which catered to "complete"—and satisfactory—reconditioning service. But when he returned from service, he found that his plans for equipping an up-to-date shop must wait. His garage business was "shot." He hustled out and obtained a job as a mechanic. Little by little, he saved from his wages, laying by as much as possible each month. Early last year he decided that his savings amounted to enough to obtain the necessary equipment for his shop. He returned to Colo and looked around for a location.

And Three Other Garages

Good citizens of Colo, Iowa, might be indignant if it were inferred that their city is not large from the standpoint of either population or business possibilities. But figures are figures. A late census of Colo gives the population as 507. Three other garages were doing business in Colo when Mr. Bamford decided to locate his recond tioning shop in his home town. Well-meaning friend shook their heads. Shortly after the first of last yea the shop was equipped for business.

From the very first, its proprietor made it plain to th public that he did not cater to ordinary overhaul an repair work. He refuses flatly to take any job when th owner persists in outlining the work to be done. Perhap we should not say he makes a flat refusal, for he diplomatic. He "sells" the idea that it is possible only t turn out a satisfactory job when he is allowed to do complete job. He points out that a smoothly workin engine is possible only when every part is correctly fitte and functioning 100 per cent. He will not stake hi reputation as a mechanic on a job when the owner dictate the amount of work to be done or specifies the parts t be replaced. He makes estimates but he will not bid o work.

Satisfied Customers Bring Business

It took some time for the idea to "take" among the auto mobile owners in the vicinity of Colo. A few satisfactor jobs and more customers came. By the latter part o 1924 Mr. Bamford and his one helper were flooded wit work. During the first six months of 1925, the sho turned out twenty-six reconditioning jobs; jobs that cos from $100 to $400 each, averaging better than $200. Th twenty-six jobs were drawn in from a radius of 100 mile of Colo. One satisfactory job has sold another. The rin of satisfied customers is constantly growing and enlargin

Most of the reconditioning work is done on the engin

Mr. Bamford finds that the engine will require rebuil ing before the chassis needs adjustment. The engin rebuilding is carried through in an orderly way. The firs step is to pull the engine and disassemble. The startin motor and the generator are checked, rebuilt and lai aside. The next step is to check every bearing point o the motor, noting what parts need refinishing or replace



Where Bamford rebuilds automobiles. This garage in a town of 500 population gets all the work it can do





These two photographs show some of the equipment used in Walter Bamford rebuilding shop. Bamford makes costly equipment pay by charging a flat service fee on machine operations in addition to the regular hourly labor charge

ment. The clutch is disassembled and inspected. If the clutch bearings betray wear they are replaced. The clutch lining is almost always replaced.

The engine itself, comes in for a complete rebuilding. Cylinders are reground and fitted with new rings and pistons. Valves are reseated and refaced. Connecting rods are rebabbited and reamed to a bearing fit. If a check of the crankshaft shows that it is to the slightest degree out of round, the shaft is reground. Precision measuring instruments are *used.* After the valves are refaced and reseated, every chatter mark is removed by grinding. Insofar as tools and expert workmanship can do it, the reconditioning work is of a high order.

Since almost every kind and variety of car is brought in for work, and it is almost impossible to forecast the amount of work necessary to put any particular job in first class condition, this garageman does not make flat rate charges for his work. He charges $1 an hour for the work done on the car. He augments this charge by a service charge for the use of certain machines in his shop. On a cylinder regrind, he charges a $10 service fee for the use of his regrinding machine and $1 an hour for operating it. Valves are refaced for 15 cents apiece, plus labor at $1 an hour.

Sells Idea of Equipment

By this system of making charges, Mr. Bramford "sells" the idea of his equipment to the public. Customers who would regard a higher hourly charge as excessive are perfectly willing to pay the $1 hourly rate plus service charges on certain expensive machines.

The Bamford shop lacks little in the way of rebuilding equipment. A list of the more important equipment follows:

Cylinder Regrinder
Cylinder Hone
Valve Refacing Machine
Valve Reseating Tools
Babbitting Machine
Bearing Boring Machine
Press with Jig for straightening Crankshafts
Piston Alignment Gage
Piston Vise
Flexible Shaft Buffer
Drill Press
Brake Lining Machine

Aside from the tools and equipment listed, the shop abounds in good hand tools. Mr. Bamford believes that first class work cannot be turned out with poor equipment. His equipment would do credit to shops in large cities, but he is not yet satisfied. As his business expands, he intends to add other machinery to his shop.

The rapidly growing business is an indication of the satisfaction which this shop's work is giving. When a reconditioned car leaves his shop, the proprietor does not regard his responsibility as ended. He is careful to impress the owner that a reconditioned car must be carefully handled at first. A sticker, which he places on the windshield, warns the car owner that the car should not be driven over 25 miles an hour during the first 500 miles. The owner is cautioned to use oil in the gasoline until the motor is "broken in." When the car has been driven 2,000 miles, it is brought in for a complete inspection.

Mr. Bamford refuses to take many jobs. Where the general condition of the car does not justify reconditioning, he is frank in telling the customer. He accepts only the jobs where the owner will receive full value for the money spent in re-conditioning. Not every car, he claims, is worth rebuilding. When he feels that he cannot recondition a car so that the owner will be thoroughly satisfied, he will not accept the work. Mr. Bamford has a standing offer of $5 for anyone who will produce a dissatisfied customer. So far, not one has been produced.



The rebabbitting bench in Bamford's shop

Ten Turnovers a Year

Accessory Department in San Francisco Car Agency Does Approximately $15,000 Worth of Business Monthly on a $20,000 Stock.



No. 4. Special glass show case



No. 3. Special portable cabinet

A FEW years ago the Chester N. Weaver Company (Studebaker dealer in San Francisco) started an accessory department on a very small scale which now does approximately $15,000 worth of business monthly on a $20,000 stock. There are approximately ten turnovers yearly.

The accessory department is in charge of N. W. Gordan (shown in photo No. 1) who has one assistant, Mr. Harris (shown in photo No. 2). The cooperation of all salesmen has been obtained by giving them a commission of 5 per cent on business that they are directly responsible for, thus they become sufficiently interested to bring many possible customers to Mr. Gordan or Mr. Harris. Even service men never overlook an opportunity to inform Mr. Gordan or Mr. Harris of possible customers, for they make 2½ per cent on business that they are directly responsible for.

Photograph No. 3 shows a special portable cabinet that Mr. Gordan has built, the top section of which is used for carrying bulbs. There are eight shelves for carrying the bulbs each shelf accommodating 56 bulbs. Holes are drilled in the shelves into which the end of the bulb is inserted keeping bulbs about an inch apart so they do not become broken or mixed. On the top of this cabinet is a whistle. In the lower part of the cabinet there are twelve drawers for minor accessories for automobiles such as gages, valve caps, horn equipment, small flash light, etc.

In photo No. 4 there is shown a cabinet consisting of 42 drawers, built along the wall, for carrying such articles as tape, tire valves, cut-out valves, screw drivers, certificate holders, pedal pads, spot lights, grease guns, flash lights, clocks, small oil cans, bumper parts, etc.

In front of the cabinet just described is a special glass show case in which are displayed cut glass vases, cigar lighters, ash trays and beautiful hand bags and vanity cases. Directly across from this case there have been arranged wicker chairs and writing desk for the use of women while they are waiting for their automobile to be released. Thus their attention is forcefully called to the ornaments in this show case. On the top of this case there are various types of trumpets and horns and an exhaust horn, which can be demonstrated by an attendant.

Photo No. 2 shows a number of special cabinets, the one at the left carrying polish, etc. Weed chains are carried on a counter extending between the two cabinets arranged along the end of the room. In the foreground and resting on the floor there can be seen a special pyramid for carrying accessories including camping stove, thermalware, spot light, tow-rope, canteens for water, oil and gasoline, camp chairs, etc. This pyramid can carry and and display more articles than if they were merely placed on the floor.

Photo No. 1 shows the tire rack at the left and in the center is a glass floor show case in which there are carried over 200 different styles, kinds and sizes of ornaments for motor cars such as agate balls for shifting levers, foot pedals, clocks, spot lights, etc. At the right of this case can be seen a counter that serves to divide the business section of the office from the accessory store proper, and at the same time acts as a display stand for oils and greases.



No. 1. Part of accessory department



No. 2. A number of special cabinets

Oklahoma Dealers Boost Sales With Comic Strip Advertising Stunt

IF you want business—advertise!

If you want your advertising to make business, make the public read your advertisements.

These, in a few words, are the two central thoughts of the creed of A. E. Kull, manager of the bus department of the Shelburne Motor Company, wholesale and retail agents for Reo and Hupmobile automobiles, trucks and buses in Oklahoma City. Upon them, through his many years in business in Oklahoma, Mr. Kull has built success and found for himself a place in the minds of newspaper and magazine readers.

A few months ago there appeared in the columns of *The Oklahoma City Times* a striking novelty. It was a feature in the advertising sections, a little square cartoon, something like the usual run of comics newspaper readers are familiar with, but, in fact, something decidedly different. It caused a stir of comment among readers and among advertising men, as well.

This little cartoon announced that hereafter Shelburne's salesmen would do their "daily dozen" in a comic strip, instead of in the solemn terms of quarter-page and half-page advertisements, decorated with fancy borders and set in special faces of type.

In other words, Mr. Kull decided that if the dignity were taken out of the advertisements of his company and a warm, intimate touch substituted, his company would profit.

Old advertisers who look at their ledgers and see the expenses running far into five figures smiled complacently at the new idea.

But orders have been attesting to the efficacy of the new departure.

"Our cartoons, which to a large extent have taken the place of conventional advertising," said Mr. Kull," now are attracting state-wide interest and are carrying our name and our message into places we never could have reached before. We make friends through the advertising and those friends do not forget us when they want a passenger car, a speed wagon, a truck or a bus. *They know us*, and if advertising will not do that for a firm then what is it doing?

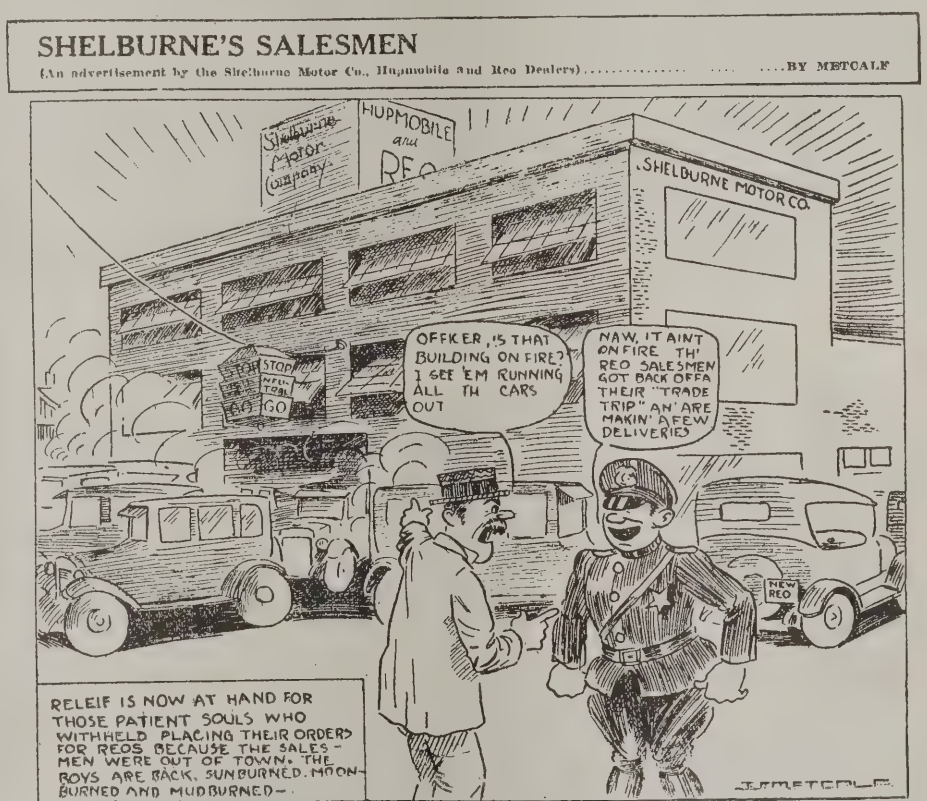
"When we began the cartoons we figured this way: If our salesmen could appear in a comic strip every day and if the strip could be made funny enough to create a following for itself, it would introduce Shelburne's salesmen to everybody in Oklahoma City. We only hoped for that, at first, but we got state interest to boot.

"Instead of being ordinary automobile salesmen they would become outstanding characters in the community, they would become talked about and laughed at, too, for that matter, but they would be 'somebodies.'

"Then there was still another angle. If a prominent citizen could be brought into the picture each day in a friendly way, or some item of local interest included, that prominent citizen would be pleased, and each prominent citizen has at least a hundred close friends who would be pleased which, when reduced to a common denominator, simply spells this: In three hundred days you will have pleased and amused 300,000 people, people who feel a real, personal interest in the performing characters.

"In addition to this, thousands of others are interested and amused because of the local application.

"After a three months trial we find that folks in all parts of the state have become intensely interested in Doc Johnson's 'prospect hound,' which was introduced as a character early in the life of the strip, as well as in the cocky conduct of Hi-Power Colling, another salesman. Roy Fasken and Claude Eichor do their stuff like old 'vets' and are better known. As a result, all of these men are better salesmen than they ever have been."



Specimen cartoon used by the Shelburne Motor Co. for advertising purposes

Mr. Kull had a good chance to find out just what his comics are doing a few weeks ago. He headed a "Reo Circus," made up of a train of Reo buses and trucks, which covered a large part of Oklahoma, and everywhere he went he found the name of his company and the names of his salesmen were familiar. They were received like notables in many towns and cities. All because they were advertised unconventionally, in a friendly, intimate, sort of a way, just as "folks," with all the aloofness and dignity stripped off.

It is the firm belief of Mr. Kull that the cartoon got crowds for that sales strip when full page advance advertisements in the newspapers of every city visited would not have brought out a baker's dozen to see a parade of motor trucks and automobiles.

A Practical Trade Association Program

(*Continued from page* 12)

This increase in sales and service on brakes was felt throughout this territory.

The association, however, does not content itself with simply telling and showing its members the better ways, but makes a definite effort to train them in doing the things which make for success. For instance, it believes that it is essential to success for the garage man to be a merchant as well as a mechanic. In case he does not understand the science of cost finding and accounting, a man who is expert in the matter is sent to him, and he is taught how to apply these things to his business. A cost finding system is installed, and he is taught how to use it, and at stated periods, the accountant visits his place of business to see that he is operating it correctly. So also in the matter of credits. He is helped not only to collect his past-due accounts, but is induced to cooperate with the association credit department in such a way that not only he, but also other members of the association are protected against the dead-beat, and the man who runs bills with one firm as long as he can and then turns to another when he cannot get any more credit with the first.

In the matter of shop equipment it is necessary, as has been stated, that the applicant for membership have a certain amount before he will be admitted to the association at all. After he is in, the conferences which are held in his department tend to make every member appreciate the necessity of having better tools, and pride, if nothing else, will induce him to keep pace with his fellows.

In other things better understandings are being had and standards are being raised. Bad practices are being eliminated, and better methods are being introduced. Uniform customs are preventing the man who wants for nothing all kind of accommodations, which are really services, from imposing on the association men, and compelling him to pay a fair price for what he gets. The raising of standards of service and work is weeding out the incompetent and indifferent, and assuring the public of a quality of work that it can rely upon, and which is well worth the price asked for it.

In return for this privilege of supervision by the association the member receives in return the endorsement of the association. This is given in the form of a membership card, which bears the seal of the association printed on it.

Along with this membership card, which is to be hung in a conspicuous place, goes a window sign, which is to be transferred to the glass where it may be seen by all who pass in front of the garage. This sign is in blue and gold. It is the ambition of the association to make this the recognized guarantee of good service and fair and courteous treatment, so that the member will receive the benefits which come with the confidence of the public, and the public shall have the satisfaction of knowing that in an establishment with this sign on it he will find a guaranteed service which will meet his every need. It will stand in pretty much the same place as the trade mark of a nationally advertised article in any line of business.

Safety Experts See Hopeful Traffic Signs

(*Continued from page* 13)

All of these speakers emphasized the importance of educating automobile drivers and the whole public in the hazards of the streets and highways and how to avoid them. It was agreed this education should begin in the home and be continued through schools, churches, factories and other places where people gather. It was the opinion of Thomas P. Henry that through constant drilling a safety instinct can be developed that can be depended upon to keep the great majority of persons out of trouble on the highways.

The motor vehicle has been made so safe in its design and construction that rarely is an accident attributable to any defect in the vehicle itself, Mr. Jordan said. In his opinion the most important safety factors in driving are brakes, steering mechanism, the driver, vision and lights. Other important factors are ample power, cast of shifting gears and sturdy wheels. The congestion of traffic on main highways near large cities on Sundays and holidays causes a great many accidents, he said.

The relation between law enforcement and safety was discussed by Judge Alva R. Corlett of the Municipal Court of Cleveland. Judge Corlett cited figures to prove his contention that when traffic violators are dealt with leniently fatal motor vehicle accidents increase, and that when stern justice is meted out the deaths on the highways are fewer.

The statistical committee of the National Safety Council made its report, estimating that there were nearly 85,000 deaths from fatal accidents in the United States in 1924. The committee reported that during the year there were not less than 17,400 deaths in motor vehicle accidents, not counting the accidents which involved railroad trains and street cars with automobiles. If these and motorcycle accidents were included, the committee estimated the total would reach 20,000.

The first results were given of the Safety Council's effort to have a uniform system of reporting accidents adopted. Following last year's Safety Congress the Committee on Public Accident Statistics developed an accident reporting system and recommended its general use. Suggested record forms were drawn up and submitted to police and other officials in all cities of 25,000 or more population. It was reported that 38 cities already are using or taking steps to use this uniform reporting system, which will give the National Safety Council reliable data for classifying the nature and causes of accidents.

From reports already received for the first half of 1925 certain analyses have been made, including one on the type of motor vehicle involved in accidents. This analysis follows:

AUTOMOBILE ACCIDENTS INVOLVING PERSONAL INJURY

		Resulting Fatally	Non-Fatal
Total cases reported	21,444	799	20,645
Private passenger car	18,468	496	17,972
Truck or commercial	4,245	243	4,002
Taxicab	1,896	67	1,829
Jitney	95	4	91
Bus	156	11	145
Motorcycle	579	16	563

These figures represent the experience of a comparatively few cities and are not put forth as indicative of conditions throughout the country. They show, however, how the Safety Council hopes by means of more complete reports to tabulate and analyze information that will be of value in helping to reduce automotive and other accidents.

Hannum Steering Gear Provides Variable Ratio

A VARIABLE ratio, no line contacts, reduced backwhip and hardened and ground bearing surfaces are embodied in the Hannum steering gear recently introduced by the Hannum Mfg. Co., Milwaukee, Wis.

The steering leverage is low for straightaway driving, but increases as the sliding member in the trunnion shaft block moves outward on turns. Naturally this means easy handling of the car at corners and particularly parking with balloon tires. The absence of line contacts, results in reduced friction and wear. The displacement of grease inside the housing of the gear has a dash pot action which softens and reduces the backwhip. All thrust and radial loads are taken on ball bearings.

In designing the new steering gear the Hannum company did considerable research work and took particularly into consideration parking of cars when they have to be in small places. It was therefore decided that the gears should have enough leverage or gear ratio when the steering wheel is turned in the extreme left or right position. It was also realized that most of the driving of the motor vehicle calls for little deviation from straight ahead and that most of the driving demands only a half turn or so of the wheel. To get these qualities in the Hannum steering gear the company brought out an apparatus which requires only a small movement of the steering wheel for the greatest steering movement of the front wheels to get comfort to the operator of the vehicle. The steering gear turns normally 2½ times for complete travel.

The accompanying illustrations show the general construction of the steering gear and it will be noted that the trunnion block pivoted on a pin integral with the nut connects to the front jaws of the rocking shaft to the steering drop arm. At the extreme travel the nut moves to the end of the screw thread and the trunnion block moves out further along the jaws thus increasing the leverage operating the drop arm. The sliding of the trunnion block increases the gear ratio and how this is accomplished is shown in the diagram which indicates the change for every five degrees movement of the steering wheel from the straight-ahead position. From this it will be seen that less steering effort is required at extreme travel while parking and less movement of the steering wheel during ordinary driving.

A rather novel feature of the Hannum steering gear lies in the design of the gear nut since it embraces only a quarter turn on the screw shaft. This has the advantage, it is stated, that when a shock is transmitted to the drop arm it is transferred to the nut by the trunnion pin, which is not at the center of the nut. This action causes a momentary rocking on the nut block the face of which is fitted accurately to the gear housing and a thrust is imposed on this face actually tending to force the grease out from the faces. The viscosity of the grease acts as a cushion to absorb part of the blow and the shock is therefore largely dissipated and absorbed in the housing and only a small part of it is transferred to the hands of the driver. In the conventional type of gear in which the nut embraces half or all of the screw shaft the nut is supported almost entirely by the threads and a shock to such a gear is much more readily transferred to the operator's hands, the company states.

The threads on the nut have an actual bearing area of one square inch in the medium car size while the truck and bus sizes have up to five square inches.

Lubrication is novel since due to the construction of the mechanism in the housing the nut virtually acts as a piston and forces the lubricant to the housing and all the wearing surfaces. This naturally has an important bearing on

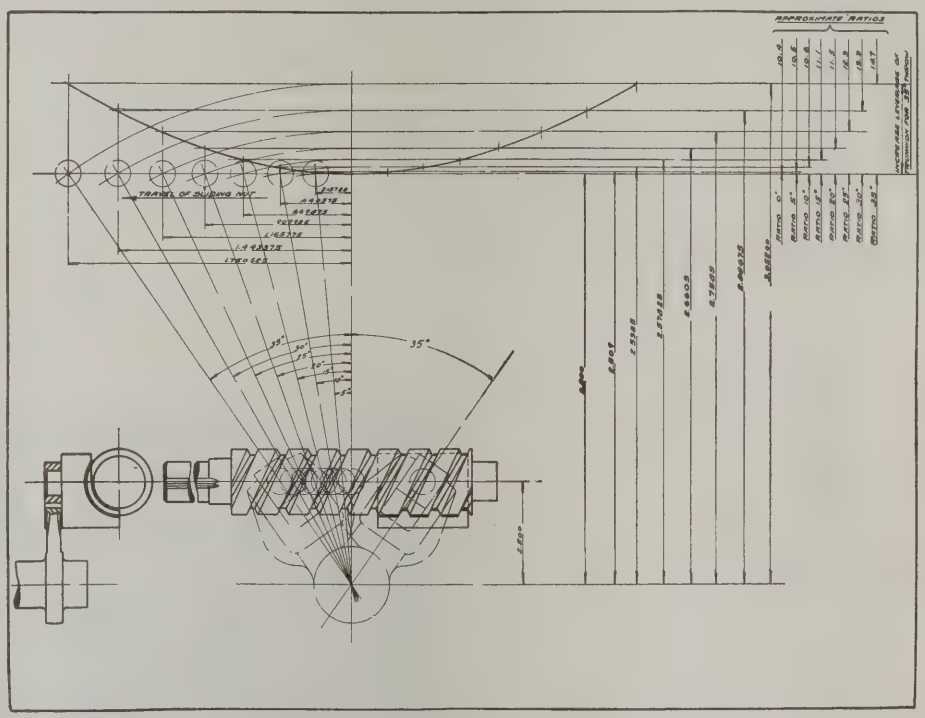
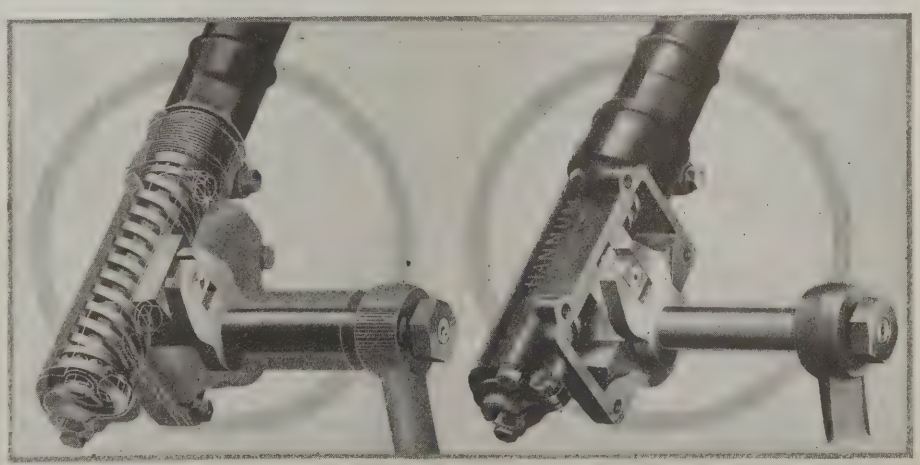


Diagram showing the increase of leverage of the trunnion in the Hannum steering gear for 35 degrees of throw



Two views of the Hannum steering gear. Note that the gear nut embraces only a quarter turn instead of the more usual turn or half-turn on the screw shaft

the ease of steering, long life and low maintenance cost of the device.

The housing is of malleable iron and all bearing surfaces and faces are milled in jigs to secure proper alignment. The trunnion shaft and block are of heat treated steel and the nut is ground after case hardening. The trunnion block is made with a spherical seat in the forks of the rocking shaft which permits of a slight swivelling action and permits the block to align itself. The casing is made oil tight by the use of ground surfaces and a gasket and oil can be used as a lubricant where desired. The gear is interchangeable with the worm and sector type and is lighter in weight.

Heldt Brings Out New Book on Fuels and Carburetion

Volume four of the Gasoline Automobile, by P. M. Heldt is now available for automotive engineers and service men. This volume deals with fuels and carbureters.

This book is a valuable addition to any engineering library and takes up not only various types of carbureters, but also discusses various fuels available and their characteristics which affect carburetion. The contents of the book are best described by the chapter headings which are as follows:

Gasoline—Its History, Source and Methods of Production.

The Chemistry of Petroleum Fuels.

Early Carbureter Types.

Theory of the Simple Carbureter.

Mechanically Controlled and Multiple Jet Carbureters.

Automatic Carbureters.

Floatless Carbureters.

Detail Design of Carbureters.

Description of Modern Carbureters.

Fuel Tank and Feed Systems.

Air Cleaners.

Servicing of Carbureters.

Carbureter Adjustment by Exhaust Gas Analysis.

Carbureter Laboratories — Equipment and Tests.

Kerosene and Kerosene Carbureters.

Benzol.

Alcohol.

Blended and Miscellaneous Fuels.

Producer Gas and Gas Producers.

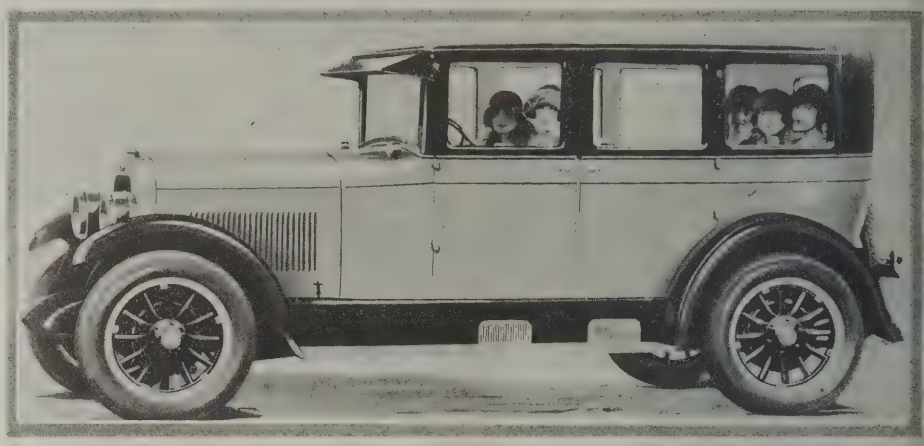
Combustion and Detonation.

The price of the volume is $5. It is published by P. M. Heldt, Nyack, N. Y.

LARGER BRANCH QUARTERS

BOSTON, Mass., Oct. 5.—Black & Decker Manufacturing Company announces removal of its Boston Branch office to new and much larger quarters at 62 Brookline Street, Boston. This new office will be in charge of A. D. Geiger recently appointed branch manager of the Boston territory to succeed D. G. Caywood who has been put on special work by the company.

Cleveland Special Sedan Roomy Car



Cleveland Special Sedan, seating five passengers and which lists at $1295 f. o. b. factory

ONE of the new model announcements of the Cleveland Six which has made it necessary for the factory to increase its production schedule is the Special Six Sedan, a roomy car seating five passengers.

The body is hung low and completely paneled in metal. Doors swing wide for easy entrance and exit. Interiorly the color scheme is gray. Broadcloth constitutes the upholstery and the instrument board is finished in circassian walnut. The rear doors have individual pockets. Balloon tires are standard equipment while four wheel brakes are optional at a slight extra cost.

Cabriolet Roadster Latest in Wills Sainte Claire Six



Wills Sainte Claire Roadster in which the windows can be raised when the top is down, effecting side windshield wings

THE latest body style to be added to the Wills Sainte Claire line of six-cylinder cars is the new Cabriolet Roadster—a two-seater. The top is Burbank with natural wood bows. It can be folded down easily and quickly, with the top lying close to the body, harmonizing with the stream line effect. The sun visor is covered with the same material as the top. The windows can be raised when the top is down, effecting side windshield wings. There is a large compartment for golf bags opening on the right side and another smaller compartment just behind the front seat. The upholstering is Beige, hand brushed Spanish leather, fashioned over deep cushions. There is a rumble seat which accommodates two comfortably. The rumble seat is finished with the same leather upholstering, with nickeled arm rests.

The addition of this body to the Wills Sainte Claire line is another indication of the demand for the two seater roadster. The construction of the top affords all of the comforts of a closed car and yet it is possible in a vehicle of this kind to quickly change it to an open model. For touring in mountains certainly it is very desirable to possess a vehicle in which the top can be folded down easily. The fact that the windows can be raised in this model with the top down makes it very desirable for touring purposes.

Radio Dealers Stage Show at Chicago

Stabilization of Radio Merchandising Indicated By the Lack of Fundamental Changes Evidenced Since the Exhibits of Last Season

Making Radio an All-Year Business

Chicago, Oct. 5.

AS FAR as Chicago and the central west are concerned, the radio season has started with the National Exposition held from Sept. 28th to Oct. 3rd at the American Exposition Palace under the auspices of the Radio Dealers' Association of America.

To put the radio business on a substantial basis it is essential that it be as nearly an all-year business as possible.

A year or so ago the radio sales started just before Christmas and stopped soon after, then they began covering a period of two or three months. Now the boom in radio is starting with the first fall days and the holding of a show at this time demonstrates the trend of radio merchandising toward an all-year program.

Another radio show, under the supervision of the Radio Manufacturers' Association, will be held in Chicago during the week of Nov. 17-22, and in this connection it is interesting to observe the parallel in merchandising methods used in radio and automobile sales. For a number of years there have been automobile shows in Chicago in January, but for several years there has also been an earlier show held in the fall for the purpose of presenting to the public the closed models.

Trade Days Observed

This radio show takes on a similar aspect, that of presenting to the public its wares at an early date, but it also affords an opportunity for dealers to meet with each other and with manufacturers and take up their merchandising problems.

At this show, the hours from 11 a. m. to 2 p. m. were reserved for dealers, the public being admitted in the afternoon only.

A representative of MOTOR AGE, visiting the show, frequently asked the question,

"What do you consider the high point of the show; that is, what new and striking development is presented which we did not know about a year ago?"

And the answer universally was "There is nothing radically new."

As far as the radio dealer is concerned, this is the most encouraging indication that possibly could be obtained. Developments, of course, are being made, but the indication is these changes will be gradual, that a set that is good merchandise this year will not be obsolete next year.

Due to some improvements in later models it may be of less value, but it will be far from obsolete.

There are of course developments of interest. At one booth for example a miniature three tube complete set was shown which occupied a space 3½ in. by 4 in. by 7 in. without space for batteries. On the other hand there were console sets with provision for concealing A and B batteries, which partook more of the dimensions of the grand piano, and between these extremes were sets of all styles and prices.

To Spread Radio Net For Car Thieves

MILWAUKEE, Wis., Oct. 5.—A radio net for automobile thieves under plans worked out by the automobile squad of the local police department may cut down the number of successful automobile thefts in Wisconsin during the next few months.

The plan provides for broadcasting a report and description whenever a car is solen, with further announcement of whatever reward may be offered by insurance companies for return of the car and capture of the thief.

It is hoped that expectation of earning the reward will prompt many in the radio audience to keep on the lookout for the cars.

The announcements will be broadcast from Milwaukee's two powerful stations, WHAD Marquette Universiy-Milwaukee Journal station and WSOE School of Engineering-Wisconsin News station.

Simplification of control was noticed on some sets where a single knob or dial is used for tuning. The simplification seems, however, to be from an external standpoint, as inside the set the unit control resolves itself into a simultaneous control of two or three condensers.

B battery eliminators still arouse interest although the number of console sets made with provision for batteries does not indicate any immediate revolutionary step. One B eliminator excited more than passing interest as it to some extent puts the radio set and its battery on the same basis as the battery in the automobile. This device is known as Socket Power, being the product of the Philadelphia Battery Co. It combines with the eliminator a rectifier which is automatically connected to give the A battery a trickle charge when the set is not in use.

Radio Winter Sales Asset

PORTLAND, Ore., Oct. 3. — Garage dealers throughout the Pacific Northwest are slowly beginning to realize that the radio will be a big asset for them during the winter months when car sales begin to slow up. Among the recent garage and automobile dealers who have recently been appointed as dealers for Grebe Synchrophase by the Stubbs Electric Co. of this city who are distributors for this equipment in all of Oregon. Washington and Idaho, are the Addington Garage, Addington, Idaho; Jordan Electric Company, Ashland, Ore.; Thompson Garage, Athena, Ore.; Purkheiser Electric Co., Caldwell, Ida.; Cambridge Garage, Cambridge, Ida.; Tourist Garage, Clatskanie, Ore.; Latourell Auto Co., Heppner, Ore.; Shurtless Garage, Payette, Ida.

A Booklet on Storage "B" Batteries

THE advantage of storage "B" batteries both from a cost and operating standpoint are pointed out in a booklet being distributed by the National Battery Manufacturers Association, 17 W 42nd street, New York.

The material for the booklet was prepared by Mr. H. A. Harvey, engineer for the U. S. Light and Heat Corp., this concern being a member of the association. The information is based on careful investigation and should be of interest to garage men, battery men, radio dealers and radio manufacturers. Samples of the booklet will be sent on request and quantities for distribution over the counter or by mail may be had at nominal rates.

Build Broadcasting Station

THE Kierulff & Ravenscroft Company, Southern California pioneers in radio distribution, Los Angeles, has constructed in its building an up-to-date 500-watt broadcasting station at present operating on 250 watts, 208 meters, 1440 kilocycles, using storage battery equipment throughout. It is the only station of its power so equipped on the Pacific Coast.

The Kierulff & Ravenscroft Company is distributor in the state of California of the Kennedy and Crosley radio receivers, Cunningham tubes and Burgess batteries. The station has been primarily constructed by radio men for radio men and it is the intention to assist by broadcasting for any and all radio manufacturers, jobbers or dealers throughout the state.

MOTOR AGE'S PICTURE PAGES



AUTOMOTIVE MAGNET. A Longren airplane was suspended above the filling station of Wimer & Co., Denver, by a scarcely visible cable and guy wire, giving the impression that it was about to land for fuel. This stunt proved a good advertising medium for the fuel dispensed



NOT TOO TIRED TO PARADE. A feature of the recent annual fair at Leipzig, Germany, was this grotesque living ad of Michelin tires

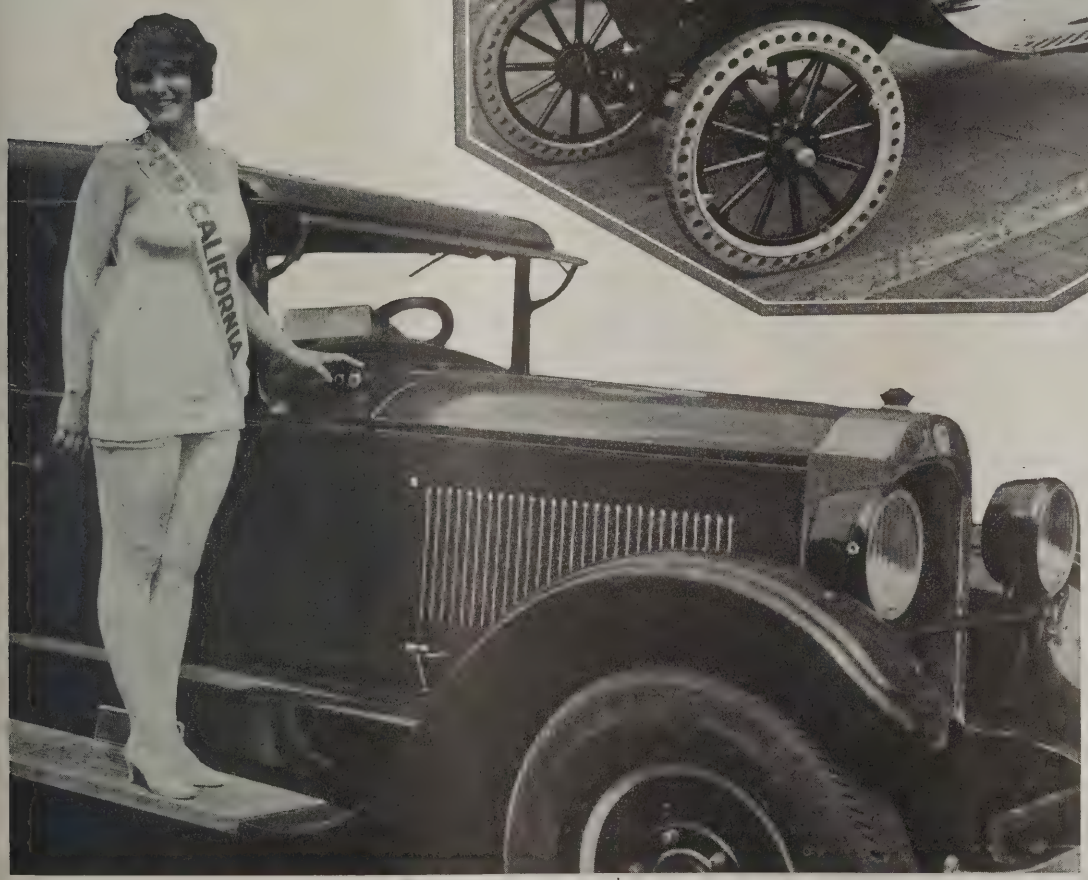


SHOWING THE NEW PRODUCT. Powerful searchlights playing on the building of the Troy Motor Sales Co., Los Angeles, attracted wide attention to the introduction of the Ajax. The searchlights were mounted on motor trucks and the illumination was visible for miles distant

OF AUTOMOTIVE INTEREST



CROOKS BEWARE! Here is shown the type of Ford car purchased by the Chicago Police Department to aid in the fight on crime. The automobile has been used with marked success by the police in apprehending gunmen and gangsters. More than 100 of the type of vehicle shown have been added to the city's fleet.



MISS AMERICA. Miss Fay Lamphier of Oakland, Cal., who won first honors at the annual Atlantic City Beauty Pageant, is shown beside a Studebaker car. The second prize also went to California, Miss Adrienne Dore of Hollywood winning it



WHEN THE OLD MEETS THE NEW. Luxurious buses are rapidly replacing the smaller vehicles of an earlier day, making sightseeing trips more enjoyable for the tourist. Above is shown a Pierce-Arrow six-cylinder motor bus of a late type and one of the earlier vehicles used by motor nomads

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Fan Not Used at High Speed

Q. A diagram and explanation of the principle of operation of the fan and fan releasing mechanism as used on the Wills Ste. Claire would be appreciated. Oscar Shilts, 630 Gary place, Chicago, Ill.

At Fig. 205 is shown a section of the fan and fan releasing mechanism of the Wills Ste. Claire engine. The principle of operation of the fan release mechanism is exactly the same as the camshaft brake used on the same engine. Briefly the action is as follows: Oil enters the drilled fan shaft, flows to the end, as will be noted in the diagram. At the end of the fan shaft there is a small cone which engages with a female cone backed up by a coil spring as shown. At ordinary engine speeds, or, in fact, at all speeds up to approximately 35 miles per hour in high gear the pressure exerted between the male and female cones by the spring provides a connection between the fan shaft and the fan propeller blade. However, as the engine speed increases and the oil pump pressure goes up oil is forced out of the hole in the small cone and counteracts the tension of the coil spring and allows the fan to slide on the film of oil between the two tapered surfaces. In other words, the pressure on the oil passing through the fan shaft pushes the male and female cone apart and the drive is partially disconnected, although the fan will continue to rotate at a certain speed made possible by the friction of the fluid itself.

Q. A diagram of the water circulation pump as used on the Packard eight will also be appreciated.

Diagram requested is shown at Fig. 206.

Q. Also a diagram of the sylphon attachment that regulates the temperature of water as used on the Packard car.

This shown in connection with the water circulation pump at Fig. 206.

THINGS THAT MAKE GEARS CLASH

Q—We have a baby Overland in which the gears clash when shifting the clutch. Can you give remedy for same? The clutch and transmission seem to be in perfect order. We have put in new clutch sleeve but that does not seem to remedy the condition. We tried loosening the clutch but the clutch pedal strikes the foot board on the back if loosened any more.—Kaw Valley Garage, Grantville, Kansas.

One possibility is that the clutch brake is adjusted too close, another being that the clutch brake fiber is worn. Other possible causes are in a clutch brake where the surface is rough or in clutch pedal improperly adjusted. If the shifting forks are bent this same trouble will be experienced. The clutch will also drag if the lubrication is too heavy or if a disc is broken. Another cause is in excessive wear of the transmission main drive gear bushing or bearing while loose countershaft gears will also cause this condition.

REMEDY FOR STICKING CLUTCH

I notice in the June 25th issue of MOTOR AGE that Mr. F. X. Witt of Metamora, Ohio, is having trouble shifting gears on his Fordson. I think that if he replaces part No. s-408, clutch drum, that his trouble will end. The clutch plates wear notches in the drum and they will not release freely. J. W. Berry, Burrton, Kansas.

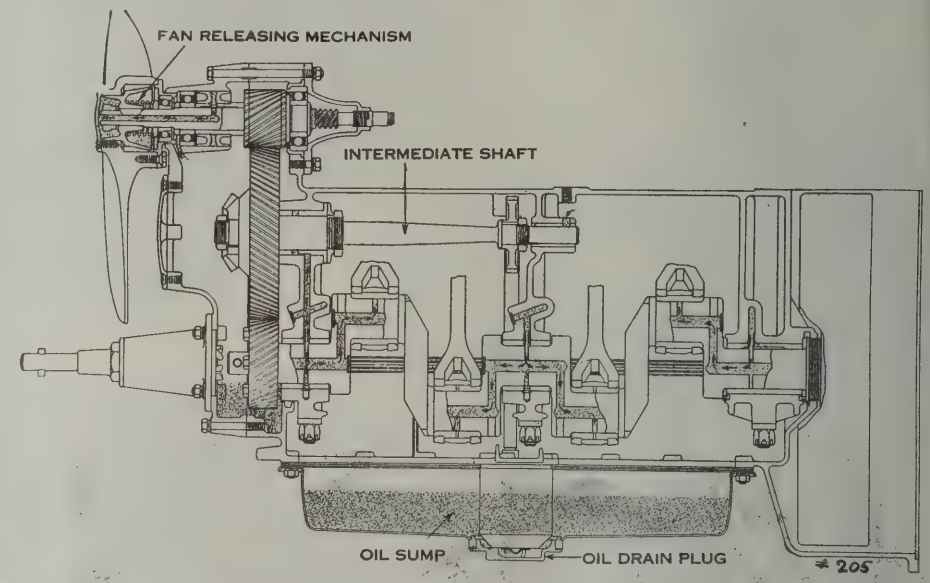
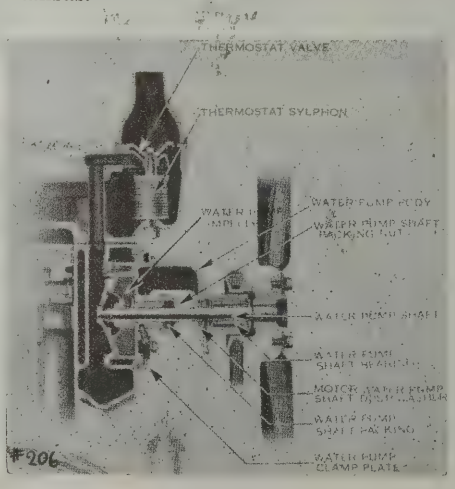


Diagram showing fan release mechanism on the Wills Ste. Claire. A spring controlled cone type clutch is released by oil pressure at high speeds



Sectional view of portion of Packard eight engine showing water pump and Sylphon thermostat

Trouble Is Probably Due to Corrosion

Q—We have had a great deal of trouble with the exhaust valves rusting in the guides on a 1917 Haynes. There are no cracks in the cylinder block and we have put in new guides and valves but this did not help any. Could you give any information on this.—Croft Machine Co., Moberly, Mo.

It seems strange that the exhaust valves would rust more than the intake. We accordingly feel that this is not rust but is corrosion due to the exhaust gases. Possibly the muffler is badly clogged up and causes sufficient back pressure to force some of the exhaust gas to go out past the valve stems. This would tend to blow off the lubricant and corrode the stems and guides. If the car has not had a new muffler for two or three years, it would be desirable to install one and to thoroughly clean out the exhaust pipe.

If the corrosion occurs on both exhaust and intake valve stems to some extent, it may be that the stems are receiving insufficient oil. You can probably determine this by examining the inside of the valve chamber where the valve springs and stems are enclosed. In some cases where insufficient oil gets to the valve stems, it is found desirable to drill one or two small holes from the valve chamber into the crankcase, so that more oil vapor will enter.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

A Tall Building With Short Ramps

Q. I am interested in a sales and service garage about 70 by 140 feet, three or four stories and basement, to be located on corner lot open on four sides as per sketch below.

I would like to have any back numbers of MOTOR AGE containing plans or photos of buildings approximating these requirements, also any special numbers or articles dealing with arrangement, requirements and construction of modern commercial garages.

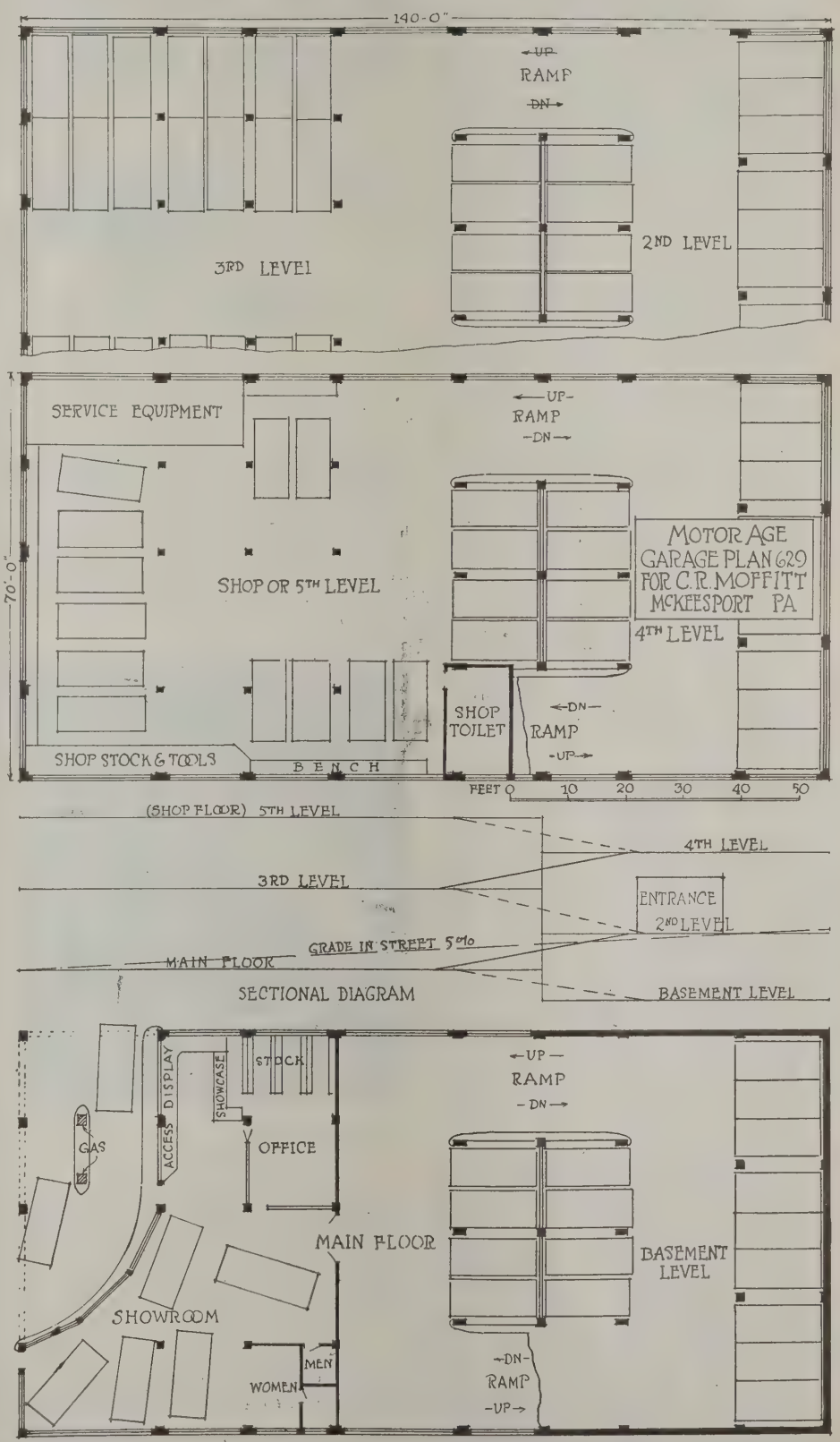
We have used a scheme in this building which has become quite popular in storage garages and should be just the thing here.

If the grade in the side street were sufficient to carry the street to the second floor level, then we would be inclined to use an ordinary type ramp, but since it will take you only approximately half way up by staggering the floors and using an intermediate floor between each main floor level, as indicated in our sectional diagram, cars may enter on the second level and go from there to the basement or to any other upper level with no trouble whatever. This type of construction has the advantage that it can be added to at any time. The ramp may be continued up, using the roof as storage space and as more space is needed other stories may be added to take the place of the roof and a new roof built over them. In this respect you may add more floors below the basement level as shown.

In our layout we have made the upper, or fifth level the shop space, but the third level might also be used for shop purposes in the same way. The fact that you have open space all around your building, makes it possible to use the lower floors for shop space where in other buildings it could not be done. It may be however, that the third level would be a very suitable space for a used car showroom and that the basement, second and fifth level floors would take care of all the storage you have.

If we were building this place ourselves, we would think a long time before using the best part of the first floor for a filling station. Filling stations of course, have their use and their advantages, but it seems to us rather a scar on the face of a beautiful new building, such as this is going to be, and we would much prefer having a beautiful showroom in its place. The columns might also be arranged to better advantage if the filling station had not to be considered.

This however, is a matter of personal opinion and it may be that your location is especially adaptable to this sort of trade and it may do you a lot of good, where it would be a detriment to some places. The type of construction used in this layout is said to be patented, but the royalties charged for the use of it, are not excessive and it is considered well worth the price.



The diagram shows how the floors are arranged, half of them intermediate between the others, the short ramps connecting the aisles. The filling station seems out of place in a building of this sort

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Negative Caster a Recommended Cure

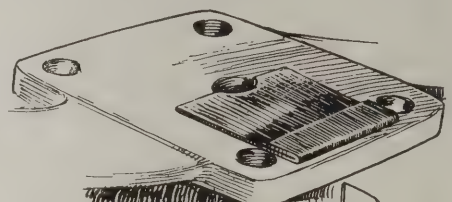
Q. I have a straight eight Packard which is equipped with balloon tires. When I purchased this car it had the Packard worm and nut steering gear and the bad habit of shimmying, at speeds above 25 miles per hour. I had their new type worm and segment steering gear put on and it has taken the jerk out of the steering wheel and some of the shimmy. However, if any play is allowed to get in the gear or rods the shimmy shows up in proportion. Do you think it would help to tilt the front axle by putting in some tapered plates between the springs and axle? I would be glad to have any suggestions that you have to offer. Jerry Robinson, Albin, Miss.

The Packard maintenance organization in this city suggests that the toe-in of the front wheels be reduced to $\frac{1}{16}$ of an inch. The next step in the correction of the shimmy is to secure a piece of $\frac{1}{32}$ sheet stock wide enough to cover the spring width and long enough to extend from the front of the axle spring pad to the rear of the spring center bolts plus one inch. Fold this piece of stock over so that there is a portion of it one inch long, $\frac{1}{16}$ of an inch thick, the remainder $\frac{1}{32}$ inch. Cut a slot in the thin end to go around the spring center bolts so as to keep the shim in position and install with the thick end toward the front. This gives a negative caster or tips the top of the axle forward. A clear idea of the method of blocking the springs is illustrated at Fig. 228.

WEAK GOVERNOR SPRINGS CAUSE KNOCK

Q—We are servicing a 1922 Jewett. It runs fine except that after motor gets warm it has a fuel or spark knock, that we have been unable to do away with. Cleaning out the carbon helps for a short time. Have changed ignition setting and also changed mixture. When car was new could step on it hard and it never murmured. Shortly after the customer got car it started to pump oil and we put in some oil rings and stopped that. We cannot afford to experiment too much with the car and thought you might be able to give us a lift. On a couple of other Jewetts we have changed valve timing and used 2-head gaskets but with no great success.—John H. Suter, 507 Cornhill Street, Peoria, Ill.

According to information supplied by the local Paige-Jewett Maintenance Organization the trouble is most likely in the ignition distributer unit. At Fig. 226 you will note a top view of the ignition unit. Directly below breaker arm mechanism is the automatic spark advance governor mechanism. There are provisions made for three springs on this governor and a few cars have come through with one or two springs only. The knock is caused from weak governor springs allowing the weight to fly out and advance the spark too far at the time engine is accelerated. The cure is to increase the tension. If there is only one spring on the governor install a second one and try the car. If the second spring does not eliminate the knock install the third one. If the governor has three springs at the present time it probably will be found that there is considerable lost motion in the governor before springs start to lengthen.



An added shim to curve the shimmy

The amount of this lost motion can be determined by moving the weights with the finger while the engine is stationary. The cure consists in cutting off each spring so as to eliminate all lost motion. When you have done this set the spark in regular position. The normal spark setting for the 1922 model is 1½ inches past top dead center position on the fly-

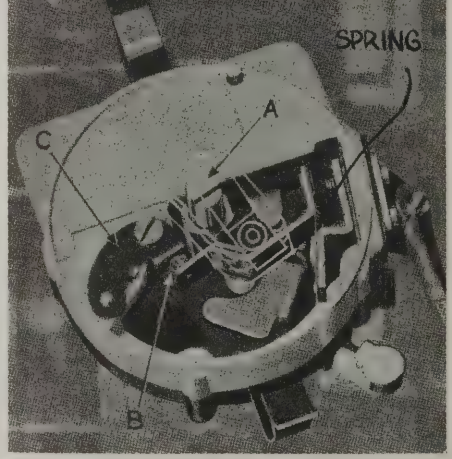


Fig. 226—Atwater Kent ignition on Jewett cars

wheel with full retard. If owner complains of spark knock after governor has been tightened it indicates that he accelerates too rapidly in which case it may be advisable to disconnect governor and use manual control only.

A MOTOR CLUB SUGGESTION

The following mechanical hint is sent to us by the Chicago Motor Club. When working on push rod assemblies, it will be found that time and trouble is saved by slipping a wedge of hard wood under the head of each valve. This saves loosening and lowering all the tappets. Th wedge holds the entire valve group o the tappets.

Camshaft Bearing Construction on Lincoln

Q. I have several questions to ask i regard to Lincoln cars. How is the cam shaft held in place?

The camshaft bearings are bronze The rear one is cast in the case and i held in place by a cap screw. The fou bearings immediately forward of the rea one are sleeves pressed into the case The front camshaft bearing controls th end play. The shoulder on the camshaf located behind the rear of the front bear ing prevents the camshaft moving for ward while the sprocket prevents th camshaft moving toward the rear. Th front camshaft bearing is held in plac by means of two cap screws through a elliptical flange.

Q. Why can only one shifting shaft i the transmission be moved at a time?

The shifting shafts are notched on th side of the shaft which face each othe A pin with rounded ends is mounted i such a way that the ends rest in thes notches. When one shaft is moved i forces this pin farther into the othe notch so that the other shaft is locked Before the other shaft can be moved th first shaft will be returned to the neutra position so that the pin can enter th notch in this shaft and permit the othe one to be moved.

Q. What is the purpose of the larg vacuum tank employed? Nebraska Sub scriber.

The large vacuum tank which hold about two gallons makes it possible t run with wide open throttle for a con siderable distance. Under these circum stances the vacuum in the intake man fold is very low which tends to prevei the tank drawing up gasoline from th main fuel supply tank while driving wit wide open throttle. The large vacuu tank merely supplies an ample reserv for such conditions.

OIL PRESSURE ON GARDNER

Q—What is the proper oil pressure on 1924 Gardner car and how can pressu be increased?

The recommended oil pressure at ave age speed is 2 to 7 pounds. The throtti is directly connected with the by-pass o the oil pump and as the throttle is opene the pressure is increased giving greate pressure when greatest power is r quired. It is possible to regulate th pressure reading on the gage by adjus ing the link connecting the pump to th accelerator.

In addition to this linkage there is spring loaded relief valve in the pum body which can be adjusted to give highe pressure at idling speed.

Clearing Up Electrical Troubles

EDITED BY A. H. PACKER

How to Connect Ignition Coils. Who Knows?

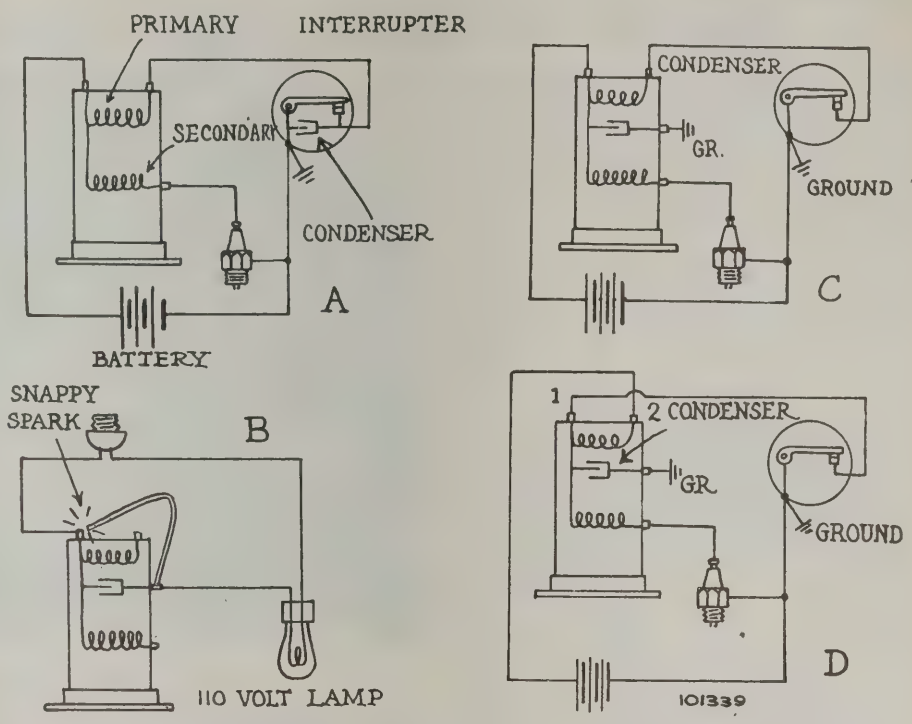
Q—Please tell us a simple way to test automobile coils.—Crutchfield Motor Co., Orangeburg, S. C.

We are showing an illustration which gives four sketches, A, B, C & D. When the coil does not contain the condenser the test is comparatively simple as shown at "A". An interrupter of some sort should be used which either contains a condenser or has one connected across its contacts. To make the test a 6-volt storage battery is normally used as most of the ignition systems are 6 volt. In the case of a Dodge Brothers ignition unit or other 12-volt outfit a 12-volt battery would be used. On the ordinary coil it is usually evident which terminals are connected to the primary winding, but if in doubt a test can be made with battery and ammeter.

The primary winding will usually allow from two to eight amperes to flow, depending upon the type of coil. In sketch "A" it will be seen that the current from the battery flows through the primary of the ignition coil, then through the interrupter to the grounded side of the interrupter and back to battery. This completes the primary circuit. From the secondary or high tension terminal a wire goes to a spark gap which can be made from a spark plug with the points opened up to give a gap approximately $\frac{3}{16}$" wide.

When the condenser is in the coil the problem is a little more complicated for there is a chance to wire the coil correctly so that the coil condenser is connected across the interrupter contacts. It is also possible to wire it incorrectly so that the condenser is not connected across the interrupter points. Sketches "C & and D" give the two methods and we are going to let you study these and see which one you think is correct. We hope other Motor Age readers who are not clear on this question will send us their answer and we will be glad to reply telling whether answer is correct or not.

In testing a coil of this kind it is first desirable to make a sketch showing the various terminals and then test to locate the primary, secondary and condenser and draw in these units on your sketch. At "B" there is a method shown of finding the condenser by using a 110-volt lamp. If the lamp is connected across the primary it will light up, which will show that these are not the condenser terminals. If connected across the secondary the lamp may not light up on account of the high resistance of the secondary, but a faint spark will be seen when the circuit is broken. If connected across the condenser the lamp will not light and there will probably be no spark visible. The test to make then consists of leaving the 110-volt lamp connected to the condenser as shown at "B" and while it remains connected, take a short piece of wire and connect across the condenser. When this is done a snappy spark which makes a noise like the crack of a small whip will be seen and heard. Having located the primary, condenser and secondary the coil can be wired up in accordance with sketches "C or D," one of which gives good results and the other, being incorrect, gives poor results. Note that no condenser should be used in the interrupter in sketches "C and D" as this would give an incorrect test showing a good spark from a coil in which the condenser might be defective.



A: Simple way to test an ignition coil; B: Locating or testing the condenser; C and D: The right and wrong way to connect a coil which contains the condenser

Modern Electricity Flows the Other Way

Q.—I would appreciate a little more information on the article "Electro Magnets" in the July 18th, 1925 issue of Motor Age. One man considered to be one of the best electricians tells me you are wrong. He says the current flows from the negative through the circuit and back to the positive, but in all my text books and teachings I learned that the current flows from the positive to the negatives. Please advise whether I am right or wrong. Arthur T. Kennedy, 300 N. 7th street, Salina, Kansas.

Nobody knows what electricity is and it is very doubtful whether any one knows which way it flows, or in fact whether electricity actually flows or not. However, in working out our electrical problems it is very convenient to figure that electricity flows very much as water flows through a pipe except that the electricity is imagined to flow through a solid conductor. All of the theory of electricity and magnetism that is in use in designing electrical machinery such as generators and ignition coils, is based on the belief that the flow is from positive to negative.

The situation is quite similar to what we might have if someone would design a clock in which the hands would go around the other way. It would probably work just as well as the clocks we use today. In like manner all of our electrical theory has been worked out on a certain basis so it seems to be more convenient to continue in that way.

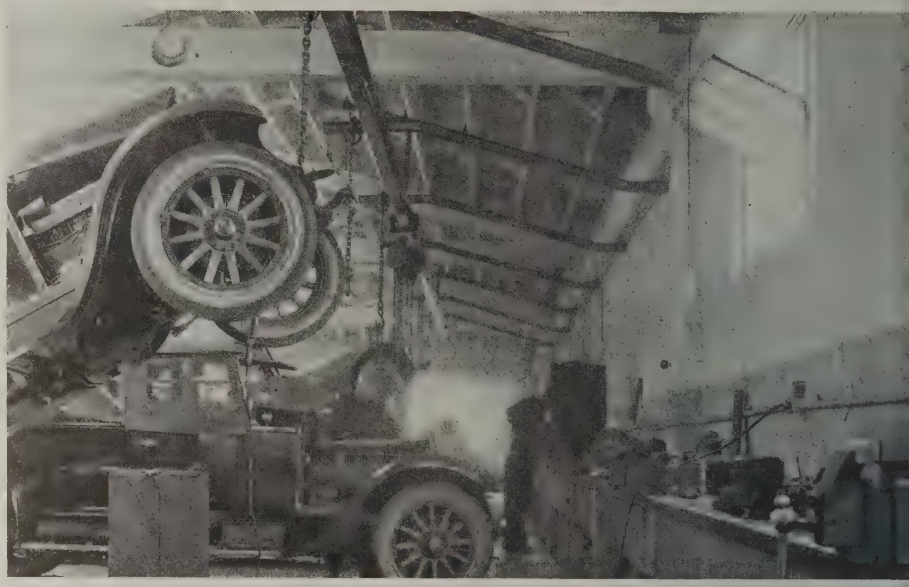
Your electrician is doubtless correct according to the latest data obtained in radio where it seems that electrons or negatively charged particles of electricity actually travel from the filament to the plates in the radio tubes. If this is actually the case then it does appear that the flow is from the negative to the positive. It would be evidently quite a job to write all of our text books over again and as we can work our problems out from them by using the theory in the old fashioned way, it may be better for the time being to think of current as flowing from positive to negative except in the case of the radio tubes or other devices in which the electron theory comes into play.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Orderliness and Cleanliness in Stockroom Help Flat Rate

THE stockroom may not have any direct bearing upon the workings of the flat rate system, but there certainly is something to be said about speeding up operations by a neat and well kept stock of parts. In fact, some of the leaks in many a shop and the failure of the flat rate system to bat 100 per cent can be often traced to a poorly arranged or kept stockroom. Much money is tied up in parts and accessories for the particular car or cars handled by the dealer or distributor and it is just as important for the stock department to be run on a businesslike basis is as any other part of the business. Too often does the dealer send hurry-up orders to the factory for supplies or parts, only to find that he has sufficient of them on hand, but they were not where he thought they were, hence he assumed the supply exhausted. This means not only tying up money in unnecessary parts or supplies, but it breeds dissatisfaction in the customer who is obliged to wait for things to come from the factory. Service means service, and there is no department more important to the full meaning of the word than the stock room.



THINGS THAT HELP FLAT RATE

Above is shown a system for supporting motor cars for repair by means of a chain extending from a steel I-beam. These I-beams in turn support the track on which the chain hoist operates. Such a layout permits one chain hoist to be used in raising and lowering 11 cars in this particular shop. The hoist raises the car until the chain can support it whereupon the hoist is released for the next car

Know Your Stock

There should be a place for everything, and then the men must be under the strictest of orders to keep everything in the designated bins or compartments provided. It should be looked upon as an unpardonable offense for the foreman of the stockroom to have to send wire orders for parts. He should carefully check the quantities of each thing, and order more when the predetermined minimum is reached.

In this the factories' own methods should be followed as closely as possible, for through long experience the stoc departments of the factories have almos all devised schemes of stock keeping an maintenance that cannot help but be benefit to the dealer if adapted to hi own business with whatever modifica tions are required to meet his particula needs and conditions.

Many factories are supplying the dea ers with special instructions for stoc room maintenance, and some even hav special forms and systems which the recommend installing.

Systems Sometimes Too Elaborate

Of course the man running a large cit sales agency is called upon for a mor extensive system and scheme of checkin than the dealer who does business in smaller way. Nevertheless the sam efficiency should be practiced by both Certain extensive schemes of stock keep ing that pay the city man would wast money for the little fellow, and therei is the secret of any man's success. H must adapt efficiency methods to th needs of his business, and not try t remake the business to conform to an efficiency schemes. For instance, i would be a waste of money for the smal dealer to have a stock keeper who di nothing else but take care of the stoc room, although the city dealer would b very foolish if he did not have a stoc keeper where he has a large business an a big service station. In the small gar age, the shop foreman can very well tak care of the stock in good shape.

MOTOR AGE'S FLAT RATE FORUM

No. 34

FLAT RATES FOR FORD MISCELLANEOUS ENGINE OPERATIONS

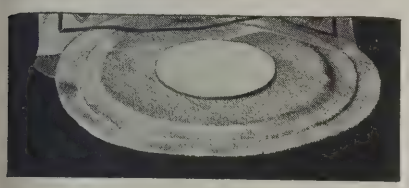
Operation Number		Labor Charges
1.	Overhaul motor and transmission	$35.00
2.	Overhaul motor only	30.00
3.	Overhaul transmission only, or repair or replace magneto	22.50
4.	Rebraze crank case arms or support or repair leak in case by taking out motor	20.00
4a.	Replace crank case only (no other work)	17.50
5.	Install or refit one piston or one connecting rod	6.00
6.	Install or refit two pistons or connecting rods	8.00
6a.	Install or refit four pistons or connecting rods	12.00
7.	Tighten one connecting rod bearing ($1.00 per rod for each additional rod)	3.00
9.	Replace transmission bands (Sedans and Coupes $1.00 extra) Starter types $1.00 extra	4.00
10.	Replace transmission cover gasket (Sedans, Coupes and Starter types $1.00 extra)	4.00
10a.	Replace transmission cover (Sedans, Coupes and Starter types $1.25 extra)	7.50
11.	Change motor	10.00
11a.	Change motor and starter equipment	12.00
12.	Replace cam shaft and refit bearings	10.00
13.	Replace cam gear—large	4.00
14.	Replace cylinder front cover	3.50
15.	Grind valves and clean carbon	5.00
15a.	Special tune-up	2.00

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

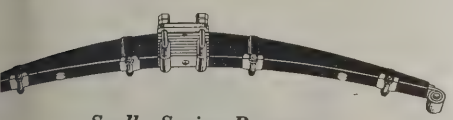
Gates Bullseye Patch

ON the theory that the most important part of the patch for punctured castings is the center or the area immediately around the hole or crack the Gates Rubber Company, Denver, Colo. brought out the Gates Bullseye Patch. The central portion of this patch is made of amalgamated gum, a special self-sealing compound which cures in service. The gum is said to have exceptional binding properties. The "bullseye," or central portion of the Gates patch, is reinforced with wide, circular

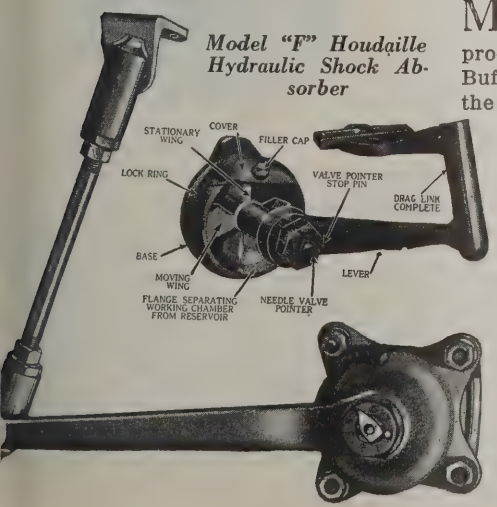


Gates Bullseye Patch

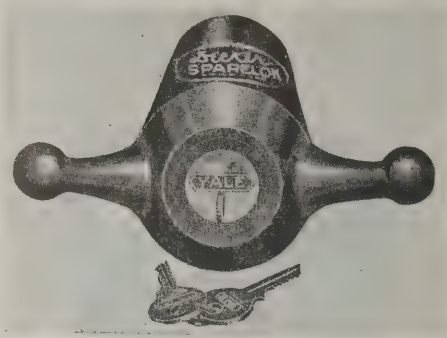
plies of tire fabric made of a high quality material. The company declares the patch makes a quick, easy and permanent repair on both balloon and high pressure casings. Dealer price for patch No. 1, 5½ inches in diameter, in lots of less than ten is 17 cents; from 10 to 50, 15 cents; from 50 up, 13 cents; Cons. list, 35 cents. Dealer price for patch No. 2, 7 inches in diameter, in lot of less than ten, 23 cents; from 10 to 50, 21 cents; from 50 up, 19 cents. Cons. list 45 cents. The patches are packed, 10 patches per carton with printed directions on envelopes.



Scully Spring Protector



Model "F" Houdaille Hydraulic Shock Absorber



Decker Sparelok

Get Lined Up for Winter Business

Winter business is near at hand and enterprising accessory merchants are getting ready for it.

Special thought is being given to stocking with the items that will have ready sale through the influence of cold and bad weather.

One thing the enterprising accessory merchant will do will be to remind car owners not to delay attention to their cold-weather automotive needs.

With the merchant who advertises in newspapers it is not too early to allot space to this purpose. Those who reach the owner by this or other methods will find him in many cases with winter accessories on his mind.

By whatever plan the owner is reached it is well to get him to thinking about his winter needs now—or better yet—buying now.

Houdaille Shock Absorber and Scully Spring Protector

MODEL "F" double acting Houdaille Hydraulic Shock Absorber is a new product of the Houde Engineering Corp., Buffalo, New York. In the illustration the full view shows the instrument used for the rear installation on Fords while the insert shows the fittings for the front Ford installations. Each fitting is an integral part of the instrument—nothing being loose. A Ford installation can be made in 25 minutes and costs $25, complete.

Scully Spring Protectors, also made by this company, are designed to protect springs from dust, mud, water and other deteriorating agencies. They are made of cellulose leather especially developed for this purpose.

Decker Sparelok

PROTECTION against theft of the spare tire or disc wheel is offered in the Decker Sparelok which is being produced and distributed by the Richard M. Decker Company, of Chicago. The Decker Sparelok replaces the nut or bolt which holds the spare tire or disc wheel on the carrier. It is screwed on tightly with the hand, a Yale key is removed and the device is in the locked position. Finished in black enamel and attractively designed the Decker Sparelok lists at $4.50.



American Bosch Electric Windshield Wiper with which two wiping arms can be made to operate in unison.

New Bosch Wiper

INCORPORATING important improvements a new model of the Bosch Electric Windshield Wiper has been put into production by the American Bosch Magneto Corporation, Springfield, Mass. Elimination of lost power through friction and elimination of noise resulting from worn gears is said to be accomplished in this wiper through transmission of power by direct linkage instead of through the usual train of gears. The power developed by the Bosch wiper is claimed by the company as an especially attractive feature. This permits use of a tandem attachment, or additional wiping arm, mounted on an adjustable rod and makes it possible for the driver to have the two wiping arms working in unison. They can be located closely together or used widely apart. The tandem arrangement is furnished at a slightly added cost. The price of the wiper complete, with attaching cord, including tax, is $9.50. The Tandem Attachment costs $1.75 extra.

GETTING MORE OUT of the SHOP

Jackson Valve Grinder and Drill

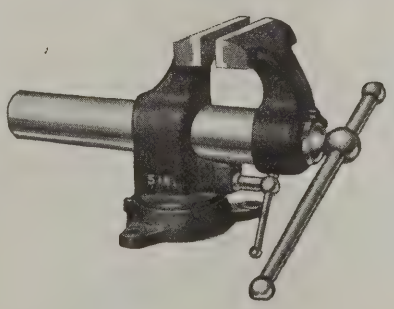
A general service tool in the form of a combination valve grinder and drill has been brought out by Mann & Briggs, Wabash avenue at 21st street, Chicago. Because of its short oscillation it never throws off the grinding compound, it is said, even at top speed and the valve can be ground in from 8 to 10 seconds. The oscillation is ⅛ of a turn which permits the use of the valve grinder at an angle of 45 degrees making it possible to grind valves under overhanging cowls.

As a drill it is said to be light and easy to handle and has a capacity up to ¼ in. With a special steel carbon removing attachment for the oscillating spindle, carbon can readily be removed. The combination valve grinder and drill with a 4 in. by ¾ in. emery wheel attachment has ample capacity for grinding chisels, drills and other tools and is said to make a compact all around small bench grinder. It is operated by 110 volt universal motor and weighs 8½ lbs. The tool with cable and connector plug, valve grinding spindle, two valve tips, one valve spring, ¼ in. drill chuck, and bench grinding arbor is priced at $45, f. o. b. Chicago. An attachment for grinding valve-in-head motors can be had for $2 extra and the price of the carbon removing brush is $2.25.

Dropfo Bench Vise

Under the trade name of "Dropfo," a vise that is made entirely of drop forgings, excepting only the handle, is now available. Each part is machined to be interchangeable with the same part on any other vise of the same size. The jaw plates are knurled and forged under the hammer and doweled onto the jaw. Thus it is possible to replace the jaw plates, which are naturally subject to wear.

The Dropfo Vise is lighter in weight than a cast iron type and made with a swivel base and wedge lock that is quick



Dropfo Bench Vise

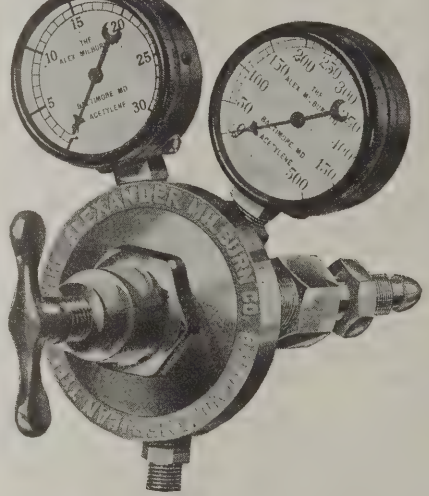
to set and automatic in tightening up, and has a grip that cannot shake or break loose, it is said. It is also made in the stationary type.

The vise is made in four sizes: 3 in. with jaws opening 5½ in.; 4 in. with jaws opening 6 in.; 5 in. with jaws opening 8 in.; and 5 in. heavy duty with jaws opening 8 in.

The vise is manufactured by The Fulton Drop Forge Company, Canal Fulton, Ohio.



Jackson valve grinder and drill, a compact unit for the automotive shop



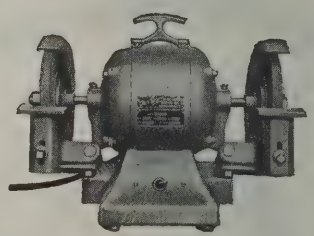
Milburn Acetylene Regulator

(Cut shown above)

Gas such as oxygen which is compressed in cylinders for welding and other purposes has to be delivered at reduced pressures ranging from several ounces to several pounds per square inch. Regulators are made for this and one of the latest of these is the Milburn made in various sizes known as the Standard, Single Gage for decarbonizing and ordinary gas regulating and Master regulators for the delivery of large volumes of oxygen or other gases to a number of outlets. The Milburn regulator is said to be noted for its extreme simplicity and accessibility. The rear opening is only 1⅛ in. in diameter which enables the cap to be unscrewed, the seat and nozzle to be immediately reached without undoing any other part. In the case of its requiring a new seat it can be immediately reversed or replaced. Bronze forgings are used for the major parts and the nozzle is of Tobin bronze. The operating pin is made of monel metal and a renewable coupling nut is provided. The diaphragm is made of resilient nickel silver and the adjusting key is quite large and provided with an easy grip. The seat is subject to very slight wear as the spring closing the seat with instead of against the pressure enables the seating to be effected by a sealing pressure of several pounds instead of hundreds of pounds. The maker is the Alexander Milburn Company, 1416 W. Baltimore street, Baltimore, Md.

Van Dorn 6 in. Bench Grinder

This grinder comes complete with two grinding wheels, adjustable tool rests, wheel guards, switch and cable, ready for use. It is provided with a handle for convenience in carrying about the job. The real improvement lies in the wheel guard. This particular grinder has an improved wheel guard which can be adjusted very easily with one bolt so that at all times the front end of the guard is always close to the grinding wheel. This allows the emery wheel to be used with complete safety to the operator even when the diameter has become very small. Of course the tool rests are also adjustable so they are the proper distance from the grinding wheel. The price is $38. It is made by the Van Dorn Electric Tool Co., Cleveland, Ohio.



Van Dorn 6 in. bench grinder

WORTHINGTON AIR COMPRESSOR

In the September 24 issue of MOTOR AGE on page 30 there was published a description of the Worthington Feather Valve Vertical Air Compressor, but the name and address of the manufacturer were omitted. Worthington Pump & Machinery Corp., with offices at Broadway & Cedar St., New York City, are the makers.

EDITORIAL

Guessing Versus Knowing

WE still come in contact with automobile dealers and repairmen who ridicule modern methods of ccurately diagnosing and correcting mechanical roubles. New oversize pistons are fitted in cylinders o overcome piston slap, but the cylinders are not eground or honed. They looked round to the mechanic nd he did not use a micrometer. When the job is one the slap is still there. Cylinders must be out of ound, says the mechanic. The time for him to have nvestigated that possibility was before the work was one.

Valve tappets are noisy. The mechanic scorns the lea of using a feeler gage to get the right clearance. Ie says he can set them right from the feel. When e is through they work all right but the noise indicates hat the clearances are not uniform. The customer is ot satisfied.

These are only two of the instances in which the use f the right tool at the right time would have enabled he repairman to do a better job in less time and would have saved the owner money. Fingers were nade before forks but in the modern scheme of things ve eat with forks. Hands were made before tools, but ots of good tools are sold every year.

Double-Smile Service pays.

Let Safe and Sane Credits Prevail

WITHIN the last year we have heard quite a bit about the wisdom of more sound time-sales olicies on the part of automobile dealers. Doubtless he trade at large has materially improved its practices long this line and headway toward saner credits has een made—yet here lately there have been numbers f stories indicating more or less "slipping" and a weakning of the knees.

There is no more excuse for credit extensions exceedng twelve months on new cars now than there was ix months ago.

If a limit of twelve months was good policy last year vhen such a limit was indorsed by leading finance comanies, bankers, dealers and manufacturers—it is good olicy today.

At the same time extensions are being liberalized in ome instances where not long ago there was hope of n approach to safe standards if not their actual attainnent.

The trade has been enjoying a good business and a eriod of good business might cause a dealer to let lown the bars a little in the matter of credit. His eceipts being larger than normally he feels he can ake more chance, but in his departure from safe and ane practice he cuts down profits that otherwise would ome his way and in the end is not so well off financially as he might have been. Also he gets into the swing of a bad habit that might eventually mean his ruin.

What these instances of "slipping" have to do with the "bad spots" found in the time sale situation we do not know but there might be a relationship and in some sections there are far too many repossessions.

Even when the demand for cars is good safe and sound credit policies should prevail.

Another thing about that "faint heart" stuff—it never "asked 'em to buy."

More Reconditioning Needed

ONE of the noticeable features of trade reports received recently relates to the insistence of used car buyers for vehicles in good mechanical condition.

Out in California the used car which has not been reconditioned is said to be extremely difficult or next to impossible to move.

Word comes from Texas that buyers right now are demanding higher standards of mechanical fitness in second-hand vehicles than ever, while a correspondent from the southeast writes that the used car in poor mechanical condition is substantially a drug on the market. And thus they come.

The wave of price reducing possibly is responsible to a considerable extent for this situation, the used car buyer while willing to step up into a higher price bracket that he would have invaded before the cuts demands that the car he buys is in good fettle. Rather than accept a car in poor mechanical condition he will drop back into a lower price bracket for his used car or buy, in instances, a new car for the sum he intended to spend.

But the big reason for the situation probably will be found in the growing disposition on the part of used car buyers to want better products. A few years ago it was much easier to sell automotive junk in the guise of transportation than it is today. Junk has been getting constantly more difficult to dispose of and right now we simply are getting a loud expression from the buying public on this point.

All of which means that the automobile dealer will have to pay close attention to the quality of cars he receives on trades.

Reconditioning used cars promises to be a much more popular practice by automobile merchants in the future. Insistence by the buying public for high standards of mechanical fitness in the used car will propel us in that direction.

What the trade needs now is more reconditioning. Sell transportation mileage and put as much transportation mileage in each car as possible. That is what the buyers are demanding.

Sales Are Booming Throughout U. S.

Exports Given Big Boost By Reductions in Prices

Dealers Meet Used Car Situation by Reducing Allowances on Trade-ins

PHILADELPHIA, Oct. 6.—Few signs of recession appear on the automotive horizon. Most of the large factories are holding production steadily to unusually high level for this time of year, and at least one large factory has been gradually speeding up for the last two or three weeks. Stimulated by price reductions and easy time payment terms, sales are booming in virtually all parts of the country.

Exports of cars and trucks, after a slight early summer recession, are again climbing, the figures for August showing a gain of about 100 per cent in unit numbers over the July totals. Lower prices have undoubtedly contributed to this gain, helping to boost the American vehicles over the foreign tariff walls. Several of the automobile and truck companies have expansion programs for overseas trade under way, and the industry as a whole is considering measures for better financing of sales abroad and for the reduction of distribution and delivery costs.

Several factories have announced plans for additions to their plant capacity, and this forecasts a period of unprecedentedly keen competition beginning later in the season. The year 1926 will be one of the hardest that sales departments have ever faced, because on them will fall the burden of keeping distribution up to the increased capacity of the plants.

A repercussion of the recent price cuts is being felt in the used car markets. Stocks of the traded-in and resold vehicles have been increasing in many of the important sections of the country, which to an extent is a normal seasonal trend; but the tendency is enhanced by the extremely attractive prices and terms on which the new cars can now be acquired. Dealers are frequently having to take losses to move their used car stocks, but on the whole they are meeting the situation in the best possible way—by reducing their allowances on trade-ins.

The public is showing an increasing disposition to demand only the best in used cars, insisting on models of good appearance and with essential parts rebuilt or placed in the best running condition.

ESTABLISH TIRE BRANCH

CHARLOTTE, N. C., Oct. 3.—Establishment of a branch of the Henderson Tire Company, of Cleveland, Ohio, in this city was announced here. T. H. Cline was named branch manager.

LUXOR ENTERS BUS FIELD

FRAMINGHAM, Mass., Oct. 5.—The Luxor Cab Manufacturing Corp. has announced that it will enter the bus field in addition to its line of taxicabs. Plans are now under way for the launching of the Luxor "Utopian," including advertising, sales, production and delivery problems, investigation and mapping out of bus routes and launching of bus operating companies. The bus division will follow the policy established as regards Luxor cabs, that is, protect franchises given to its operating companies.

Champion Athletes Join Sales Force

ST. LOUIS, Mo., Oct. 5.—Terrell C. Peters, former roller-skating champion, Jules J. Wehrli, a high class tenpin bowler and Frank Mulligan a former soccer star have been added to the sales force of the Lambert-Graves Motor Car Co., Manchester avenue and Kingshighway boulevard, Ford and Lincoln dealer. The company seems to have a penchant for adding athletes of prominence to its sales force.

Hupp Six at Popular Price Soon to Make Appearance

DETROIT, Oct. 2.—A popular priced six-cylinder Hupmobile car which will act as a companion to the well-known eight-in-line model, will be illustrated and described in MOTOR AGE at an early date.

According to the officials of the Hupp Motor Car Corp., the newcomer is of conventional design throughout, using the same quality of materials and identical standards of inspection as employed in the construction of the larger Hupmobile car. It is understood that the performance and riding qualities of the new model are very unusual.

OPEN GARDNER BRANCH

CHICAGO, Oct. 3.—The Gardner Motor Company, Inc., of St. Louis, has opened a wholesale factory branch at 2001 Michigan avenue, Chicago, in charge of Helm Walker, a well known Chicago automobile merchandiser.

In announcing this development in the distribution of Gardner cars, Russel E. Gardner, Jr., president of the Gardner Motor Company, states: "We determined to operate our own wholesale branch under experienced Gardner management to further assist our large dealer organization in the Chicago trading area in rendering Gardner owners the permanent and efficient sales and service facilities to which every automobile buyer is entitled. Our factory branch will carry a complete stock of parts, and warehouse Gardner cars for our dealers."

Kissel Co. Cuts List Price on Various Models $100 to $20

Four-Passenger Enclosed Speedste Also Is Added to Big Line Maintained

HARTFORD, Wis., Oct. 3.—The Kisse Motor Car Company has announce price cuts ranging from $100 to $200 o all six cylinder models except the fiv passenger brougham sedan and the fiv passenger brougham, and also price cut on the eight cylinder enclosed two pas senger speedster and de luxe victoria In addition a four passenger enclose speedster and a de luxe addition of th same model have been recently added t both the six and eight cylinder lines, th six cylinder and enclosed speedster bein listed at $2185 with the de luxe mode selling at $2685 and the eight cylinde enclosed speedster listing at $2585 wit the de luxe model selling at $3085.

Equipment on these standard enclose speedster models includes artiller wheels, rear view mirror and automati windshield wiper. The six cylinder d luxe model is in addition fitted with spar tire, front and rear bumpers, shoc bumpers and a clock. The eight cylinde de luxe speedster has artillery wheel front and rear bumpers, snubbers, auto matic windshield wiper, rear view mi ror and clock included as standar equipment. All four models are upho stered in leather and are lacquer finishe

Following is a list of the model affected by the recent price cuts togethe with old and new prices.

Model	Old Price	New Pric
Kissel 55		
2-p. Speedster	$1895	$17
4-p. Speedster	1995	18
2-p. Enc. Speedster	2285	20
4-p. Tourster	1895	17
5-p. Phaeton	1685	15
7-p. Touring	1785	16
4-p. Coupe	2185	20
5-p. Phaeton	2285	21
De Luxe Models		
2-p. Speedster	$2185	$20
4-p. Speedster	2285	21
2-p. Enc. Speedster	2785	25
4-p. Tourster	2085	19
5-p. Phaeton	1885	17
7-p. Touring	1985	18
4-p. Coupe	2585	24
5-p. Brougham Sedan	2685	24
7-p. Sedan	3285	30
Berline Sedan	3385	31
Victoria	2685	24
Kissel 75		
2-p. Enc. Speedster	$2585	$24
De Luxe Victoria	2985	28

AERIAL TAXI SERVICE

SAN FRANCISCO, Cal., Oct. 5.—A aerial taxi service is operated out San Francisco, flying to Sacramento, miles, in one hour, and to Los Angele 468 miles, in a little more than fo hours. Cost of travel is 20 cents p mile per each passenger, provided tw go in the same direction.

Automotive Exports First Half Year in Big Increase

Forty Per Cent Over 1924 Period Puts Industry Second in Foreign Shipping

WASHINGTON, Oct. 5. — Exports of automobiles, parts and accessories by the United States for the first half of 1925 increased $45,000,000 or 40 per cent over the first half of 1924, making the automotive industry rank second in exports, it was made known here in the semi-annual analysis of America's world trade by the Foreign Commerce Department of the United States Chamber of Commerce. Raw cotton was the leading export, increasing $111,000,000 or 31 per cent in value and 737,000,000 pounds or 65 per cent in quantity.

It is further shown that during the first half of 1925 exports of motor trucks and buses increased from 14,571 to 23,296 or 60 per cent over the first half of 1924 and passenger cars from 80,293 to 118,174 or 47 per cent and automobile engines from 13,722 to 93,678 in number, or 583 per cent. Notwithstanding the increased domestic consumption of gasoline, American exports of the third leader, gasoline, naphtha and other light products increased $8,400,000, or 9.5 per cent and 38,358,000 gallons, or 6.5 per cent in quantity. Another noteworthy increase in quantity though not among the 50 chief exports was tractors, gaining 47 per cent.

The analysis shows that the foreign trade of the United States as a whole took a jump during the first six months of the year, exceeding in value the total for the same period in any previous year except the war years of 1917 and 1918 and the post-war years of 1919 and 1920.

Farm Outlook Prompts Large Expansion Program by Pence

SIOUX FALLS, S. D., Oct. 3.—After inspecting the farm country in this state Harry E. Pence, president of the Pence Automobile Co., Minneapolis, Minn., distributor of Buick cars, forecast such a promising future agriculturally that he decided on a $200,000 enlargement program, including a new lease on a $25,000 building at Watertown, a new $60,000 Buick building at Huron, a $65,000 structure at Mitchell, and a $75,000 building here. Contracts have been let for the Mitchell and Huron buildings.

PEABODY GOES WITH VELIE

MOLINE, Ill., Oct. 5.—C. W. Hadden, general sales manager of the Velie Motors Corporation, has announced appointment of F. D. Peabody as district representative for Velie in the Pittsburgh district.

Mr. Peabody was for several years connected with the Studebaker Corporation in various sales capacities, and later with the Lally Light Corporation. For the past year he has been associated with the Chrysler sales organization, leaving them to assume his present responsibility.

Trade in Mexico Is On Upgrade

SAN ANTONIO, Texas, Oct. 5.—The automobile business in Mexico City is improving rapidly, according to reports from dealers in the capital of the republic south of the Rio Grande. The financial situation in Mexico is better than it has been for many years. Streets and roads are being improved and more inquiries are being made concerning automobiles.

William C. Benbow, distributor for the Dodge Brothers products in Mexico City was in San Antonio recently buying accessories, parts, tires, etc. He declared sales for all lines of machines represented in Mexico, are increasing. He said also, the outlook for trade is better than it has ever been. Mr. Benbow said most sales in Mexico are for cash or cash and paper which can be handled easily. Other members of the Mexican trade visiting San Antonio make similar reports.

HOLD TRACTOR SCHOOL

MEMPHIS, Tenn., Oct. 5.—The Memphis Branch of the Ford Motor Company has just held a school for Fordson tractor salesmen. C. E. Fawcett was the director. Road graders, scrapers, drag lines, street sweepers, trailmobiles, agricultural implements, and every piece of equipment used in this territory with a Fordson tractor were shown. One hundred and sixty-eight salesmen attended from points in Tennessee, Alabama and Mississippi, Arkansas, Missouri and Texas.

OPEN NEW WHITE BRANCH

LOS ANGELES, Sept. 26.—Announcement is made here of the establishment of a direct factory branch in that city by the White Company. J. L. Sydnor, who has been attached to the Pacific coast headquarters of the company at San Francisco, heads the Los Angeles organization. The White Company has been operated through a dealership in Los Angeles for about fifteen years and has a large number of its trucks in service.

WILL MAKE METAL BODIES

FREMONT, O., Oct. 3.—Papers have been filed with the secretary of state chartering the Fremont Metal Body Co., with a capital of $50,000 to manufacture metal bodies for automobiles. The incorporators are George D. Welles, Ray E. Zackman, Henry E. Saney, Frank A. Harrington and Charles Weinrich.

TO DO MANUFACTURING

AKRON, O., Oct. 3. — The National Steydford Co., has been incorporated with a capital of $15,000 by Don E. Williams, N. N. Pollock, Clarence V. Cole, Edward Kohl and A. V. Burkhart to manufacture and sell automobile parts and accessories.

Custom Coachwork Classics On Display in N. Y. Nov. 15-23

Say New Styles at Salon Will Tend Strongly to Brilliant Color Effects

NEW YORK, Oct. 2.—American and foreign custom coachwork makers will offer the latest products of their art at the twenty-first annual Automobile Salon to be held at the Hotel Commodore here Nov. 15-23. It is predicted that the new styles will tend strongly to contrasting colors in brilliant hues, rather than the combined and harmonizing shades that have come into general use of late years.

The carossiers exhibiting at the Salon are Blue Ribbon, Brewster, Brunn, Derham, de Causse, Dietrich, Fisher, Fleetwood, Holbrook, Judkins, Le Baron, Locke, Merrimac, Rollston and Willoughby. Nineteen chassis, representing six nations, will mount the custom bodies of the designers. They include Amilcar, Brewster, Cadillac, Cunningham, Duesenberg, Franklin, Isotta-Fraschini, Lancia, Lincoln, Locomobile, Marmon, Maybach, Mercedes, Minerva, Packard, Pierce-Arrow, Renault, Rolls Royce and Wills Sainte Claire.

A new rule of the Salon limits to twelve the number of chassis of any one make which may be exhibited.

Gas Volatility Holds Well To Federal Specifications

WASHINGTON, Oct. 5.—Results of the twelfth semi-annual motor gasoline survey, recently completed by the Bureau of Mines, Department of Commerce, indicate that the average volatility of motor gasoline now being marketed throughout the United States falls well within the limit of Federal Government specifications. The investigators found that the average gasoline sold today is about the same quality as that sold in the summer of 1924. As would be expected, gasoline sold in the summer of 1925 shows a slight decrease in volatility as compared with the gasoline marketed last winter.

A slow but certain tendency towards uniformity among the various gasolines marketed has been manifested since 1917.

BUDD ERECTS NEW PLANT

PHILADELPHIA, Oct. 5.—The Edward G. Budd Manufacturing Co., of Philadelphia, through its subsidiary, the Edward G. Budd Manufacturing Realty Co., is erecting on Charlevoix avenue, Detroit, a plant for unholdtering and finishing a substantial proportion of the bodies made in its plant here. The new factory will employ about 2,500, and will have available for working purposes 336,540 sq. ft. of floor space. The structure, which is being built on a tract of eleven acres, will be four stories high, 725 ft. long and 100 ft. wide. The cost will be about $1,500,000.

The Budd concern specializes in all steel bodies for automobiles.

Rubber Industry's Growth Is Reflected in New Buildings

About $4,000,000 Worth of Factories to Be Completed Before End of 1925

AKRON, O., Oct. 5.—Physical evidence of the growth and prosperity of the automobile tire industry in the last few years is reflected in a report of construction activities just made public by the city building department.

Before the end of 1925 approximately $4,000,000 worth of new factory buildings will have been completed or started by rubber companies in Akron.

Nearly everyone in the industry predicted two years ago that the city's excess factory floor space would not be occupied for the next 20 years. Today every inch of surplus space has been occupied, and the manufacturers are running new units and additions to completion.

A new $2,000,000 warehouse will be completed by the B. F. Goodrich Co. about Nov. 1. It will be six stories high, with a basement. This will make Akron the central distributing point for tires and other Goodrich products, eliminating rented warehouses in the large cities. The company also is building a new branch office building here.

Construction has just been started by the Goodyear Tire & Rubber Co. on a five-story factory unit, which with equipment will cost more than $800,000. The machine shop building, which was begun six years ago, but left uncompleted when the financial slump hit the industry, has just been finished, and is now occupied.

The General Tire & Rubber Co., completed additions to factory and office buildings, at an estimated cost of $225,000. A heater unit is now being constructed, and plans are being made for a larger building program next year.

Three additions to its factory and warehouse units are being made by the Seiberling Rubber Co.

The Firestone Tire & Rubber Co., which ranks next to Goodyear in point of tire production, is building a $350,000 warehouse and a $50,000 heater unit.

The Miller Rubber Co. has completed this year factory additions valued at $350,000. In the last three years the company has spent, entirely out of earnings, $5,000,000 for new equipment and other factory improvements, according to officials.

HAWKEYE TO RESUME

DES MOINES, Ia., Oct. 5.—The Hawkeye Cord Tire Co., has been organized to take over the plant formerly operated by the Hawkeye Tire & Rubber Co., which has been in the hands of a trustee for some time. High pressure cords as well as balloons will be turned out by the plant when operations are resumed. Officials of the company hope to have production under way by October 15. John T. Christie and Bert Springer have been appointed temporary officers.

VISIT G. M. PROVING GROUNDS

DETROIT, Oct. 2.—Members of the Detroit section, Society of Automotive Engineers, and a number of their friends in the industry, were the guests for an afternoon and evening of the General Motors Corp. at the proving grounds maintained by the corporation at Milford, Mich. The afternoon was spent in witnessing tests of passenger cars to determine their hill-climbing capacity, maximum speed, fuel economy, braking efficiency and other characteristics. The members later were guests of the corporation at a buffet supper served on the grounds. In the evening, O. T. Kreusser, resident engineer in charge of the proving grounds, read a paper on methods employed at the grounds in determining important characteristics of cars and accessories.

NEW POST FOR J. S. HUNT

NEW YORK, Oct. 5.—J. S. Hunt, general factory manager, Star Car Division, Durant Motors, Inc., has been appointed vice-president of Manufacturing of the Star Car Division, according to a factory announcement. Mr. Hunt's headquarters will continue to be at the Elizabeth plant.

MAKING FLOOD LIGHTS

COLUMBUS, O., Oct. 3.—The Madison Service & Sales Co., which has been operating as a partnership between Ralph Madison and S. G. Smith for the past year, for the purpose of manufacturing and selling automobile accessories, has been incorporated for $15,000. The concern will retain its old quarters at 118½ East Long street. The company is now engaged in the manufacture of flood lights especially adapted to buses, trucks and touring cars.

Moon-Diana Head Enthused Over Foreign Trade Outlook

Germany Offers Especially Fertile Field for American Cars, Believes Stewart McDonald

NEW YORK, Oct. 5.—After ten weeks travel and observation of business conditions in Europe, Stewart McDonald, president of the Moon Motor Car Company and Diana Motors of St. Louis returned to this country greatly enthused over the outlook for American progress in the automobile market of Europe.

Mr. McDonald in his statements concerning the increasing use of American automobiles abroad augments the optimism in export trade conveyed by other prominent automobile manufacturers recently returned from Europe. Especially in Germany does Mr. McDonald see a remarkable fertile field for American cars. In his opinion England stands second only to Germany, from the standpoint of popularity of American made automobiles, he being greatly impressed by the growing use there of many well known American makes.

In discussing the progress of his own cars, Moon and Diana, Mr. McDonald estimated production for year at 15,000 cars including 5,000 Dianas. He further stated that production at his factories for September this year exceeded the same month in 1924 by 50 per cent and that for the first nine months of 1925 the Moon and Diana output exceeded that of the whole twelve months of 1924, the increase being largely due to the success of the new Diana eight. He considers outlook for future business, by far brightest in history of his company.

25 Years Ago In the Automobile Industry
As Recorded In MOTOR AGE

(*From* MOTOR AGE *of Oct.* 11, 1900)

Automobile Racing at St. Louis

Albert Champion and Kenneth Skinner proved the chief attraction at the Missouri State Fair in St. Louis, Thursday, Oct. 4. They were supposed to be on hand to help out the trotting races by enlivening the program, but the marvelous speed of their motor tricycles and the reckless skill displayed in their riding caught the unassembled St. Louisians agape and held them enthused during the afternoon.

Further Concessions in Boston

BOSTON, Mass., Oct. 8.—After considering the results of a public hearing held last summer the Boston park board has voted to grant the owners of automobiles further concessions than those already enjoyed, by extending the time within which motor vehicles shall be allowed to be driven in the park system an hour at each end. This means that automobiles may be run in the parks from 8:30 in the evening to 11:30 a. m.

The Motor Age Exhibition

The dates for the automobile exhibition, being promoted by the publishers of the MOTOR AGE, are March 18 to 25, inclusive. The building where the exhibition will be held is the Chicago Coliseum located less than a mile from the business center of the city and accessible by various lines of transportation.

Philadelphia's Big Celebration

PHILADELPHIA, Oct. 8.—To celebrate their victory in securing the passage of the ordinance to throw the park road open to all classes of horseless vehicles and to demonstrate to the public the growth of automobiling, the officials of the Pennsylvania Automobile Club and of the Automobile Club of Philadelphia set apart last Saturday afternoon for a parade of self-propelled vehicles, and in order to make the exhibition more impressive, an invitation was extended to all "unattached" motorists to participate

Stutz Third Quarter Output Over Double 1924 Period

Chief Work of Last Six Months Directed at Rounding Out Distributing Organization

INDIANAPOLIS, Oct. 5.—A report covering third quarter production of cars by the Stutz Motor Car Company of America, Inc., shows that an increase in production has been made over last year's records of 213 per cent. The report also shows a marked increase in distribution with many strong new distributors and dealers added at impotant points.

"The work of the past six months," says president Fredrick E. Moskovics, "has been chiefly directed at rounding out the Stutz distributing organization, and we now have assurances that by the first of the year Stutz will be well represented in every important market in the country. During the same period we have made important forward strides in Stutz production methods and are now in a position, both from a production and a distribution standpoint, to do a greater business in 1926 than has ever been known in the history of the organization.

"Today we hear a great deal of the economies effected in the production end of the automobile industry. A recent report of one of the leading manufacturers states that they were producing as many cars with 11,000 men as were formerly produced with 17,000 men on the pay-roll. Another manufacturer has claimed a reduction of one-half in men employed with production figures for the smaller group exceeding those of the larger.

"While we feel that there are many economies being effected in manufacture, we at the same time believe that the greatest ecenomies of the future are going to be centered around the problems of distribution. Our policies include no sacrifice in design, materials or workmanship for Stutz cars. In fact we contemplate making Stutz cars better than ever before, but we are vitally concerned in new policies in relation to sales, the used car problem, distributors overhead and wasteful advertising and sales expenditures which have steadily increased the cost of selling.

"We believe the buyer of the car is more interested in saving from the cost of selling than he is in saving at the cost of production expenditure. Every dollar that is wasted in distribution must be paid by the buyer of the car. We believe our distributing policies, without sacrifice of profit to the dealer and distributor will make important savings to the buyer. Our present distribution organization, including our six branches in the larger cities and established responsible distributors and dealers at other points is reflecting a policy 'helping the owner to buy,' rather than going into high pressure sales methods. And on this basis we anticipate a shortage of Stutz cars in the coming months even in view of our plans for larger production."

LARGE AUTOMOBILE DISPLAY

PHILADELPHIA, Oct. 3.—Exhibits of motorbuses, parts and equipment will be larger than ever before at the show held by the American Electric Railway Association in connection with its 44th Annual Convention at Atlantic City, October 5-9. Over 200 manufacturers have taken over 100,000 feet of space, and of this 40 per cent will be occupied by bus manufacturers and the companies making parts and equipment for the motor coaches.

PAIGE-DETROIT PROFITS

DETROIT, Oct. 3.—Paige-Detroit Motor Car Company announces that its August profits, including all branches but before preferred dividends and taxes, amounted to $532,281.48. Profits for the first eight months of 1925 were $2,634,186.06. The cash resources of the company as of Sept. 27 were $5,429,000. President Harry M. Jewett declares that the outlook for fall business is very favorable, and that the improved models announced in August at reduced prices have been eagerly received by the trade and the public.

Percy Owen Drops Federal Post to Join Dodge Brothers

DETROIT, Oct. 3.—Percy Owen, chief of the automotive division, United States Department of Commerce, joined Dodge Brothers, Inc., Detroit, Oct. 1 as director of foreign sales. Announcement of Mr. Owen's appointment was made by F. L. Sanford, general sales manager of the corporation.

Mr. Owen is known throughout the United States and abroad for his long and important activities in the automobile industry and as an official of the Department of Commerce. His entry into the automobile industry dates to 1899. For twelve years he was dealer, branch manager, importer and eastern sales manager for Winton, Bianchi (Italian) and Chalmers cars. In 1912 he became general sales manager and director of the Chalmers Motor Car Co., Detroit. In 1915 he was vice-president of the Saxon Motor Car Co. and from 1916 to 1924 was president and general manager of the Liberty Motor Car Co.

At this time he joined the Department of Commerce and in the capacity of chief of the automotive bureau, has served on a number of important commissions.

MEMPHIS BUSINESS GOOD

MEMPHIS, Oct. 5.—September, despite unprecedented heat, has presented good activity in the automobile trade. The Ford Motor Co. that was closed down awaiting new models is resuming and in a short while will be running full capacity. This has stimulated somewhat interrupted accessory trade which also waited after a fine spring and summer activity. Automobile sales, parts, service, garage and affiliated departments are very active. A number of new cars have been placed on this market and a number of the concerns have enlarged their places.

Daily Auction to Feature Chicago Used Car Exhibit

Thirty-five Dealers Will Participate in Big Display and Market Oct. 10-18

CHICAGO, Oct. 5.—Finishing touches are being put on arrangements for the Seventh Annual Used Automobile Show, which will be held at the Chicago Coliseum, Oct. 10-18. There will be 35 exhibitors this year and it is announced that all available space in the big exhibition building will be occupied.

The most interesting new feature added to the show this year will be a public auction to be held every evening in the Coliseum Annex. Here cars will be sold under the hammer and it is promised that many big bargains will be "knocked down" to highest bidders. The show usually is well patronized by the public, but it is believed the auction will draw an attendance of larger proportions than at any of the earlier used car displays.

Only "tested and approved" used cars bearing the green tag of the association will be shown on the floor of the Coliseum, thus assuring the purchaser that the car he buys is in good condition. To obtain this "tested and approved" green tag an automobile must undergo a rigid examination by an impartial committee of experts, after which it is priced by an Appraisal Committee, made up of used car managers who know the market value of all such machines. In this manner the association strives to protect the buyer and it is by strict enforcement of rules upholding the integrity of the green tag that the association hopes to perpetuate the annual used car mart and maintain the confidence of the public.

Inspection of cars to be shown at the Coliseum now is under way. Hundreds of "tested and approved cars" will be offered for sale on the floor and put on the auction block.

Following is the committee which is in charge of the exhibition and sale: Chairman, W. E. Butler, Franklin-Butler Motors; George C. Norwood, Thomas J. Hay, Inc.; Gordon Bird, Bird-Sykes Company; Harry P. Branstetter of H. P. Branstetter, Inc.; H. A. Wehmeier of Community Motors, Inc.; O. G. Heffinger, Chicago Motor Car Co.

FORD CLINIC HELD

COLUMBUS, O., Oct. 5.—A service clinic was held at the salesrooms of the Miller-Van Horn Co., local Ford dealers recently. This was attended by approximately 35 Ford dealers and some 20 authorized service station men, all located within a radius of 35 miles of Columbus. The clinic was under the supervision of factory engineers from the Columbus branch of the Ford Motor Co. and was held with the purpose of assisting Ford sales and service dealers in rendering more satisfactory service. Factory experts demonstrated the most efficient use of modern shop equipment in the furnishing of genuine Ford service.

Milwaukee Sees Last Half Ahead of First Six Months

September Outstanding From Sales Standpoint With Delivery Only Problem

MILWAUKEE, Oct. 3. — Predictions made earlier in the year that motor car sales in Wisconsin for the last half of 1925 would be equal to or in excess of sales for the first six months of the year appear at this time to be almost certain of fulfillment. Retardation of sales from now on will come principally from manufacturers unable to meet distributor demands with adequate production schedules.

Following an August business satisfactory in all respects, car retailers in Wisconsin hit a stride in early September which promises to make that month an outstanding one in sales. Inability to obtain cars hampered September sales to some extent, but most distributors kept pace with retail sales during the month.

New car registration in August of this year exceeded registration for August, 1924, by 225, figures being respectively 5,995 and 5,770. Milwaukee county accounted for more than 60 per cent of this increase, its contribution to the excess being 146 new cars. Extended comparison of August sales this year with July sales this year and August sales last year with July sales last year reveals a loss, however. This was due, not so much to any tendency as to the unusually good sales in July of the present year.

Time payments are being met promptly and distributors and dealers point out that if payments are made as well during October as they are being made now, it is safe to assume that the financial rating of the average citizen is most excellent. October with its fuel and winter apparel obligations to meet is usually a crucial month for automobile credit men.

Mail Course School Hit in Trade Commission's Ruling

WASHINGTON, Oct. 5. — Using the name "Chicago Auto Shops" as a trade name for the business of conducting a correspondence course in the repair of automotive vehicles was denied B. W. Cooke, C. E. Wesch and Job-way Home Study, Inc., all of Chicago, in a cease and desist order issued by the Federal Trade Commission which alleges this group has been guilty of unfair methods of competition. The order also denies the company from using the name "Associated Drafting Engineers."

The order also sets forth that the company must cease making the following representations to prospective automotive students:

"That any person, regardless of age or the amount of schooling or education he has had can and will within the period of one year be qualified as an expert in all matters pertaining to the repair of automotive vehicles by taking the correspondence course offered.

"That pupils who take the course of instruction in the repair of automotive vehicles are generally able to secure positions as superintendents or other executive officers at salaries ranging from $75 to $200 per week and from $3,000 to $10,000 per year.

"That there is a great demand for persons who have completed respondents' correspondence course in automotive repair."

39,733 Persons Are Drawn by Stunt

CINCINNATI, Oct. 3. — E. S. Gahagan, proprietor E. S. Gahagan Company, Eight and Broadway, Studebaker distributors, reported that the recent endurance test of a continuous drive of 100 hours and one minute of a Studebaker Six had attracted 39,733 persons to his show rooms by actual count from about 6 to 11 p. m. He said the test was the best advertising he has ever done and had given his sales a very substantial boast.

DINES DODGE BROTHERS DEALERS

ST. LOUIS, Mo., Oct. 5.—Phillips Motor Co., Dodge Brothers dealer opened its new building at Lockwood and Summit avenues, Webster Groves, on October 1 with a dinner for 150 Dodge Brothers dealers in the St. Louis territory, a parade, a reception and a dance.

The Phillips Co. has been handling the Dodge Brothers car in Webster Groves for seven years, formerly having been located at 720 Big Bend road.

The cost of the new building was approximately $125,000.

SCOTT LEAVING OLDS

LANSING, Oct. 3.—I. J. Reuter, president of the Olds Motor Works, has announced the resignation of John M. Scott as factory manager. Mr. Scott has been factory manager for several years and has resigned to obtain a rest. He will leave soon on a six months' tour around the world. J. J. Carter has been named to succeed Mr. Scott. He has been assistant factory manager since coming to Lansing with Mr. Reuter, at the time the latter assumed the presidency of the Olds works.

LINSLEY HEADS SALESMEN

DETROIT, Oct. 1.—D. R. Linsley of Chicago, was elected president of the Packard Master Salesmen's Association at the annual convention of the organization just closed here. More than 300 salesmen, picked after a sales contest as the star Packard salesmen of the entire country, attended the convention. In order to render a better service to prospective purchasers and to persons to whom they have sold cars, the master salesmen were taken for a three-day tour of the factory, to study manufacture, sales and service.

New Light Six Car in Lower Price Class Planned by G. M.

Unit Will Be Companion to Oakland and Produced at Plant in Pontiac

PONTIAC, Oct. 3.—A new light six passenger car to sell at a price ranging between the Chevrolet and Oldsmobile, somewhere between $700 and $800, will be built by General Motors at the Pontiac plant of the Oakland, it was announced by officials of the corporation.

It is possible that the new product will be exhibited at the New York show in January, but production and delivery is not expected before spring.

Two years of experimenting have resulted in the completion of plans for the new car. Production of about 60,000 cars is expected the first year after its introduction. The name of the new car will not be announced until later, it being understood that the name will be selected through an advertising campaign, in which the public will participate.

The heavy production that Oakland has maintained this season has retarded the introduction of the new car, as the new product will be built in the Oakland plant and is announced as a companion car to the Oakland.

Manager A. R. Glancy of the Oakland plant announced that about $3,000,000 will be expended in the introduction of the new car and in preparation for its manufacture. Oakland dealers throughout the country will be authorized to handle the new car.

The new car will be equipped with a Fisher body, but all other specifications are to remain a mystery until the car is shown about the first of the new year.

Fifty Buyers Out of 2054 Who See New Ford Models

OAKLAND, Cal., Oct. 5.—Don Neher, Ford dealer here, kept actual count of the number of visitors at his showrooms for the first 24 working hours after the arrival of the new Ford models, and found that 2,054 persons came through the doors to see the new cars. This number of spectators produced fifty orders for cars. The crowd started to come within half an hour after the first of the new models had been placed in the showroom.

BUSINESS AHEAD OF 1925

ST. LOUIS, Oct. 3.—The McQuay-Norris Manufacturing Co. reports that business so far this year has shown an increase over the corresponding period of 1924, with the exceptiion of February, which was a few hundred dollars below the same month of last year. The increase has been distributed well, with the piston and pin plant at Connersville, Ind.; the piston ring plant at St. Louis; and the bearing plant at Indianapolis all sharing.

Balloon Tire Sales So Far in 1925 Over Twice 1924 Volume

Rise of Low Pressure Design in Favor of Automobile Owners Has Been Rapid

AKRON, O., Oct. 5.—Although there has been some falling off in balloon tire production during the past two months, sales of balloon casings so far this year have been twice those for the entire year of 1924, it is estimated by leading rubber manufacturers.

In the past two years the popularity of balloon tires has grown by leaps and bounds. They have gained the favor of the public in a shorter time than did the cord tire in comparison with the fabric casing.

Less than two years ago only a few high priced automobiles were equipped with balloon tires. Now practically all new cars, including Fords, are sold with balloons as original equipment.

Until July of this year, the proportion of balloon tires over high pressure pneumatics had grown steadily larger. In that month, however, balloon casing production fell from 1,729,121 in June to 1,561,806, according to figures just compiled by the Rubber Association of America, Inc. Inventories increased from 1,527,629 to 1,654,629.

Production of high pressure pneumatic cord casings gained from 1,994,704 to 2,181,645, inventories decreasing from 2,870,827 to 2,502,056.

Several large manufacturers in the Akron district are taking steps to practically eliminate fabric tire production.

Better methods of construction which lengthened the life of balloon tires have helped to increase their popularity, it is pointed out.

SAM L. CHORLINS DEAD

ST. LOUIS, Mo., Oct. 5.—Sam L. Chorlins, formerly president of the State Tire Co., and vice-president of the Associated Tire Dealers of St. Louis, died here recently. Mr. Chorlins had given up his connection with the tire industry and had planned to go to Florida. Before leaving for Florida he entered a hospital for an operation for appendicitis. Complications followed and he died.

Many tire dealers attended his funeral and Robert E. Lee, manager of the St. Louis Automobile Dealers' Association delivered the funeral oration.

New Models Bring Increase Ford Ford's Weekly Pay List

DETROIT, Oct. 5.—As a barometer of the popularity of the new Ford models, the Ford Motor Co. cites the increase in enrollment for the Ford weekly purchase plan. During the last ten days in August, enrollments totaled 13,167 and in the following ten days, the first in September, the number of new purchasers under the plan reached a total of 16,054.

All those who enrolled under the plan at the time the new cars were announced, benefited by the change, for they will receive the new types and be given preference as to delivery.

More than 175,000 are now enrolled under the plan and with others coming in at the rate of 1,600 a day, it is expected that the enrollment list will reach 200,000 within a short time.

63 PER CENT CLOSED CARS

DETROIT, Oct. 3.—Sixty-three per cent of all cars sold by General Motors in August were closed models, the corporation announced today. This total compares with 40 per cent in August, 1924, 30 per cent in 1923 and 31 per cent in 1922. This comparison includes Chevrolet, Oldsmobile, Oakland, Buick and Cadillac, and as these makes represent practically all price classes, the corporation considers the figures for them representative of the trend toward closed cars in the entire industry.

Customers Wait And Texas Dealers Clamor for Cars

Almost Unprecedented Situation Is Found in New Vehicle Market for Lone Star Trade

DALLAS, Texas, Oct. 5.—Dealers of standard makes of medium priced automobiles in Dallas and most cities of Texas, are clamoring for shipments from distributors and factories while long lists of customers continue to wait week after week for new models they purchased some time ago.

The situation in this territory with reference to new cars is almost unprecedented. Business has been improving from month to month. In many instances the dealers are 100 to 200 cars behind on deliveries, and some of the sales have been made 60 days.

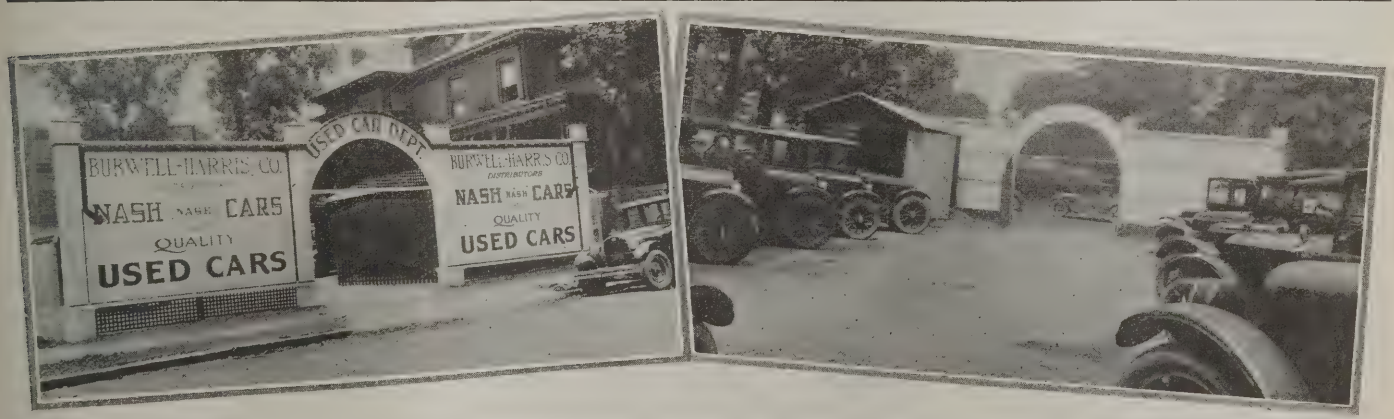
One dealer in Dallas said he was more than 100 deliveries behind and had been trying to borrow cars from agencies in five different places to make good delivery promises, but to no avail. Another dealer, 200 deliveries short, said he could use 20 car loads of new cars right now. Other stories are about like these.

But while the new car business has been setting new records the used car boogy involved practically every new car sale. While the dealers were generally badly understocked on new cars they were woefully overstocked on used cars.

ETTINGER TO WISCONSIN

DES MOINES, Ia., Oct. 5.—E. H. Ettinger, who for several years has been connected with the sales department of the Iowa Alemite Co., has been promoted and transferred to Milwaukee, where he will serve as assistant manager of the Alemite Lubricator Company of Wisconsin, a factory branch of the Bassick Manufacturing Co.

"Slicking Up" the Used Car Lot Is Something Many Dealers Neglect—But Not in This Case—And It Is Paying Dividends



Here is a "slick up" idea for dealers who would dignify and beautify the usually unattractive Used Car lot. The Burwell-Harris Company, Nash distributors in Charlotte, N. C., erected this handsome combination gate and billboard at the entrance of the property in the rear of its building. It attracts considerable attention and many prospective customers. On the inside of the Burwell-Harris Used Car lot the cars are arranged as if they were in a display room. The prices are plainly marked—but not smeared in ugly whitewash all over the windshield of the cars. In fact, this department is operated with the same high standards that govern the policies of the new car salesroom

Los Angeles Merchants Hold Second Big Closed Car Salon

Forty Motor Vehicle Models Representing Many Makes on Display at Hotel Biltmore

LOS ANGELES, Oct. 3.—All space available for the second annual closed car salon to be held at the Hotel Biltmore, Los Angeles, during the four days commencing Oct. 6, under auspices of the Los Angeles Motor Car Dealers' Association, has been assigned. Forty enclosed passenger cars, representing as many different makes, will be displayed.

Last year the salon was held in March and proved a marked success, with an attendance of 20,000 people, but President Robert S. Breyer this year believed that holding the event in the fall would stimulate more actual buying than in the spring.

The committee in charge of the show includes Lynn C. Buxton, Stearns-Knight distributor, chairman; J. S. Woollacott, of the Harold L. Arnold Company, Lincoln dealer, and H. E. Woodward, general manager of the Reo Motor Car Company of Southern California, and Burt Roberts, executive secretary of the dealer association.

Musical entertainment will be provided for the afternoon and evening sessions.

OFF TO EUROPE

DETROIT, Oct. 3.—Don S. Devor, vice-president in charge of manufacturing of the Timken-Detroit Axle Co., Mrs. Devor, Matthew B. Morgan, chief engineer and Mrs. Morgan, have sailed from New York for London. They will return early in November. Mr. Devor is also a director of the Timken-Detroit company and it is the intention of the two officials of the company to visit the principal automobile, truck, bus, axle and gear manufacturing plants in England and the Continent to observe methods and designs, particularly in bevel and worm gearing.

The itinerary of the party includes Paris, Brussels, London, Geneva, Interlaken, Lucern, Vienna, Berlin and Antwerp. They will attend any automobile, truck or bus shows that occur while they are in Europe.

Price Reductions Speed up Car Sales in Carolinas

CHARLOTTE, N. C., Oct. 5.—Out of conditions which caused apprehension in the automotive trade in this section of the country has come a well balanced and well distributed fall demand that is serving as the basis optimism. New car sales are brisk due largely to the cut in prices. Many of the dealers in the Carolinas are complaining of slow deliveries. The price cuts in most lines came when dealers' stocks were low. The used car situation is satisfactory, and the demand for light used cars is brisk. Extreme difficulty is being experienced in selling used cars in poor mechanical condition.

To Teach Salesmen Public Speaking

ST. LOUIS, Mo., Oct. 5.—A class in public speaking for its salesmen has been established by the Southwest Nash Motor Car Co., St. Louis Nash distributor. It is believed by the company that a salesman who is able to deliver a speech before an audience acceptably will be able to handle situations which arise in handling a prospect with more ease.

It is planned to make the school a feature of the regular Monday evening meetings which were resumed recently after having been discontinued during the summer. English literature and grammar will also be taught.

Indiana's Registrations Take 15 Per Cent Drop in August

CHICAGO, Oct. 3.—Statistics covering registration of new passenger cars in Indiana during August reveal that there was a drop of 15 per cent in the total as compared with the preceding month. Fords declined the sharpest with a loss of 34 per cent, due probably to the disposition of buyers to await developments concerning the new models. Low priced cars (excluding Fords) were off 4 per cent; there was a gain of .8 of 1 per cent in the medium priced division while high priced vehicles showed a gain of 10 per cent over July.

Following are the detailed figures for the first eight months of 1925:

Month	Fords	Low excl. Fords	Med.	*High	Total
Jan.	4,239	1,024	1,837	117	7,217
Feb.	3,515	896	1,533	103	6,047
March	5,778	2,042	4,031	205	12,056
April	5,002	2,292	3,641	243	11,178
May	4,819	2,205	3,413	175	10,612
June	4,176	1,982	2,920	153	9,231
July	4,314	1,965	3,245	164	9,688
Aug.	2,816	1,868	3,274	181	8,139
Total	34,659	14,274	23,894	1,441	74,168

*Includes miscellaneous cars not named.

The foregoing statistics were compiled from figures furnished to MOTOR AGE by Indianapolis Auto Trade Association, Indianapolis, Ind.

35 STAR DEALERS AT MEETING

SACRAMENTO, Cal., Oct. 5.—The sales convention for 1925 drew 35 Star dealers to this city, for a meeting presided over by H. W. Curtis, director of sales and branches of the Durant Motor Company of California. The session was for one day, and the W. I. Elliott Star Company of Sacramento acted as hosts to the convention at luncheon. The meeting was such a success that the dealers voted to have another similar convention here in October. Star dealers from all sections of northern California attended and heard Mr. Curtis present the Star Gold Certificate Plan, and several sales-systems that he has tried out successfully in different retail branches.

Production Capacity of Ajax Factory Will Be Doubled

Demand for New Nash Product Necessitates Enlargement of Factory Facilities at Racine

RACINE, Wis., Oct. 5.—Production capacity of the factory of the Ajax Motors Company is to be doubled in response to demand for the Ajax Six and active work preparatory to the installation of new machinery has already begun.

This announcement, coming as it does four months after the first Ajax was run onto the loading dock for shipment, is submitted by the company as evidence of the enthusiastic manner in which the public has received the new Nash-built car. Coupled with word regarding production expansion, it has been made known that Ajax Motors celebrated its fourth monthly "birthday" in the shipment of the 5,000th car to leave the plant since May 26 when the first Ajax was shown to a group of dealers.

"While it was felt, before actual production on the Ajax had begun, that demand for the car would be unusually heavy, I am frank to say that we did not anticipate public acceptance of so sweeping a character," said D. M. Averill, vice-president and general manager of the Ajax Motors Company. "With the opening of new dealer points, factory production has been increased to meet shipping schedules, but the demand has grown in proportions greater than our present facilities can supply, so we have literally been forced to prepare for doubling production considerably sooner than our original plans called for. When the Ajax Motors Company was organized it was Mr. Nash's fixed policy that nothing be left undone which would make the Ajax a quality product in every sense, and that production should be increased only as actual public demand for the car made greater volume necessary. And that is precisely the plan we have followed."

The program as carried out provided for limited production at first and as the cars passed into the hands of owners, their character of performance was closely checked by the dealer and by the factory. Production increases, on a careful basis, have been made from time to time until volume reached the point where the necessity of increased plant capacity was apparent.

41,500 Chevrolet Dealer Deliveries Made in August

DETROIT, Oct. 5.—The Chevrolet Motor Co. reports that a new record has been set in deliveries to Chevrolet dealers during August. A final check of August deliveries places the figure at 41,500, a larger number of cars than the company ever has placed during any preceding August.

This figure exceeds deliveries made in either June or July of this year.

Californians Demanding Rebuilt Used Cars

"As Is" Second Hand Vehicle Especially Hard to Move

Resale Business From Oregon Line South Caught in Complex of Unusual Problems

SAN FRANCISCO, Cal., Oct. 3.—Aside from stimulation of sales, in which they have been a considerable factor, recent reductions in new car prices have had several most interesting effects on the merchandising of used cars in California from Santa Barbara northward to the Oregon line.

Used car stocks in the hands of dealers of new cars have been increased materially; the demand for rebuilt used cars has increased to a point at which it is almost impossible to sell a second-hand car as is; credits for used cars turned in as first payments on new car purchases have been reduced to what appears to be about the minimum; dealers in new cars are endeavoring to take in only used cars of the makes they sell; dealers who handle used cars only are having rough going; and a large number, probably more than half, of the "wild-cat" used car dealers in central and northern California have been forced out of business, in some instances, particularly in the smaller cities and towns, leaving the banks holding the sack.

In addition to these conditions, a number of used cars, none of them rebuilt and few of them of little account as to transportation or appearance, have been scattered over this section of the state as a result of auction sales held hurriedly in an effort to realize something on the stocks of the used-car dealers who have gone out of business. This is not so good. The closing out of the "wild-catters" is a decided benefit to the general automotive merchandising industry all up and down the coast. Time alone will tell how the other newly introduced factors in the used-car situation here will work out.

Take in More Used Cars

Dealers in new cars have been compelled to take in more used cars on sales of new ones because of the great stimulation of demand by the recent price cuts. But the dealers, almost unanimously, have been allowing from 15 to 50 per cent less for these used cars than they did prior to the reduction in new-car prices. This means that, though the stocks of used cars in the hands of the dealers in San Francisco, Oakland, Sacramento, Fresno and other towns in this section, are probably larger on the average than they ever have been before, the amount of dealers' money tied up in these cars is only from 60 to 65 per cent of what it was at this time last year. It should be said in connection with this situation, that the months of September and October in this part of California are usually good passenger-car sales months, due to the influx of large sums of money in payment for the annual fruit crop.

Time on deferred payments on new cars has been extended in this section from the former usual 12 to 15 months, to 18, and, in some cases, 24 months. But the dealers who take in used cars on these new car deals are standing close together in an effort to hold down the deferred payments on such transactions to 12 to 15 months and no more. One of the results of this method, which is being generally accepted by the public, is that the dealer can then sell the used car he has taken in for cash on a very small margin and still come out in the clear. Or, he can sell this used car on a smaller down payment and longer time in the deferred payments, at a lower rate of interest, than he has been selling used cars in past years.

18 Months on Rebuilts

Reputable dealers in San Francisco and Oakland are selling good rebuilt used cars for down payments of $50 to $100, on time as long as 18 months, and at interest as low as six per cent. This is a lower interest rate than the buyer can obtain at a bank, and the dealer who is in a position to finance his used-car deals, or to have his financing done by his bank at 5½ to 6 per cent—as is being done here—is making some money on his used cars, largely due to the general reduction in factory prices on new cars.

Another interesting result of this price reduction is that more used cars are being rebuilt than ever before in the history of the industry in this part of the Pacific coast. At least 85 per cent of the dealers of the larger cities of this section are taking in almost no used cars except of the makes which they sell new, and then are rebuilding them, and selling them on a purely transportation basis.

There has been a very material in-

(*Continued on page 43*)

Milton Buys Two Little Peugeots

PARIS, Sept. 19 (By Mail)—When Tommy Milton boarded the French liner France for his return home after visiting and racing in Europe he had among his effects two Peugeot runabouts of a type common in France, having a four cylinder engine of only 40 cubic inch piston displacement. While in Europe Milton was impressed with the results obtained with small automobiles. He selected the Peugeot, which has a track of 37 inches and a wheel-base of 89 inches, as being the smallest of Europe's diminutive cars.

Foreign Trade to Be Topic at N. A. C. C. Fall Conclave

Drawings for Space at New York and Chicago Shows Also to Be Held

NEW YORK, Oct. 3.—Looking forward to 1926 as a new era in the export of American cars and trucks, the National Automobile Chamber of Commerce will have foreign trade as the chief topic of its annual fall meeting at its New York offices on October 8. The drawing for space for the National Automobile Shows at New York and Chicago will be held on the afternoon of that day.

The shows will take place at the Grand Central Palace, New York, January 9-16 and at the Coliseum, Chicago, January 30-February 6.

"We are trying to work for better motor travel conditions throughout the world," said John N. Willys, chairman of the foreign trade committee of the automobile organization, commenting on the program. "We want the foreign makers to get their share of the market. There is plenty of room for all. The problem is not what makes of cars will be sold, but rather how to improve roads, lower taxes, provide financing and get uniform regulations which will make motor travel readily available for all."

Preliminary details of the second World Motor Transport Congress, New York, January 11-13, will be made at this meeting.

Chandler Reduces Prices From $100 to $505 on All Models

CLEVELAND, O., Oct. 2.—Price reductions ranging from $100 to $505 are announced by the Chandler Motor Car Co. New prices compared with former ones and the amount of reduction are as follows:

	New Price	Former Price	Reduction
Twentieth Century Sedan	$1490	$1995	$505
Metropolitan Sedan de Luxe	1795	2195	400
Seven-Passenger Sedan	1895	2295	400
Brougham (2-Door, 5-Pass.)	1695	2045	350
Comrade Roadster	1695	1795	100
Sport Touring (5-Pass.)	1495	1595	100
Seven-Passenger Touring	1595	1735	140

CLIPS DE PALMA'S RECORD

TANFORAN, Cal., Oct. 5.—Frank Lockhart, driving a Miller Special, did the mile on the Tanforan track recently in 46 2-5 seconds, or two-fifths of a second lower than De Palma's record. Lockhart also took the 35-mile free-for-all.

Along Automobile Row

DENVER, Colo.—Boyle & Blunt, Inc., Denver Lincoln dealers, announce appointment of L. G. Murphy, formerly with the Wyoming Trust Company of Casper, Wyo., as sales manager.

MASON CITY, Ill.—W. A. Shipp has sold the Midway Garage here to George O. Zimmerman. The new owner is distributor of the Dodge Brothers car and Hart-Parr tractor at a plant on Tonica Street and has moved to the Midway Garage plant on South Main, a much larger building. Mr. Shipp's plans are not yet announced.

GOLDSBORO, N. C.—The Goldsboro Knight Company, of which Edward G. Goodwin is president, obtained the dealership for Willys-Knight and Overland passenger cars. The Odom Motor Company has closed a contract for the Nash dealership.

WATERLOO, Ia.—The Osbun Motor Corporation, Studebaker dealer in this district, celebrated its first anniversary and the opening of the Waterloo division's new quarters, at a banquet at which 40 members of the Waterloo and Cedar Rapids branches attended. Harold Plumb of the Associated Manufacturing company presided; A. C. McCormack, Cedar Rapids agency, B. M. Osbun, president of the firm; and Harry Padden, Waterloo head salesman, spoke.

FARGO, N. D.—J. C. Vincent & Co., distributors of Dodge Brothers cars have bought the Emerson Brantingham building from the Emerson estate for $140,000. The tire company will continue to occupy the east half of the building until the Emerson Brantingham lease on two floors expires in 1928. The Fargo Battery Co., will remain as a tenant. The building is 3 stories, concrete, 150x175, with a 45 ft. concrete platform on trackage. The site is 150x205.

CLEVELAND, O. — Berichon-McGhee, Inc., is the name of a new Ford agency in this city. Mr. Berichon has been connected with the industry since 1905. Mr. McGhee has been engaged in the automobile financing business.

LOS ANGELES.—W. D. Dunham, for 17 years connected with the Ford trade, has purchased the business of J. E. Coberly Company, Los Angeles Ford dealers, for years one of the largest merchandisers of Ford products in the west.

CINCINNATI, O.—The Max R. Miller Co., distributors for Willys-Knight and Overland cars at 1010 Gilbert avenue, has obtained a long term lease on the new stone-front Hake building at 2400 Gilbert avenue. The Miller Company will install increased service facilities.

PORTLAND, Ore.—The W. R. Cate Motor Company, Hudson-Essex dealer, has opened another retail store, used car showroom and service shop on Portland's east side. This new store will be operated in addition to Cate's original location at East Forty-second Street and Sandy Boulevard, and will be under the supervision of Arden Fugate. Mr. Cate will devote his personal attention to the new store.

INDIANAPOLIS, Ind.—The Miller Robinson Motor Company has been organized here to distribute the Oakland car in central Indiana. G. P. Miller is president; W. M. Thompson, the latter of Milwaukee, Wis., is vice-president; and W. J. Robinson, secretary-treasurer. The latter has been with the Oakland organization at Milwaukee since 1920. Mr. Miller has been with the Nash Sales Company of Milwaukee.

CINCINNATI, O.—Robert Sloan, president of the Robert Sloan Motor Company, Chrysler distributors in the Cincinnati territory, announced appointment of the Westwood Auto Sales and Service Company, at 3000 Harrison Avenue, as Chrysler dealer at Westwood, Ohio.

BELVIDERE, Ill.—Franklin W. Bauer of Rockford has purchased the Triangle garage here from Andrews & Beckington for $50,000 but possession will not be given until Nov. 1. The retiring owners have been in the garage business here for the past ten years.

CHARLOTTE.—The Locomobile Company of Western North Carolina has received its charter of incorporation with an authorized capital stock of $40,000 of which $2,500 has been paid in by J. E. Erwin of Morgantown; T. G. Mosley and J. C. Blanke of Charlotte. The company will take over a building at 500 North Tryom Street. Mr. Erwin is president, Mr. Mosley vice-president and general and Mr. Blake secretary-treasurer of the new company. The sub-agency at Winston-Salem will also be shifted to handle the Locomobile.

CEDAR RAPIDS, Ia.—Frank Weisbard, senior member of Wiesbard Bros., local Ford dealers, has purchased the brick building, 74 by 66 feet, adjoining the Weisbard station on the north. It will be remodeled for sales and service, the two buildings being thrown into one. The firm now has 132 foot frontage on both Washington and Second Streets.

CINCINNATI, O.—The Cincinnati Auto Specialty Company, 312 Main Street, has been named agent for the Southern Ohio and Northern Kentucky territory by the manufacturers of the Wedford automatic curtains.

BLYTHEVILLE, Ark.—The Jackson Motor Company of Blytheville, will represent Durant Motors, Inc., as selling agents here in the future. The company has discontinued Chevrolet.

NEW ORLEANS, La.—The United Motor Car Company, Inc., distributors of Hupmobile in the New Orleans territory and local dealers, now located at 718-721 St. Charles Street, secured the Go-Ro building at 4049 Carrollton Avenue, for a consideration of $90,000. The building covers a frontage of 99 feet on Carrolton Avenue and a considerable part of the 324 feet depth on Tulane Avenue. It will give the motor car company one of the finest dealer display room locations in New Orleans. Edmond H. Fairchild is president of the United Motor Car Company and Joseph H. Rule is vice-president.

FARGO, N. D.—The United States Tire Co., branch at 632 Second Avenue, proving too small, the company has leased 7000 square feet of space at 320 Northern Pacific Avenue, Manager C. W. Hulian reports. This gives an increase of 4000 square feet. The Stubes Top and Body Works will be a tenant of the second floor until it moves to the Nick Breyer garage building, under construction at Fourth Street and First Avenue, N.

GREENSBORO, N. C.—Coble and Starr, of Greensboro has become dealer here for Willys-Knight and Overland motor cars, taking over the franchise formerly held by T. and H. Motor Company, which now handles Studebaker.

CARTHAGE, Mo.—C. B. Nance has purchased the Durant and Star dealership in Carthage and leased the Hannum garage building, 124 Grant Street, where he will operate. In addition to a sales division the company will conduct a full equipped service garage and handle parts and accessories. The business will be conducted under the name of the Nance Motor Co.

DENVER, Colo.—Chas. E. Hilliker, formerly of the Martin-Hilliker Mortuary, and later connected with the Olinger Mortuary of this city, has purchased the interest of George Irvin in the Stovall-Irvin Ford agency located at Broadway and Alameda, and the firm will be known henceforth as Stovall-Hilliker. Mr. Irvin has bought the interest of J. O. Stannage in the Stannage-Vorbeck Company, also Ford retailers, this firm becoming Stannage-Irvin. They are located at Broadway and Arapahoe. Mr. Stannage is retiring.

CHATHAM, Ont.—Colonial Traders Limited, this city, have been appointed by the Russell Manufacturing Company of Middletown, Conn., as resident factors for "Russo" products throughout the Dominion of Canada and Newfoundland. Colonial Traders recently established a Western branch at Vancouver, B. C.

LOS ANGELES.—The Electric Equipment Corporation of Los Angeles has taken on Southern California distribution of Stromberg shock absorbers.

GALESBURG, Ill.—The new two-story garage on East Simmons Street built for A. L. Mulvaney is open for business. Mr. Mulvaney occupies the second floor with a general repair shop and Packard service for the Flannagan Motor Car Company, Packard dealers, whose sales rooms are on the ground floor.

DULUTH, Minn.—J. A. Kohn, proprietor of the Duluth Auto Exchange, Duluth, Minn., has bought from J. E. Davis the Zenith Motor Co., local agency for the Hudson-Essex. Mr. Kohn is associated with Jacob Jacobson and Harold Crassweiler of Jacobson Bros., contractors. The company has just moved from 316 E. Superior Street to a new 3-story building at 222 E. Superior Street.

LOS ANGELES.—F. L. Carley, for eight years with General Motors in Detroit, has been appointed service manager of the downtown headquarters of Stanley W. Smith, Inc., Los Angeles Hudson-Essex dealers.

BIRMINGHAM, Ala.—The Jordan Motor Co., of Birmingham, Ala., Oldsmobile distributors, announces the company's recent removal to larger quarters at 215 Twenty-first Street. The company also handles the Hudson and Essex line in the Bessemer, Ala., territory, where it operates a branch.

AKRON, O.—The Ge-Na Tire Sales Co., has been chartered with an authorized capital of 200 shares, no par value designated to sell tires, tubes and accessories. Incorporators are W. T. Nagle, F. L. Gehres, Lawrence Halter, C. T. Yeager and Dwight G. Hay.

MILWAUKEE, Wis.—Roman Gabryszek of Milwaukee has been appointed Hudson-Essex dealer in Bay View, a suburb, and has leased the building at 141 Ward Street formerly occupied by the Bay View Nash Co. He was formerly with the Edwards Motor Car Co., distributors for Dodge Brothers cars and Graham trucks.

CLEVELAND, O.—The Carrig & Collins Oil Co., has been incorporated with a $10,000 capital to deal in oils, greases, gasoline and automobile accessories. Incorporators are M. P. Carrig, C. J. Collins, W. G. Gibbons, John E. Gallagher and Emmett P. Dowling.

CHARLOTTE, N. C.—L. G. Rogers, formerly manager of the Southern Radio Corporation, of Charlotte, N. C., has assumed his duties as southern representative of the Radio Corporation of America, with headquarters at Charlotte.

CHICAGO.—The seventh branch establishment in Chicago of the Studebaker Sales Company is to be constructed at Lawrence and Avers Avenues, Albany Park, it is announced by H. R. Levy, president of the company.

TOLEDO, O.—The Francis-Raitz Auto Sales Co., 3412-16 Monroe Street, has been chartered with an authorized capital of $5000 to deal in automobiles and accessories. Incorporators are Horace E. Francis, E. P. Raitz, G. E. Raitz, Edward Sowden and R. P. Whitehead.

MINNEAPOLIS, Minn.—Two new Nash dealers in the city are the Halleen Garage, 3008 West Fiftieth Street and Miller Motor Co., 1909 Chicago Avenue. The appointments were made by S. G. Gunderson, assistant manager Northwest Nash Motors, 1008 Nicollet Avenue.

LOS ANGELES.—George Gardiner, for many years general manager of the Master Service Company, and president of the Los Angeles Automobile Trade Association, recently established a replacement parts distributing store in the commercial district of the city.

With the Associations

Exhibit Is Big Success

ABILENE, Texas, Oct. 3.—The fall show of the Abilene Automotive Trades Association, held in connection with the West Texas Fair, was the most successful the automobile dealers of West Texas ever staged. The accessory dealers of Abilene joined with the automobile men to make the show more complete. So did the tire dealers. Seventeen automobile dealers and several accessory and tire dealers had exhibits.

The fall show this year was held in the building erected by the automobile men especially for show purposes. This building was completed at a cost of $25,000.

Dealers report trade greatly stimulated through the show which was attended by some 50,000 persons.

Peoria Season Opens

PEORIA, Ill., Oct. 3. — At the first meeting of the fall of the Peoria Automobile Trade Association, President E. R. Maleham, presided. Rollen Travis gave the principal address, noting some of the pitfalls of the automotive industry and issuing a note of warning. It was voted to co-operate in a state membership campaign and committees will call upon every dealer within a radius of 50 miles and endeavor to procure his membership in the state association. Similar campaigns are to be carried in other districts in the hope of swelling the membership by several hundred.

Show Cars at Fair

MEMPHIS, Tenn., Oct. 3.—Favorable conditions attended the seventh annual show of the Memphis Automobile Dealers' Association which was held as a special feature of the Tri State Fair, just closed. The committee in charge of the motor vehicle display was composed of Harter B. Hull, Hugh H. Jetton, and Thomas H. Smart.

R. R. Price is president of the association.

In addition to exhibits of passenger cars, trucks, tractors and accessories were shown.

75,000 See New Models

TYLER, Texas, Oct. 3.—A successful automobile show was held in East Texas at Tyler, by the Tyler Automobile Dealers Association in connection with the East Texas Fair. The show lasted for one week during which more than 75,000 persons viewed the new models. Twelve dealers participated in the show. Dealers from ten surrounding counties were here. Business has improved as a result of the show, dealers declare.

LeQuatte Managing Iowa Association



T. W. LeQuatte

DES MOINES, Ia., Oct. 3.—At a meeting of the directors of the Iowa Automotive Merchants Association, T. W. LeQuatte, formerly of Des Moines but recently of Chicago, was elected secretary-manager of the association. For the past two years Mr. LeQuatte has been vice-president and director of sales for the Potts-Turnball Advertising Agency of Chicago. Prior to his connection in Chicago, Mr. LeQuatte was for 14 years advertising manager of Successful Farming, a Meredith publication at Des Moines.

Mr. LeQuatte is well known as an advertising man, having served as vice-president and treasurer of the Associated Advertising Clubs of the World, director and secretary of the Agricultural Publishers Association, president of the Associated Advertising Clubs of Iowa, president of the Advertising Club of Des Moines and vice-president of the Advertising Club of Chicago.

SHOW COMMITTEE NAMED

TOLEDO, Oct. 3.—Charles E. Doan, head of the Doan Motors Co., distributors of Nash cars in the Toledo territory, has been named chairman of the committee in charge of the Toledo Automobile Show to be held in February.

Other members of the committee selected by the Toledo Automotive Trades association are George W. Close, Jr., Thomas J. Cooper, secretary, John W. Banting, treasurer, and Warren E. Griffith, Paul H. Jones, Eli E. Culver, and Robert Butler.

Fire which destroyed the old Terminal Auditorium has made it necessary to secure a new show place. Lucas County Armory and one of the new downtown garages are being considered as possible show sites.

Names Sales Congress Committee

DENVER, Colo., Oct. 5.—At a meeting of the Denver Automobile Dealers' Association the following committee was appointed to handle the Sales Congress to be held in this city Dec. 9 under the auspices of the National Automobile Dealers' Association and the National Automobile Chamber of Commerce: Chairman, Tom Botterill, distributor for Hudson-Essex; W. J. Hoy, Buick branch manager, and Paul Jarrue, Chevrolet branch manager.

The meeting will probably be held in the ball room of the Brown Palace Hotel, and all dealers of lines represented in the association from Colorado, Wyoming, part of New Mexico, and Nebraska will be invited to attend as guests of their distributors. Four or five speakers of national prominence will appear on the program.

Urge Excise Tax Repeal

FAYETTEVILLE, N. C., Oct. 3.—Approximately 50 members of the North Carolina Automotive Trade Association attended the Fall meeting here of the association's third district, with Harry Clendenin, of Greensboro, the association's president, holding the gavel. A resolution urging repeal of excise taxes on automobiles was unanimously adopted.

Denver Show Planned

DENVER, Oct. 3. — Secretary Tom Braden of the Denver Automobile Dealers' Association has announced the choosing of Feb. 2, 3, 4, 5 and 6, 1926, as the dates for the annual Denver automobile show. This is held in the municipal auditorium each year, and is the principal event of its kind in the state.

Cottrell Is Advanced

SAN FRANCISCO, Oct. 3. — C. C. Cottrell, former manager of the good roads bureau of the California State Automobile Association, has been appointed consulting highway engineer of that organization, according to announcement by H. J. Burnnier, chairman of the association's good roads committee.

Organize at Durham, N. C.

DURHAM, N. C., Oct. 5.—The Durham Automotive Trade Association, recently organized, elected S. P. Alexander president and A. M. Worth, secretary-treasurer. Harry Clendenin, of Greensboro, president of the state association, attended the organization meeting.

Southeast Business Outlook Is Promising Despite Drouth

Collections Reported Slowing Up—Full Effect of Economic Disturbance Expected Next Year

CHARLOTTE, N. C., Oct. 3.—The immediate outlook for the automotive trade in the Southeastern states is promising, with many dealers and distributors reporting accumulations of unfilled orders, but important financing companies report a marked slowing up of collections.

The steadily increasing tightness of money is attributed in part to seasonal agricultural conditions and in part to industrial conditions resulting from a general partial suspension of hundreds of industrial plants because of lack of hydro-electric power incident to the unprecedented drought. The unfavorable aspects of the agricultural situation are expected to become more definite and the managers here of the divisional offices of finance companies indicated their expectation that an increasingly unfavorable affect on the automotive trade will be noted.

The larger dealers and distributors in this territory appear to expect their respective volumes of business in the next twelve months hardly will equal that of the previous like period. Many dealers reported they would be unable to make immediate deliveries on orders before October 15, when the heavy accumulation of orders, unloosed after the recent wave of price-cutting, will have been wiped out.

Some recent improvement was reported in the demand for accessories and garage supplies. The approaching close of the vacation season has resulted in a slackening of the demand for tires, though the tire business continues fair. The radio business continues, poor but is expected to show an early improvement. Only a fair demand was reported for Ford replacement parts.

The Ford Motor Company's assembly plant here reported receipt of orders for 10,200 touring cars within a week after the new models were announced. The plant had attained production only on touring cars by the middle of September.

Make Plans for a Greater Show at Jackson Mississippi

JACKSON, Miss., Oct. 5.—Work is in progress at the State Fair grounds here to provide for the enlarged automotive show, which it is claimed will be the most comprehensive ever shown in Mississippi at any fair, and equal to any show of its kind in the south. The automotive show will be held October 19-24 as a regular department of the State Fair. One of the largest structures, adjacent to the live stock section, is being fitted up for the purpose of housing the automotive show, which is under the personal direction of Dr. R. S. Curry.

Coming Motor Events

Automobile Shows

Danbury, Conn.—Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc., H. Lage, manager.

Boston—Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.

Chicago—Oct. 10-17
Seventh annual Used Automobile Show under auspices of Chicago Automobile Trade Association, at Coliseum.

Dallas, Tex.—Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.

Boston—Oct. 12-17
Annual radio show in Mechanics' Building. Shelton Fairbanks, manager.

Jackson, Miss.—Oct. 19-24
Automobile Show by local trade in connection with State Fair. Dr. R. S. Curry, manager.

Shreveport, La.—Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

Chicago—Nov. 5-7
Annual show in connection with convention of National Standard Parts Association, Coliseum.

Chicago—Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

New York—Nov. 15-21
Twenty-first Annual Automobile Salon.

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Louisville, Ky.—Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Races

Fresno, Cal.—Oct. 3
Rockingham (Salem, N. H.)—Oct. 17
Baltimore—Oct. 24
Charlotte, N. C.—Nov. 11
Los Angeles, Cal.—Nov. 26

Conventions

Buenos Aires, Argentine—Oct. 3-13
Pan-American Road Congress.

Montreal, Que.—Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.

Pittsburgh, Pa.—Oct. 12-14
Pennsylvania Automotive Association Convention.

Montreal—Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

Des Moines, Ia.—Nov. 12-13
Automotive Merchants' Association Convention.

St. Louis—Nov. 17-19
Annual Convention of National Tire Dealers' Association.

New York—Jan. 11-15
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Foreign Shows

Buenos Aires, Argentina—Oct. 3-13
Pan-American Road Congress.

London, England—Oct. 3-17
Olympia Passenger Car Show.

London, England—Oct. 29-Nov. 7
Annual Truck Show.

Berlin, Germany—Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

RECEIVER FOR EARL MOTORS

JACKSON, Mich., Oct. 3.—Frank H. Shaw has been appointed receiver for Earl Motors Company of Jackson, by Circuit Judge Williams, in a decree filed by the Jackson City Bank against the company. All property of the company was ordered turned over to the receiver to be sold for the satisfaction of creditors of the concern. Appraisers have been appointed to value the plant and property. The decree sets forth that the concern owes various banks a total of $604,973.

GOES TO FLINT

OAKLAND, Cal., Oct. 5. — George R. Scott, assistant general manager of the Durant Motor Company of California, with headquarters in Oakland, since the Pacific coast Durant factory came under the management of Norman de Vaux, has been appointed assistant general manager in charge of production at the Flint Motor Company's Plant, Flint, Mich.

Toledo Prepares to Receive Fleet of Twenty Airplanes

TOLEDO, Oct. 2.—Arrangements are being made for the Glidden tour of a fleet of about 20 aeroplanes to stop in Toledo through Robert A. Stranahan, president of the Champion Spark Plug Co., leading Toledoan interested in promotion of commercial aviation in this part of the country.

The flyers will probably stop here at Heatherdowns, a large new subdivision in which suitable acreage for landing is available.

A committee headed by Stranahan is purchasing an airport for Toledo and some of the Ford aviation engineers have been in Toledo to survey various sites selected by the committee.

Stranahan proposes to purchase the field and develop it and later turn it over to the city when legal steps can be taken by the city to purchase such an airport

Luisville Begins to Feel Effect of Reduced Prices

Jed Car Stocks Lower Than Usual and Fall Is Expected to Be Best Season

LOUISVILLE, Oct. 1.—The effect of pe reductions and new models which, en first announced, failed to materially rease new car sales, is beginning to felt generally. September sales are ad of August and are expected to al July. Good general rains have ken the extended drouth which caused ributors some anxiety over the rural ation and fall sales throughout the e are expected to show quite an imvement over the summer months.

sed car stocks are lower than at any e during the past 12 months. Dealers tinue to buy used cars carefully and making strenuous efforts to keep ks low. Low resale prices are bling dealers to move used cars idly.

ord sales are showing a decided imvement over August, which had the est Ford sales record of any month year, and the dealers are enthustic over the bright outlook for sales the new models. Many of the new iel open cars have been sold and ivered and practically every dealer a stack of orders for the new closed ds and will begin delivering these iels early in October.

ime payments are satisfactory and y few repossessions are being reted. General business conditions are d. Collections are improving. Truck s are equaling last year's record but not keeping pace with passenger car s. Tire, accessory and replacement ts dealers report sales as fair while io jobbers and dealers report a slight provement and are optimistic over fall winter prospects.

SQUEEKS and RATTLES



Wife—"Dear, the doctor found two spoons and six buttons in baby's stomach."

Hubby (tuning radio) — "Wonderful what a small receiving set can pick up."

—College Comics.

The two great drawbacks to the happiness of the motor tourist are the billboard and the board bill.

—The New Yorker.

Good Excuse

She: Now, what are you stopping for?

He (as the car comes to a halt): I have lost my bearings.

She: Well, at least you are original. Most fellows say they run out of gas.

—Ziff's.

The Wall Street Journal thinks motorists, in the interests of pedestrians, should carry their spare balloon tires on the front bumper.

—The Road.

One headlight is all you need if the other fellow's guess about the side it's on is correct.

—Associated Editors (Chicago).

Take It or Leave It

Painted on the windshield of a used Ford roadster parked in front of **The Road** office was the expressive sign:

"For Sail. Cheep."

Of course the passing proof reader, who had been to spelling school, paused to smile over the sign and get funny at the expense of the rustic-looking owner.

"How soon does this boat sail?" he asked.

"Just as soon as some sucker comes along that can raise the wind," was the rustic's ready reply.

—The Road.

Impossible

"Have you heard the latest? Mrs. Fisher walks in her sleep!"

"How perfectly absurd . . . when they have **three** cars!"

—The Passing Show.



Mildred—What did you do when he proposed to you on that aeroplane trip?

Frances—Oh, I fell for it.

—Exchange.

LIFORNIANS DEMANDING REBUILT USED CARS

(*Continued from page* 39)

ase in the number of men and women o, in buying their first automobile, chase a rebuilt used car. These prosts buy rebuilt cars of standard makes ich sell when new up to $1,500. These s can be bought for $250 to $800 or 0, and this rather unusual wave of ing, which set in along about the inning of vacation time, in May and ie, has done some harm to sales of se cars priced, new, at up to $1,000. the other hand, these buyers have ved an excellent outlet for honestlyuilt cars in the hands of the new-car lers.

Rumors of overstocking in used cars the Pacific coast have gone out widely ough the industry, but it is quite apent to one on the ground that those lers who reduced the prices they alred for used cars to correspond with factory price reductions on new cars e not suffered any on their trade-ins. Probably less than 3 per cent of the dealers in central and northern California failed to do this, and they are the only new-car dealers who have suffered. In spite of the efforts of a number of car-owners who purchased automobiles this year prior to the recent price reductions to allow their cars to go by the board, and get new ones at the reduced figures, there have been comparatively few repossessions. In the opinion of the dealers of San Francisco and Oakland, these repossessions of new cars amount to less than 7 per cent of sales, and these mainly among cars priced at $1,500 or less. In used cars, priced up to about $750 or $800, repossessions are estimated at 9 per cent, slightly higher than among the new cars.

Takes Capital to Stay

Dealers in used-cars only have been having rough going, and only those with capital, or the ability to get capital, have been able to hang on, and the greater part of the used car business has gone back where it belongs, to the reputable and established dealers in new cars. The tendency to separate completely the new-car business from the used-car section is growing rapidly in the establishments of all the new car dealers. Some of these dealers are openly advocating the elimination of all "trade-ins," by the simple method of paying cash for all used-cars bought, and demanding cash first payment on all new cars sold. There has been a well-sponsored movement among San Francisco dealers for some time to enter into an agreement whereby each dealer would buy only used cars of the makes which he sells new, paying cash for them or taking them on new car sales, as he prefers. Both these plans have received very serious consideration by the leading dealers of San Francisco and Oakland, and indications are that the recent factory price-cuts and the resultant used-car complications may bring about definite action by the dealers' associations soon.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
------	4-p	Sport-Roadster	1,495
------	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
------	-----	Wanderer	1,845
		"8-88"	
------	4-p	Sport Roadster	1,975
------	6-p	Touring	1,995
------	5-p	Brougham	2,250
------	5-p	Sedan	2,350
------	7-p	Sedan	2,550
------	-----	Wanderer	2,400
BUICK		"Standard"	
------	2-p	Roadster	$1,125
------	5-p	Touring	1,150
------	2-p	Coupe	1,195
------	4-p	Coupe	1,275
------	5-p	4d. Sedan	1,295
------	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
------	2-p	Roadster	1,250
------	5-p	Touring	1,295
------	5-p	Sedan	1,495
------	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
------	3-p	Sp. Roadster	1,495
------	5-p	Sp. Touring	1,525
------	4-p	Country Club	1,765
------	4-p	Coupe	1,795
------	5-p	Brougham Sedan	1,925
------	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
4075	2-p	Coupe	$3,045
------	5-p	Sedan	3,195
4155	7-p	Sedan	3,295
4240	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
------	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
------	-----	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	-----	Phaeton	3,250
------	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "SS"			
3090	2-p	Roadster	$1,695
3132	4-p	Roadster	1,785
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3248	4-p	Royal Dispatch	1,885
3376	5-p	Coach	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3128	5-p	Sedan 4d.	1,995
------	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895
3585	7-p	Limousine	3,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2325	5-p	Touring	$ 895
2435	5-p	Touring DeLuxe	1,025
------	3-p	Coupe	975
2580	5-p	Sedan	895
		"43"	
2750	5-p	Touring	1,095
2810	5-p	Touring De Luxe	1,195
2910	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
------	3-p	Coupe	1,175
------	5-p	Sedan	1,295
3190	5-p	Sedan De Luxe	1,595
3190	5-p	Sport Sedan	1,625
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	2,185
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3400	3-p	Coupe	2,345
3500	5-p	Sedan	2,345
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
------	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
------	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$. 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DORRIS		"6-80"	
4120	4-p	Pasadena Tour.	$4,150
4115	7-p	Touring	4,150
4193	4-p	Coupe	4,985
4200	5-p	Sedan	5,550
4310	7-p	Sedan	5,800

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
------	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
------	2-p	Sp. Roadster	900
2225	5-p	Touring	810
------	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
------	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
------	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
------	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
------	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
------	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
------	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	795
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
------	5-p	Oxford Sedan	3,172
GARDNER		6A	
------	5-p	Brougham	$1,495
3070	5-p	Touring	1,395
------	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	-----	DeLuxe Sedan	1,895
		8A	
------	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3360	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		D-1	
3360	5-p	Sedan	$1,695
HUDSON		"Super Six"	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,195

SHIP. WT.	PASS.	BODY STYLE.	PRI
3425	4-p	Brougham 4 d.	1,
3675	7-p	Sedan	1,
HUPMOBILE "R"			
2595	2-p	Roadster	$1,
2705	5-p	Touring	1,
2760	2-p	Coupe	1,
2875	5-p	Club Sedan	1,
		"E"	
3050	2-p	Roadster	1,
3270	4-p	Roadster	1,
3135	5-p	Touring	1,
3295	2-p	Coupe	2,
3295	4-p	Coupe	2,
3410	5-p	Sedan	2,
JEWETT		"23-25"	
3025	4-p	DeLuxe Road.	$1,
3015	5-p	DeLuxe Touring	1,
3000	5-p	Coach 2d.	1,
3150	5-p	DeL. Coach 2d.	1,
3305	5-p	DeLuxe Sedan	1,
JORDAN		"J"	
------	4-p	Playboy Road.	$1,
------	5-p	Sedan	1,
		Series "A"	
3330	2-p	Playboy Road.	$2,
3340	5-p	Touring	2,
3450	3-p	Friendly "9"	2,
3625	5-p	Brougham	2,
3520	4-p	Victoria	2,
3525	5-p	Sedan	2,
3470	7-p	Sedan	2,
KISSEL		"55"	
3130	2-p	Speedster	$1,
------	2-p	Sp'dster De Luve	2,
------	4-p	Speedster	1,
------	4-p	Sp'dster De Luxe	2,
3530	2-p	Enc. Speedster	2,
------	4-p	Enc. Speedster	2,
------	4-p	Enc. Spdstr. DeL	2,
------	2-p	Enc. Sp'd'r DeL.	2,
3190	4-p	Tourster	1,
------	4-p	Tourster DeL.	1,
2980	5-p	Phaeton	1,
3170	5-p	Phaeton DeL.	1,
------	7-p	Touring	1,
------	7-p	Touring De L.	1,
3430	4-p	Coupe	2,
------	4-p	Coupe De Luxe	2,
3540	5-p	Brougham Sedan	1,
------	5-p	Broug. Sed. DeL.	2,
------	5-p	Brougham 2 d.	1,
4070	7-p	Sedan De Luxe	3,
4010	7-p	Berline Sed. DeL.	3,
3530	5-p	Victoria	2,
------	5-p	Victoria De Luxe	2,
		"75"	
------	2-p	Speedster	2,
------	2-p	Speedster De L.	2,
------	4-p	Speedster	2,
------	4-p	Speedster De L.	2,
------	2-p	Enc. Epeedster	2,
------	2-p	Enc. Sp'd'r DeL.	2,
------	4-p	Tourster	2,
------	4-p	Enc. Speedster	2,
------	4-p	Enc. Spdstr. DeL	3,
------	4-p	Tourster De L.	2,
------	5-p	Phaeton	1,
------	5-p	Phaeton De Luxe	2,
------	7-p	Touring	2,
------	7-p	Touring De Luxe	2,
------	4-p	Coupe	2,
------	4-p	Coupe De Luxe	2,
------	5-p	Brougham Sedan	2,
------	5-p	Broug. Sed. DeL.	2,
------	5-p	Brougham 2 d.	2,
------	7-p	Sedan De Luxe	3,
------	7-p	Berl. Sed. De L.	3,
------	7-p	Victoria	2,
------	7-p	Victoria De Luxe	2,
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,
3000	5-p	Touring (Enc.)	1,
2950	5-p	Spec. Touring	1,
3200	5-p	Sedan	2,
3425	5-p	Spec. Sedan	2,
		"Minute Man"	
3120	2-p	Roadster	2,
3195	5-p	Touring	2,
3489	7-p	Touring	2,
3230	5-p	Lark Touring	2,
3368	5-p	Cal. Touring	2,
3395	7-p	Cal. Touring	2,
3375	7-p	Royal Coach	2,
3440	5-p	Brougham	2,
3542	5-p	Sedan	2,
LINCOLN			
4380	2-p	Roadster	$4,
4595	7-p	Touring	4,
4565	4-p	Phaeton	4,
------	-----	Sport Touring	4,
4655	4-p	Coupe	4,
4775	4-p	Sedan	4,
4825	5-p	Sedan	4,
4865	7-p	Sedan	5,
4945	7-p	Limousine	5,

MOTOR AGE

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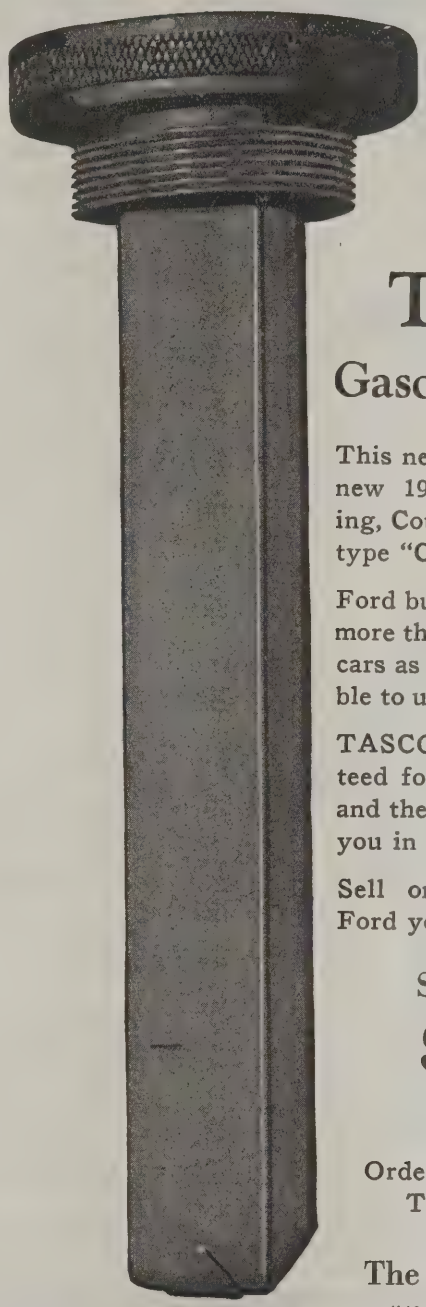
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Entered as Second Class Matter, Sept. 19, 1899, at the Post Office at Chicago, Ill., under Act of March 6, 1879

for the
NEW FORDS



order
TYPE
"H"
TASCO
Gasoline Gauge

This new Type "H" fits the new 1926 Roadster, Touring, Coupe, and Tudor. Old type "C" fits the Fordor.

Ford buyers will want them more than ever on these new cars as it is almost impossible to use a measuring stick.

TASCO gauge is guaranteed for the life of the car and there's a good profit for you in every sale.

Sell one for every New Ford you see.

Sell Quick at
$1.25
Retail!

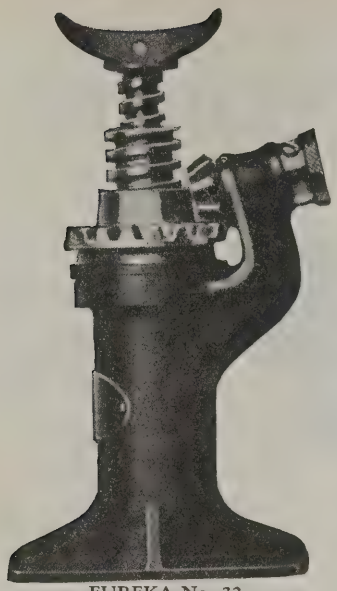
Order some of the new Type "H" today.

The Akron-Selle Co.
"40 Years in Business"
Akron, Ohio

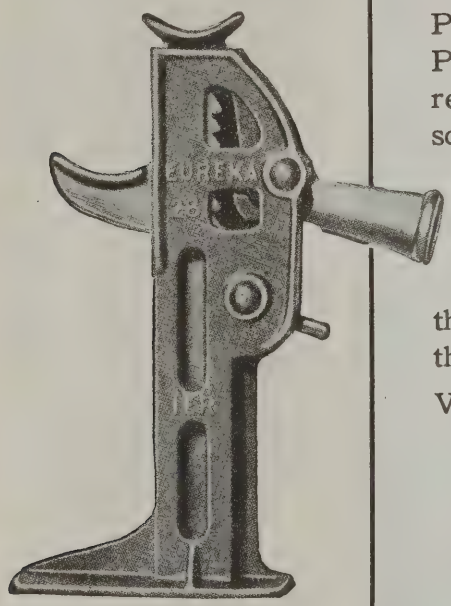


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FORDS, CHEVROLETS AND OVERLANDS



EUREKA No. 32
Special Balloon Tire Jack
Low placement—high lift. Every part designed especially for balloon tire service. Double machine cut screw of high carbon steel. Fast and easy to operate. Equipped with 36 inch collapsible steel handle positively locked in action. Adjustment, 7 to 17 inches. Capacity, 3,000 pounds. Weight, 8½ pounds. Packed in individual cartons.
Price - - - - - - $5.75



EUREKA No. 28
A husky ratchet type jack. Lifting pawls are heavy and spring mechanism simple. Adjustment, 8 to 16½ inches. Capacity, 2,000 pounds. Weight, 4½ pounds.
Price - - - - - - $2.25

Who makes it?

WHEN a jobber or dealer considers handling a line, of course he asks: "What is it?"

But the question of even more importance to him is: "Who makes it?"

A good pump is a good pump—a good jack is but a good jack, after all.

But when it comes to handling them, expecting to build a decent trade in them, make money and friends with them, and get real lasting satisfaction out of your relationship with them—the organization that makes them is the vital thing.

Back of every Eureka-Fostoria Jack or Pump is the integrity of the Fostoria Pressed Steel Company—a house whose reputation for quality of product and squareness of policy is known to the entire automotive trade. In taking over the manufacture and distribution of the Eureka-Fostoria line, we offer to jobber and dealer a money-making line that is a substantial one—and a policy that protects you.

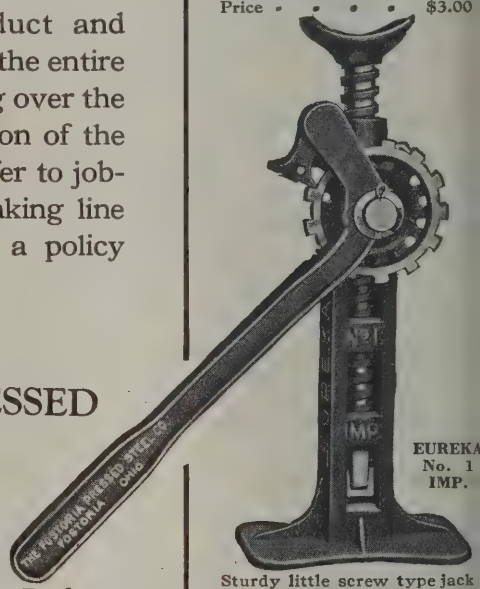
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(Successors to the Ashland Mfg. Co., Ashland, Ohio)
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FOSTORIA, OHIO U. S. A.

Also manufacturers of the famous Fostoria Fenders



EUREKA No. TS PUMP
A powerful pump. 1½ inch diameter with 18 inch barrel. Five ply rubber hose 24 inch long with "Han-D Slip-On" connection. Baked maroon enamel finish.
Price - - - - $3.00



EUREKA No. 1 IMP.
Sturdy little screw type jack for Ford, Chevrolet, Overland particularly. Capacity, 2,000 pounds. Weight, 4 pounds.
Price - - - - $1.40

THE EUREKA LINE

EUREKA

FOSTORIA

JACKS *and* PUMPS

MOTOR AGE

Vol. XLVIII | Chicago, October 15, 1925 | No. 16

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

AUTOMOTIVE production maintains high level set in September when sales totaled about 300,000 according to final estimates. Page 32.

Drawings for space at New York and Chicago national shows are held in East. Page 32.

Hupmobile announces new six with sedan selling at $1285 and touring at $1225. Page 16.

Seventh annual Used Car Show opens in Chicago at Coliseum. Page 34.

Pierce-Arrow wins appeal to board of tax appeals over deductions claimed for depreciation of special tools and patterns. Page 39.

Dealers in interior California towns win in fight for lower freight rates in decision by I. C. C. Page 39.

Pierre S. duPont, chairman of General Motors board, is appointed tax commissioner for Delaware. Page 39.

Fageol-Hall-Scott merger strikes snag in form of California legal restrictions. Page 42.

Next Italian grand prix race will admit single-seater racing cars, irrespective of decision of other European clubs. Page 42.

A-C Spark Plug Co. plans to begin making mufflers about Nov. 1. Page 33.

Fifth tire price advance since May is expected about first of November. Page 33.

Olds plans to add equipment to care for big increase in demand for cars. Page 34.

Captain Rickenbacker believes this year will see fall and winter demand for cars equal to summer volume. Page 38.

Revenue collections from automotive industry advance materially during August, survey shows. Page 38.

Bus manufacturers, body builders and parts and accessories makers will hold joint exhibit in Detroit, Nov. 16-21. Page 38.

Letters to metropolitan dealers indicate Ford has abandoned low down payment plan. Page 43.

Dates of National Standard Parts Association show in Chicago are changed to November 16-18. Page. 43.

Weather has bad effect on St. Louis used car auction, but dealers feel that project will be more successful soon. Page 35.

Spring Clutch Company absorbs Central Gear and Hunter Dry Kiln in big merger. Page 35.

New motor coach body being designed and built by Kentucky Wagon Manufacturing Company for Ford one-ton truck. Page 35.

Miller Rubber Co. plans meeting of stockholders Oct. 19 to consider reorganization to obtain more working capital. Page 36.

Kelly-Springfield will abandon Akron plant entirely. Page 36.

Motor and Accessory Manufacturers' Association holds three-day annual convention in Montreal. Page 36.

National Association of Finance Companies will hold annual convention in Chicago November 16 and 17. Page 37.

St. Louis plant of Chevrolet adds another assembly line to speed up production. Page 37.

In Next Week's Issue—What Is a Small Car?

A TAX-DOGGED INDUSTRY APPEALS

For Relief

Repeal of Automotive War Taxes Urged Upon Congress as Ways and Means Committee Meets to Consider New Revenue Bill

The Ways and Means Committee of the House of Representatives will meet in Washington Oct. 19 to begin consideration of the tax reductions that will be incorporated in a bill to be presented to Congress when it meets the first Monday in December. On Oct. 24 and 25 the Ways and Means Committee will hear representations from those advocating repeal of the automotive war taxes. Trade associations and motorists can make their desires known to this committee without appearing before it in person by sending letters and telegrams to it at Washington, D. C. The personnel of the committee is given in another column.

By SAM SHELTON

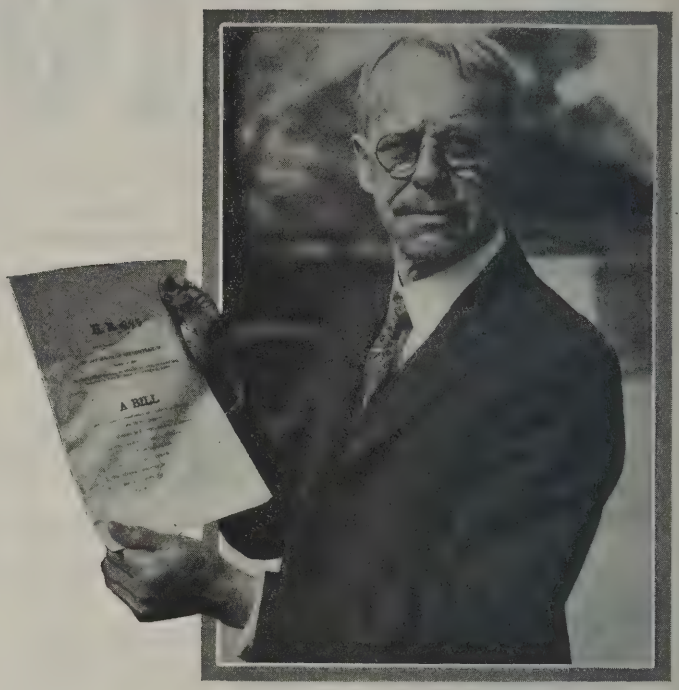
AN industry that has been long suffering in bearing its burden of war taxes believes that it is now entitled to relief.

More than 12,000,000 owners of motor vehicles believe that the war has been over long enough for the Government to have adjusted its finances so as to get along without the imposition of a heavy tax on this essential transportation industry.

Citizens who next year will buy probably 4,000,000 new motor vehicles assert that it would be an injustice for the Government to collect from them an average of about $30 in war tax on each vehicle, or a grand total of $120,000,000 as penalty for using the most highly developed individual transportation system the world has ever known.

Manufacturers, distributors, retailers and users of motor vehicles, patriotic and long patient in the payment of a heavy war tax, are at last united in an overwhelming demand for the complete elimination of these taxes which are plainly an unjust and discriminatory penalty upon the greatest single industry in the United States.

In other words, an appeal is going up to Congress from the owners of more than 17,500,000 motor vehicles for relief from the war-time excise taxes that must be paid on the purchase of parts, tires, accessories and new vehicles. The trade joins in this appeal because it recognizes the unjust restriction that is placed on business by such a tax.



Will automotive war taxes be repealed in the new tax reduction bill? The Honorable W. R. Green from Iowa probably could give the answer. He is chairman of the House Ways and Means Committee, which must pass on all revenue bills, one of which he is holding in the photograph

The automotive war taxes are imposed by the Federal Government directly upon the manufacturer of motor vehicles, parts, tires and accessories. But this tax is passed on from manufacturer to dealer and from dealer to consumer. In other words, it becomes an addition to the retail price of automotive merchandise and the consumer, as in the case of most taxes, is the ultimate payer.

But the tax is nevertheless a burden to the trade. Its collection and accounting to the Government entails a great deal of machinery and overhead expense that ought to be eliminated. It serves as a distinct increase in the delivered price of motor vehicles, over and above the manufacturer's advertised retail price, and thus is an active creator of sales resistance. It is the almost universal practice of motor car manufacturers to advertise retail prices F. O. B. factory. To this price the dealer must add freight charges and the war tax. Customers knowing the advertised retail prices are at first shocked when the delivered price is quoted, the degree of the shock depending somewhat upon the distance from the factory, but augmented nevertheless by the war tax which in 1924 averaged nearly $30 on every vehicle.

The elimination of this tax would immediately amount to a substantial reduction in the delivered price of new motor vehicles, the amount of the reduction being proportionate to the price of the vehicle. But this reduction would not in the least cut down the profits of dealers, as most factory reductions do, or of the manufacturers, but would serve as a healthy stimulus to business and actually would enable the trade to make a more satisfactory profit through

doing away with red tape and extra bookkeeping and accounting.

The automotive excise taxes, commonly known as war taxes and imposed to raise revenue needed on account of the late war, have been in effect since Oct. 4, 1917, a period of eight years. In that time these taxes have taken from the motorists of America nearly one billion dollars. The American Automobile Association has computed the amount to have been $862,000,000 up to June 30, 1925. Approximately $15,000,000 more was collected in July this year and assuming that this was an average for the months of August and September there has now been added the sum of $45,000,000 making a grand total of $907,000,000.

Automotive War Tax Collections for Fiscal Years 1918 to 1925

Year	Automobile motorcycle, etc 3 per cent	Motor Trucks 3 per cent	Automobiles and motorcycles 5 per cent	Tires, accessories, parts, etc. 5 per cent (Also truck parts 3 per cent)	Total
1918 (9 mo.)	$23,981,268.35	.....	.....	.....	$ 23,981,268.35
1919	24,076,261.97	$ 1,934,222.51	$ 17,915,510.81	$ 4,908,276.18	48,834,271.47
1920	.....	14,471,464.32	76,315,814.26	53,135,513.43	143,922,792.01
1921	.....	11,640,055.92	64,388,184.22	39,518,009.17	115,546,249.31
1922	.....	8,404,557.85	56,684,540.30	39,344,664.60	104,433,762.75
1923	.....	10,678,761.05	92,736,580.44	40,875,148.79	144,290,490.28
1924	.....	11,510,563.05	112,870,536.57	33,633,609.78	158,014,709.40
1925 (1st 6 mo. fiscal year†)	.....	4,333,708.23	43,576,048.73	12,452,098.66	60,361,855.67
Total	$48,057,530.32	$62,973,332.93	$464,487,215.38	$223,867,320.61	$799,385,399.24

† i. e. Last six months calendar year 1924.

The tax on automobiles was first imposed by the War Revenue Act of 1917, effective October 4, 1917, at a rate of 3 per cent on the wholesale value.

The tax does not end with the purchase of the motor vehicle. As long as the vehicle is operated it pays tribute to the war tax because of the imposition of a levy of two and one-half per cent on tires, parts and accessories. This tax was five per cent until last year when Congress, at the demand of the industry and motor car owners, cut it in half. At the same time the tax of three per cent on motor trucks and bodies was eliminated as applying to chassis of a wholesale value of $1,000 or under and bodies of a wholesale value of $200 or under. This is the only relief the industry has had since the taxes were first imposed eight years ago, although many other businesses and industries have been completely freed from war taxes.

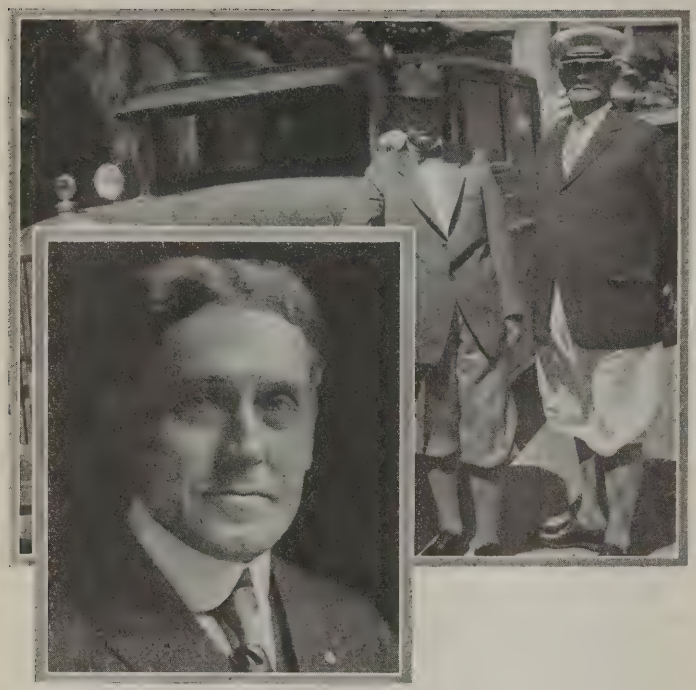
The tax on tires, parts and accessories, from the beginning up to June 30 this year, amounted to $223,867,320. Last year its total was $33,633,609 and for the first half of this year, at the reduced rate, it was $12,452,098. In July this year it was $1,844,970. This is distinctly a tax on transportation because it adds to the cost of operating motor vehicles, taking its toll with every repair that involves the installation of a new part and with every tire replacement.

The automotive war tax was at first three per cent on vehicles, parts and tires. In 1918 the tax on passenger automobiles, tires, accessories and parts (except truck parts) was increased to five per cent. On trucks and truck parts it remained at three per cent. In 1924, as previously stated, the tax on parts, accessories and tires was reduced to two and one-half per cent, and the truck industry was to a considerable extent relieved of the tax.

These reductions, however, were not recommended in the revenue measure as reported by the House Ways and Means Committee. They were put in on the floor of the House after representatives of the industry and car owners had made vigorous protests to Congress.

Although 13 different types of war taxes were levied between 1917 and 1919 and something like 40 classes of merchandise were subjected to the excise levy on manufacturers and products, the great majority of these taxes





Leaders in the fight for repeal of automotive war taxes. Standing, Thomas P. Henry, president, and Ernest N. Smith, manager of the American Automobile Association. Insert, H. H. Rice, of General Motors, chairman of the special taxation committee of the National Automobile Chamber of Commerce

have been repealed and the automotive industry stands alone as the outstanding contributor to Governmental expense through a direct tax. The direct war tax on the older forms of transportation, including railway freight, express and passenger traffic, oil pipelines and telegraph and telephone, has been taken off.

Under the "manufacturers and products tax," which originally affected about 40 classes of merchandise, only seven classes remain subject to the tax. These are automotive products, cameras and lenses, cigar or cigaret holders and pipes, firearms and shells and cartridges, photographic films and plates, slot vending and weighing machines, mah jongg and similar tile sets.

Of all these the automotive products easily lead in the amount of revenue produced for the treasury. In fact the great productiveness of the automotive tax is the main reason it was not repealed years ago. It provides a single source from which the Government has been able to obtain more than $1,000,000 a year for the last six years, running up to $158,000,000 last year. This tax last year represented 5.6 per cent of the total internal revenue receipts of the treasury.

Apathetic Attitude a Factor

Another fact working against the repeal of the automotive war tax has been the apparent apathy of the industry and car owners. The tax was accepted in time of war with a spirit of patriotism and it was recognized by all concerned that it would have to continue for a reasonable time after the close of hostilities awaiting recovery of the Government from the great strain of war.

For these reasons the industry and its vast number of customers continued to bear the burden of war taxes without complaint. But the recovery of Governmental finances has been rapid. Treasury surpluses from year to year have permitted important tax reductions, and Congress being a political institution naturally has given relief in those quarters from which the loudest protests came. Hundreds of minor taxes have been repealed and the income tax has been materially reduced, and yet the slight relief so far granted the automotive industry does not aggregate more than about $25,000,000 out of annual taxation exceeding $150,000,000.

And yet practically three times as many people pay automotive war taxes as pay income taxes. In 1924 there were 4,000,000 income tax payers in the United States. In the same year there were 17,591,981 registered motor vehicles in the country, but it is estimated by the American Automobile Association that these were owned by 12,000,000 owners. Large fleets of buses, trucks and taxicabs, and multiple ownership of passenger cars account for the smaller number of owners. But so far as Congress is concerned up to this time the 4,000,000 income tax payers have made a louder noise than the 12,000,000 motor vehicle owners.

The industry and owners, however, have awakened to the situation. Treasury officials have estimated that the financial condition of the Government will permit this year a tax reduction of some $300,000,000, nearly twice the total annual contribution of the automotive taxes. The feeling has grown that under these conditions the car owners and the trade are entitled to relief, especially in view of the many other taxes imposed directly or indirectly upon the automobile owner. These include the state registration tax, gasoline tax in 44 states, personal property tax in most states, city registration fee or wheel tax in towns and cities, and in some states a driver's license fee and a title certificate fee. Not all owners are subject to all these taxes, but all pay one or more of them and the great majority pay several.

In the campaign to obtain relief from the Federal war tax the trade and motorists' organizations have united. The American Motorists Association comprising in its membership 700,000 car owners in 734 state and local clubs is exerting every effort to impress upon Congress the fact that car owners are now demanding repeal of the war tax. Cooperating in this campaign are the National Automobile Chamber of Commerce, the National Automobile Dealers' Association, the Automotive Equipment Association, the Motor and Accessory Manufacturers' Association, the Automotive Manufacturers' Association, and hundreds of local trade and owners associations.

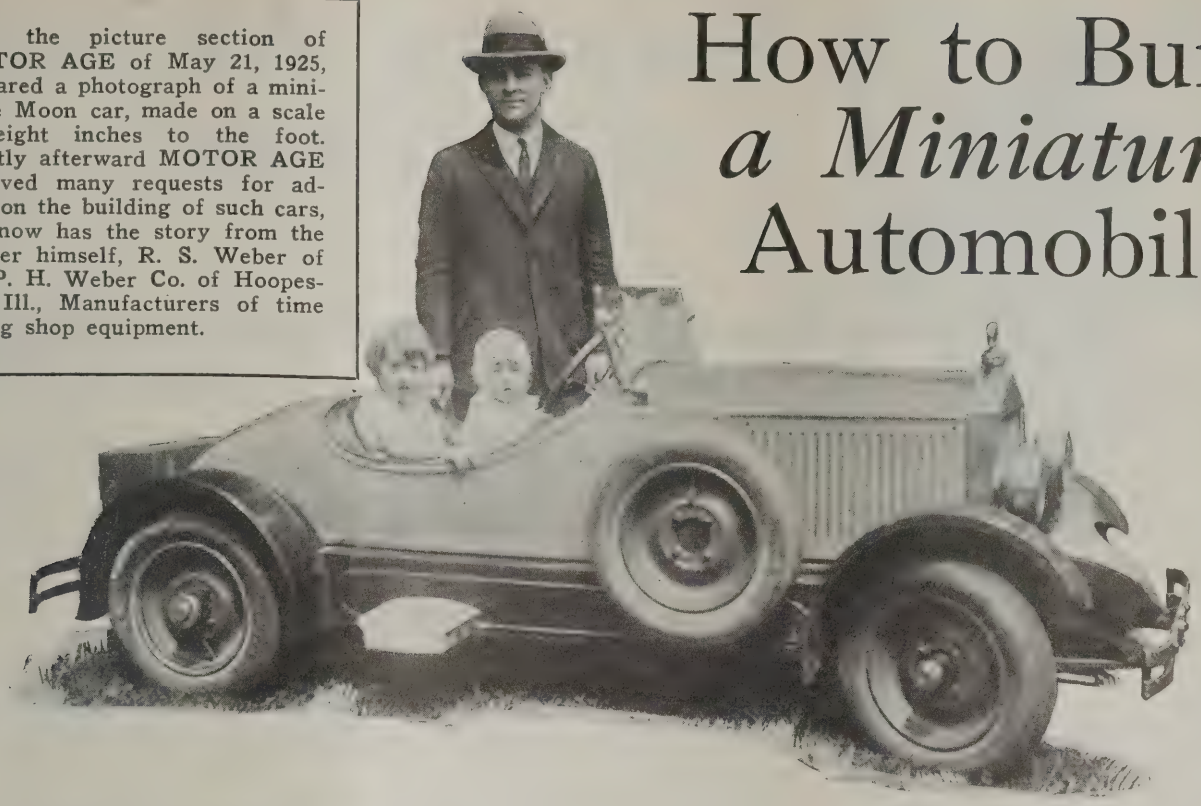
The important fact, however, is that a tremendous demand has arisen from individual car owners for relief from this tax. Realization of the burden it is has struck the motorists, and this, together with the knowledge that the Government can afford to give up the tax, strengthens the demand for its repeal.

Members of House Ways and Means Committee which will draft tax reduction bill:

W. R. Green, Iowa, Chairman
W. C. Hawley, Oregon
A. T. Treadway, Massachusetts
J. A. Frear, Wisconsin
J. Q. Tilson, Connecticut
Isaac Bacharach, New Jersey.
L. H. Hadley, Washington
C. B. Timberlake, Colorado
H. W. Watson, Pennsylvania.
O. L. Mills, New York
J. C. McLaughlin, Michigan
C. C. Kearns, Ohio
C. R. Chindbloom, Illinois
Frank Crowther, New York
J. N. Garner, Texas
J. W. Collier, Mississippi
J. J. Casey, Pennsylvania
W. A. Oldfield, Arkansas
C. R. Crisp, Georgia
J. F. Carew, New York
W. P. Martin, Louisiana
Peter F. Tague, Massachusetts
H. T. Rainey, Illinois
Cordell Hull, Tennessee
C. C. Dickinson, Missouri

In the picture section of MOTOR AGE of May 21, 1925, appeared a photograph of a miniature Moon car, made on a scale of eight inches to the foot. Shortly afterward MOTOR AGE received many requests for advice on the building of such cars, and now has the story from the builder himself, R. S. Weber of the P. H. Weber Co. of Hoopeston, Ill., Manufacturers of time saving shop equipment.

How to Build *a Miniature* Automobile



R. S. Weber, Whose Replica of a Moon Car Has Been Widely Used for Advertising Purposes, Tells MOTOR AGE Readers How He Made It

By R. S. WEBER

IF the person building a miniature car is a good machinist, a welder, a woodworker and a tinner he will get by with the job. In fact, he almost has to be a Jack of all Trades if he desires to do all the work himself. However, if he lacks some of these qualifications he need not be discouraged, as one can call on any of the aforementioned mechanics who are always ready to do this work at a reasonable price in order to get the benefit of the advertisement which goes with a job of this kind, (and this I believe, is worth all the time and effort that one puts into it.)

The most important part of building a miniature car is getting the correct proportions. I have seen a good many miniature cars, but very, very few are well proportioned. If you expect your car to look like an honest-to-goodness automobile, it must have the proportions of a large car carried out to the smallest detail. The easiest way to do this is to take the specifications of a large car that you expect to model after, and use the scale of 8 inches to the foot or 2/3 (which is the scale that I used), or if you desire a still smaller car, 1/2 size, use 6 inches to the foot. If you hold this all the way through, you may rest assured you will have a good looking job when you have finished.

I think the most important tools in building a car are a hacksaw and a welding torch. Almost everything has to be sawed into, a piece cut out and welded back together.

An autmobile graveyard is the best place I know of to get parts. I would suggest for the frame, to use an old frame from one of the lighter style cars. This of course, will have to be shortened and made narrower by cutting and welding.

For the engine I used a small four cylinder, made by the Continental Motors Corporation of Detroit, Mich.

The radiator was made by cutting a core from an old used radiator. I then made a top and bottom tank for same and soldered these to the core which had been cut to size. Radiator experts can give you a lift on this.

For the front axle I would suggest using either a Ford or Chevrolet, which is a lighter type. In case you wish to drop them, or undersling them, you may do this by heating in a forge and bending to desired shape after which it will be necessary to cut a piece from the axle to get the proper width.

The rear axle and propellor shaft, of course, will have to be made short by the usual process of cutting and welding.

For the body, I made a wood framework similar to those built by the car manufacturers and covered with sheet metal or body steel. The hood was made by cutting the hood of a used car.

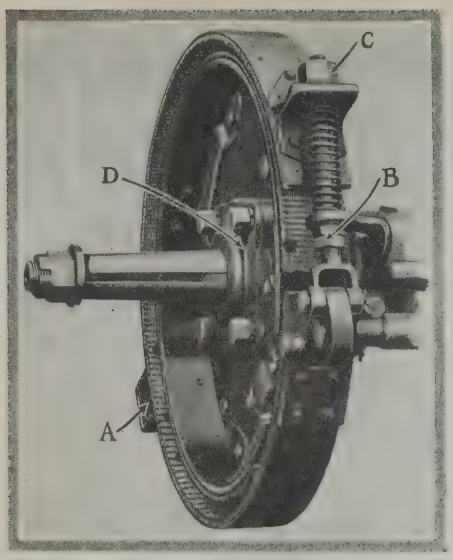
For wheels, I turned wood patterns and had them cast out of aluminum. Then it is necessary to take 3 1/2 inch rims and cut a piece out, heat and rebend to the diameter of the wheel you wish to use.

The tires used on the car shown in the picture are 20 by 4 inch airplane tires which were bought from an airplane supply house.

The accessories such as body rails, and parking lamps can be obtained from any supply house. For the drum head lights one can use Stewart Warner spot lights or any lamp that is of the right proportions.

The bumpers are made of spring steel and nickel plated. For a windshield I cut down a used car windshield and had the posts nickel plated.

The job is painted a light Duco finish, the color used being French cream and khaki.



In spite of the great strides made during the past few years by the four-wheel brakes, there still are many cars fitted with the conventional rear wheel brakes only. For that reason it is well for mechanics to be thoroughly familiar with the external contracting band and internal expanding type brake. Above is shown a typical external contracting band brake with adjustments at A, B and C. At D is the bearing housing plate which must be removed when adjustment of the rear wheel bearing is necessary before the brakes are adjusted

How to Adjust Brakes

Position of Levers Important — Several Supplementary Operations Often Necessary Before Band Clearance Is Corrected

By B. M. IKERT

(The first of a series of articles dealing with conventional rear wheel, mechanical four wheel and hydraulic four wheel brakes)

TO do a good job of adjusting brakes the mechanic must be prepared to spend a bit of time performing the work. It is not enough to merely give attention to the clearance of the bands on the drums and often supplementary operations must be performed to get the desired results.

It also makes some difference as to the car's mileage and one of the first things to decide is whether an adjustment or overhauling of the braking system is necessary. If the lining is worn very thin there is but one remedy—replace it with new. The relining of brakes will not be discussed in this article as it is the aim to deal here with brake adjustment only.

We believe not enough attention has been given in the past to selling the car owner that brake adjustment is quite an involved operation. Too often adjustments are attempted before other things are corrected, and presently the car owner comes back and says the job was not done properly.

Condition of Bearings Should Be Checked

Take the case of loose rear wheel bearings, for example. How many mechanics check up on the condition of these bearings before making brake adjustments? How many realize that it makes a difference in the adjustment of brakes if the work is done with the wheels jacked up or on the ground? How many pay proper attention to the position of the brake levers on the brake operating shafts in order to get maximum leverage with easy pedal action?

Then, there is wheel alignment, wear of the clevis and yoke pins, circularity of the bands, grooved drums, etc., all of which must be taken into consideration.

In a car fitted with conventional rear wheel brakes, speaking now of the service brakes operated by the foot pedal, there are three things to consider. They are:

1—Adjustment of the brake rods for proper length.
2—Adjustment of pedal and levers.
3—Adjustment of brake band clearance.

The brake rods always should be adjusted first. Very often proper brake action can be obtained by merely turning the turn buckles or yoke ends, if adjustable, on the brake rods. The thing to bear in mind is that the brake operating levers on the brake rocker shaft as well as on the brake camshafts must be set in the position where the greatest amount of travel is obtainable for applying the brakes. Reference to Fig. 1 will make this clear.

Here it will be noted that the lever A is set so a pull on the rod B moves it through the greatest distance possible. In order to show this more clearly we have divided the arc C-D into segments of 20 deg. each. If a pull is exerted on the rod B so the lever A travels 20 deg. it

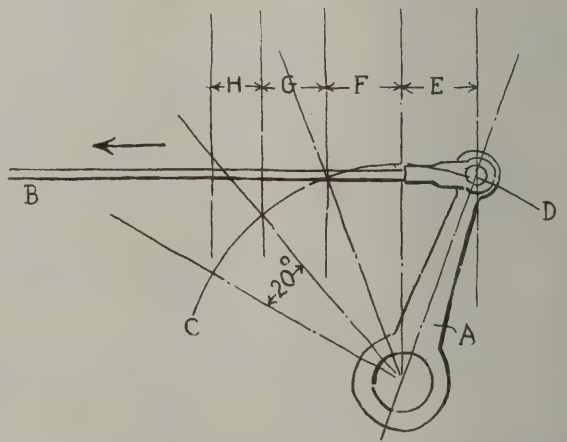


Fig. 1.—This shows a brake lever in positions 20 deg. apart. Note that the distance H and G are less than E and F. The lever operates most advantageously through the distances E and F. Hence, the necessity of getting the levers in the right position before adjusting brakes

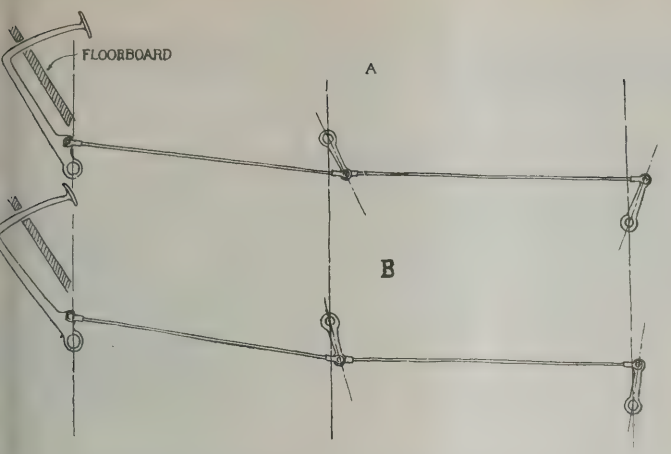


Fig. 2.—Conventional hook-up of rear wheel brakes. At A the foot pedal and levers are in the desired position, while at B the levers will not travel the full distance as they are too near the vertical line. A study of Fig. 1 will make this clear

moves the distance E and if another 20 deg. pull follows, t moves the distance F, which in this case is exactly the ame as E. If, however, an additional 20 deg. travel is dded the straight pull is not as great as either E or F, ut is represented by G. The distance H is still smaller han G. From this diagram it will readily be seen why n making brake adjustments the levers must be in the ost advantageous position.

On brake cross shafts where the levers point downward hey invariably must be swung toward the rear when the rakes are in the off position. Where they point upward he same thing holds true. Naturally there are modifica- ions of this because in some instances where the cross haft levers are comparatively short they may hang traight down.

Conventional Brake Hookup

In Fig. 2, is shown a more or less conventional brake ook-up and at A is shown the proper position of the foot edal in relation to the floor board and the brake operat- ng levers to get maximum braking effort. At B the pedal s too close to the floor and the levers being almost vertical 'ill not exert maximum effort when the brakes are applied.

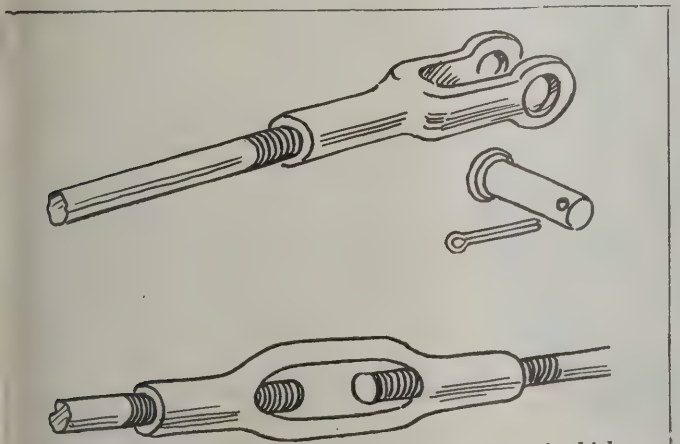


Fig. 3.—Yoke ends and turn buckles by means of which brake rods are adjusted for length. In the former the cotter key and clevis pin have to be removed during adjustment of the yoke. The turn buckle has a right and left thread and needs to be turned only

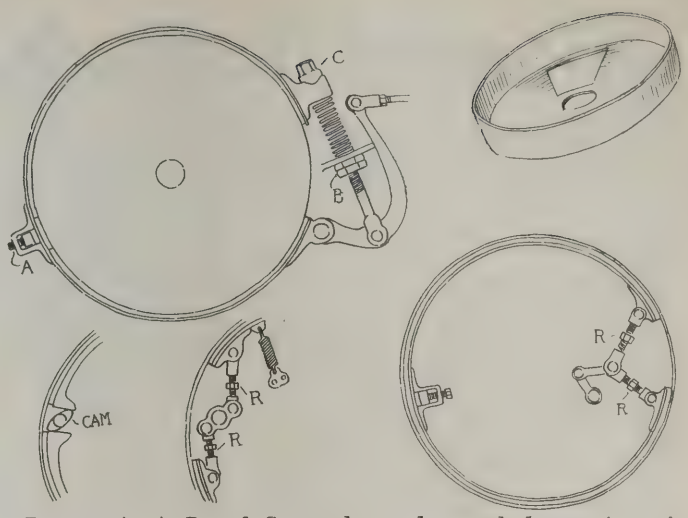


Fig. 4.—At A. B and C are shown the usual three points of adjusting an external contracting band brake. The anchor adjustment at A is first made, then B and C. Above is also shown a dummy drum cut-away so internal brakes, shown below, can be adjusted. At R are the expanding adjustments on a toggle type internal expanding brake. In many cases such brakes are operated by a cam as shown at the left

To get the pedal and levers in the proper position it is usually only necessary to turn the turn buckles to either shorten or lengthen the rods or where adjustable yoke ends are provided, as in Fig. 3, the procedure is to remove the cotter and clevis pin and screw the yoke end in or out on the brake rod.

If adjustment of the brake rods does not give the desired results and if the lining on the bands is still in good condition then the clearance between the band lining and drum must be adjusted, and in the conventional layout of an external contracting type of brake as shown at Fig. 4, there are three places of adjustment. These are designated by points A, B and C. The first one to go after is at A where the brake band is anchored and where usually some form of adjustment is provided in the way of a slotted screw which is turned inward to bring the band closer to the drum or outward to increase the clearance. The clearance at this point should be about the thickness of an ordinary business card.

To adjust the lower portion of the band the lock nut and adjusting nut at B are manipulated to bring the band closer to the drum or to increase the clearance as the case might be. Finally the upper portion of the band is given the proper clearance by screwing down on the adjustment C.

The procedure of adjusting an external band brake as given above is really quite simple, but the trouble is that too often the anchor adjustment at A is entirely forgotten. Many mechanics seek to adjust an external brake by merely turning down on the adjustment C or sometimes B and C, but this does not give uniform clearance around the entire band.

When it comes to adjusting internal expanding brakes, one of the quickest and best ways to do this is to have a dummy drum. Such a drum is shown in Fig 4 and is to all appearances a regular brake drum excepting that a portion of it is cut away so the internal brake mechanism can readily be seen and the adjustments made. Otherwise the wheel of the car has to be replaced and taken off each time the adjustments are made.

Internal, expanding brakes are usually of the cam operated or toggle operated type. The particular type has not much to do with the adjustment since the latter is carried out in much the same manner in each case.

(Continued on Page 20)

Hupmobile Six Now in Production

Complete Technical Description of Latest Product of Hupp Motor Car Corporation Offered in Sedan Model at $1285 and in Touring Model at $1225

By LESLIE S. GILLETTE

SENSING the demand for a popular priced six cylinder car, the Hupp Motor Car Corp., after building four-cylinder automobiles since 1908, announces this week the manufacture of a medium sized six. Besides acting as a companion car to the eight-in-line model introduced ten months ago, which except for minor mechanical improvements continues unchanged, the new six will complete the Hupp line for the coming year.

Presented in two body types only, a sedan at $1285 and a touring at $1225, the new six is powered with a 3⅛ by 4¼ in. bore and stroke "L" head engine mounted in a chassis of 114 in. wheelbase. The weight of the closed car fully equipped is 2,800 lbs. and that of the phaeton 2,650 lbs. Balloon tires, 30 by 5.25 in. size, and four wheel brakes are standard equipment.

On the front axle, Bendix three shoe self-energizing brakes are adopted which operate simultaneously with the orthodox contracting band rear wheel brakes. This arrangement is totally different from the Lockheed hydraulic four wheel brake principle employed on the larger eight cylinder car.

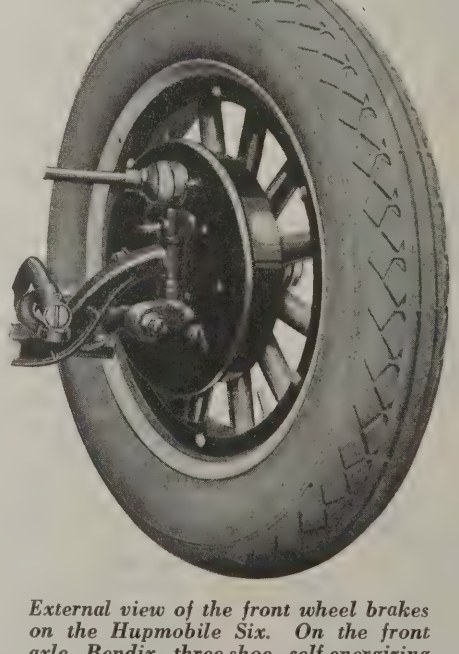
Excepting of course for the number of cylinders and the braking arrangement, Hupmobile's latest product may be considered a smaller edition of the higher priced model. The same principle of conventional design is apparent throughout while the materials as well as the inspection standards are identical to those employed in the manufacture of the eight. In step with the general simple design which characterizes the chassis, careful consideration has been given to those parts or units which are likely to require maintenance so that the cost and time required to service the car are cut to the minimum.

Acceleration Smooth

A representative of MOTOR AGE driving a regular sedan model was impressed by the all around performance of the car as well as the comfortable manner the car rides on bad roads at speeds above 40 m. p. h. The rate of acceleration throughout the entire speed range was unusually smooth and free from vibration, the car from a 2 m. p. h. high gear speed attaining a 58 m. p. h. speedometer speed in a remarkably short time.

While the new engine has a piston displacement of 195.6 cu. in. and a S. A. E. rated h. p. of 23.4, excess of 50 b. h. p. is delivered at 3,000 r. p. m of the crankshaft. Installed at an angle, the unit powerplant provides a straight line drive to the rear axle thereby reducing the frictional losses at the universal joints to a minimum.

Cylinders and crankcase are cast in block with the head a separate casting. Four boring and two honing operations provide for exceptional smoothness in the cylinder bore which is held to a .002 in. variation in diameter. The combustion chamber is of the high compression type and is entirely machine finished. While a block casting, each cylinder is separated from the next allowing complete circulation of the water which extends down two-thirds of the piston travel. One of the unusual features of this engine is the capacity of the side water chambers which are formed by a removable cover running the full length of the block. The route followed by the water is from the radiator inlet to the water pump, the latter being of the impellor type and located integral with the front part of the cylinder block. From the pump, water is forced to the large side chambers, from there distributed around the cylinders. As the valve side necessarily requires more water, extra large holes on this side permit a rapid flow of water at this point. Smaller holes are used on the opposite side, thereby producing uniform combustion chambe temperatures. From the holes, the wate returns up through the cylinder head t the radiator the latter being of the ce lular honeycomb type and cradle mounte so as to be protected from shocks. Th water capacity of the entire system 3¼ gals.



External view of the front wheel brakes on the Hupmobile Six. On the front axle Bendix three-shoe self-energizing mechanically operated brakes are employed

Employing four point suspension, th crankcase is designed for utmost fram rigidity and ease of accessibility whic is exemplified in the fact that the piston and connecting rods can be withdraw through the bottom without disturbin any other part of the engine. The mai bearing caps which are recessed in th case to provide maximum rigidity carr the static- and dynamic balanced crank shaft in four bronze back babbitt line bearings. Dimensions of the main bear ings follows:

Front 1⅝ in. length by 2 11/32 in. diameter

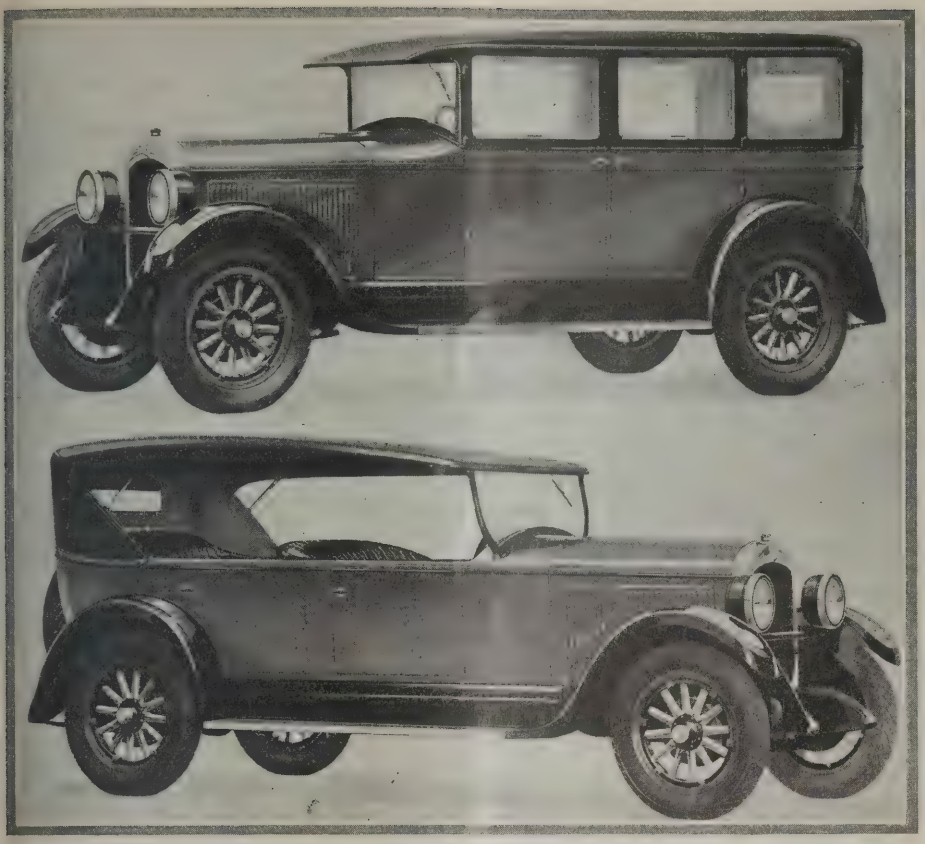
Second 1¼ in. length by 2 23/64 in diameter.

Third 1¼ in. length by 2⅜ in. diameter

Rear 2⅛ in. length by 2 25/64 in diameter.

Bearing Caps Have Brass Shims

All bearing caps are provided wit brass shims and chrome nickel stee studs locked in position by recesses ma chined in the crankcase casting. Bear ings are bonded to the connecting rod by a special spinning process and ar machine broached before hand fitted t crankshaft. The length of the connect ing rod bearings is 1 17/64 in. with diameter of 2⅛ in. A Lanchester vibra tion dampener of the friction disk typ and similar to that adopted on the eight in-line engine a few months ago, i mounted on the front end of the si crankshaft and forms part of the fa drive pulley while at the opposite end the semi-steel flywheel is attached b four bolts. The crankshaft itself is o massive construction weighing 64½ lbs Thrust is taken by the flanged fron bearing provided with shims to take u shaft end play. The rear of the crank shaft is machined to receive a steel rolle bearing and bearing shell which sup ports the front end of the clutch gea shaft. The carbon steel connecting rod are machined all over and have a cente to center length of 8¾ in. with ⅜ in dia. bolts securing the bearing caps. Al rods are weighed and selected in group of six with an allowance of .01 lbs variation in weight. At the small end the pistons are secured by hollow hard ened steel pins clamped in the rods an



Top: Hupmobile new six-cylinder sedan listing at $1,285; Bottom: Five-passenger phaeton listing at $1,225

providing a bearing surface 1 5/16 in. long. It is claimed that the steel pins bearing against cast iron pistons makes for greater longevity than when the more usual bronze bushings are employed. The piston pins which are hardened, ground and polished, are of the same diameter as those in the four cylinder model being 7/8 in. dia.

Steel dies are employed to form the gray iron pistons, each weighing 19 ozs. and 3 1/8 in. long. There are two 1/8 in. rings fitted above the pin with one oil scraping ring 5/16 in. wide below. The weight of the complete assembly including the connecting rods complete is 48 ozs.

A Morse silent chain 1 1/4 in. wide operates the camshaft and the generator, the latter being pivot mounted and provided with a screw and lock nut making for easy adjustment of the timing chain. The camshaft is a 15-25 point carbon steel forging carried on the right side of the engine the same as the generator. Four large removable phospor bronze bearings of the following dimensions carry the shaft which has its thrust taken by a special plunger and spring at the front end:

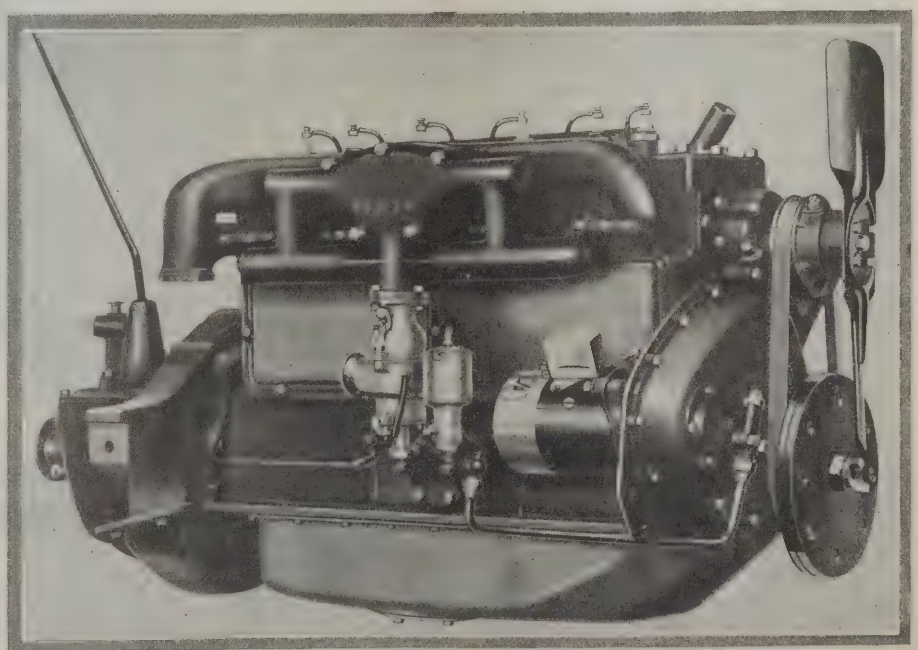
Front	2 3/32 in. diameter by	1 3/8 in. length
Second	2 5/64 in. diameter by	7/8 in. length
Third	2 1/16 in. diameter by	7/8 in. length
Rear	1 1/2 in. diameter by	1 1/2 in. length

Integral case hardened cams actuate the mushroom type valve lifters. The latter have their base formed of chilled iron and joined to a steel stem of 7/8 in. diameter. By the removal of three cap screws, it is possible to detach one of the two valve cluster assemblies complete. This operation is simple to effect as by the removal of the valve covers, the entire mechanism including the lifter assemblies is readily accessible making valve adjustment and other service work easier to check. Both inlet and exhaust valves have a 1 5/8 in. clear diameter, a lift of 5/16 in., 3/8 in. diameter stems and 45 deg. face angle. Two-piece construction is used to join the cast iron head to the steel stem of the inlet valve while the exhaust valve is made in one piece of special alloy steel. The springs are of oil tempered chrome vanadium steel exerting a pressure of 58 lbs.

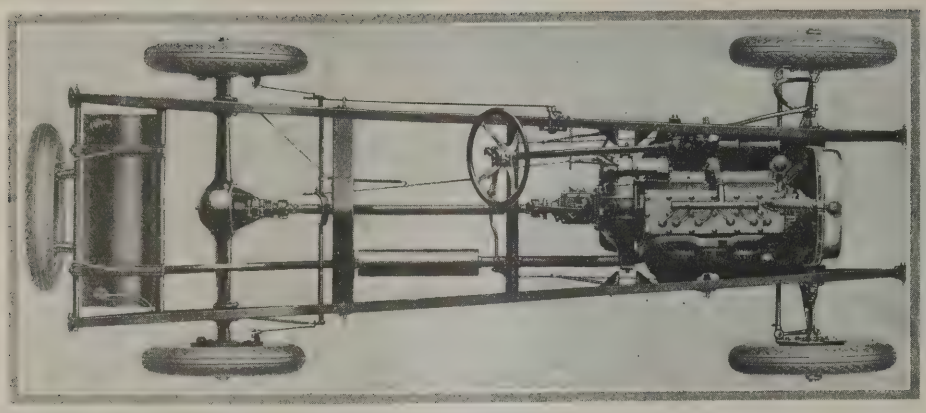
One of the unusual features of the new six engine is the drive for the oil pump and the ignition distributor, the former being located on the upper right side of the engine and the latter on the lower left. The shaft actuating these two units while driven from the center of the camshaft by spiral gears is inclined across the engine at an angle approximating 30 deg. in relation to transverse horizontal plane of the crankshaft. Mounted at the ends of this accessories shaft, the two units are in a most accessible position, enabling the pump driving gear clearance to be adjusted on the outside of the engine.

Oil Distributed by Four Pipes

From the gear pump, oil is distributed to each of the main crankshaft bearings by four pipes each placed immediately below the bearings. By means of holes drilled through the crankshaft webs oil is led from the main bearings to the connecting rod journals. Cylinder walls, piston pins, valve mechanism and camshaft bearings are lubricated by oil spray which is doubly insured by the open construction at the junction where the crankcase joins the cylinders. Being mounted at an angle, a supply of oil is maintained in the oil pump at all times. A large strainer which can be removed quickly for cleaning purposes through a special hole in the pressed steel oil pan, completely surrounds the entrance of the oil suction pipe. The oil pressure relief valve located on the timing chain cover,



Manifold side of the Hupp Six showing the vibration dampener on the front end of the crankshaft and the combined fan and water pump unit



Hupmobile Six chassis showing the simplicity of design

controls the pressure at all engine speeds and its overflow is used to lubricate the front end drive. Mounted on the left side of the engine, the float type oil level gage is graduated to show 8 qts. of oil which is the capacity of the crankcase.

A Stewart model No. 25 carbureter of the plain expanding tube type is fed with fuel drawn from a 15½ gal. tank located at the rear by a vacuum tank. A supply gage of the hydrostatic principle built into the tank is supplied as standard equipment with the dial conveniently located on the dash. The design of the manifolds is somewhat unusual and has attributed to a large extent to the smooth running of the new six, it is claimed. The exterior intake manifold is connected directly to the hot spot on the exhaust. After the gas is volatilized at this point, it is delivered to large size distributing passages having abrupt square corners which tend to break up the mixture more, producing a highly turbulent gas to the cylinders. Exhaust gases are discharged through extra large valve openings and thence to the muffler, the latter being fitted with a tail pipe extending out to a point beyond the gas tank.

An Auto-Lite make of generator, distributer and starter are employed. As previously mentioned the generator is driven by the timing chain on the right hand side of the engine with the starter mounted in the clutch housing on the left side of the engine. Engagement with the flywheel gear is through a Bendix drive of the outboard type. Current for the distributer and the lighting system are supplied by a Willard 6 volt, 15 plate, 120 amp. hour battery carried in the frame.

Spark Control Semi-Automatic

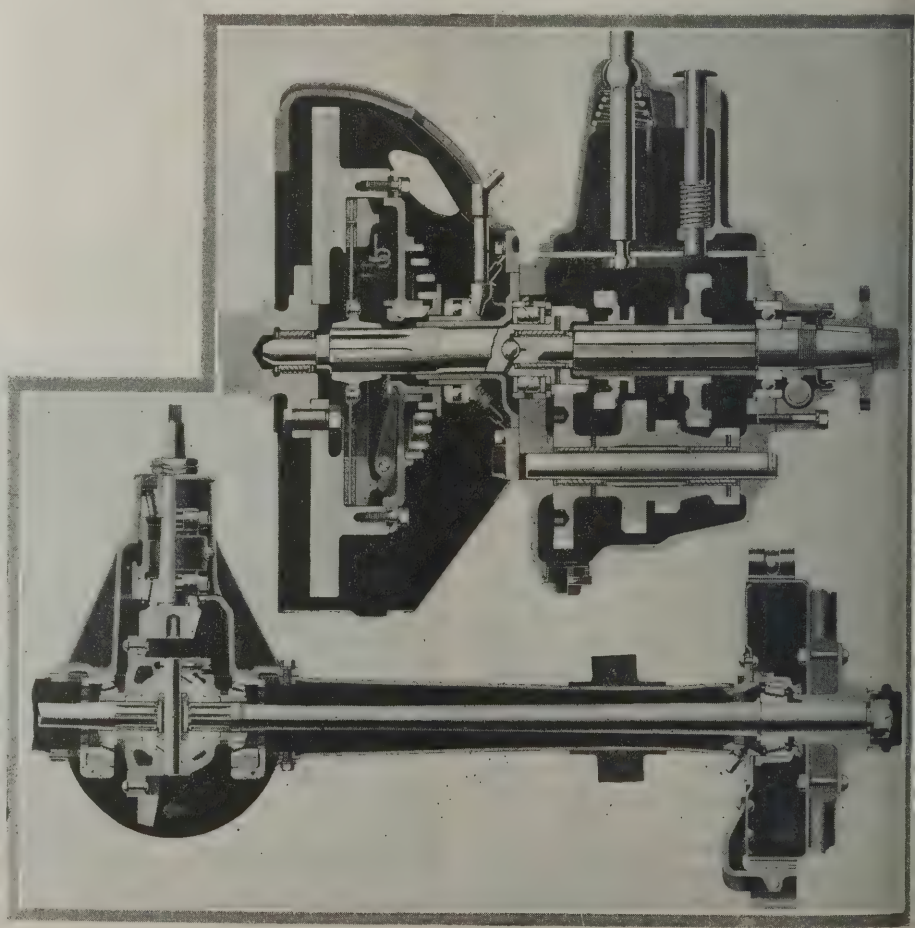
Spark control of the distributor is semi-automatic and a special arm on the unit limits the advance and retard travel to provide uniformity of control. The hand spark lever is operated in a small arc at the top of the steering post. Besides being very accessible in the center of the engine on the left side, the distributer which has only three moving parts is well protected from mud and water likely to be splashed through the radiator. The coil is equally well protected on the front of the dash. The high tension wires running to the Champion spark plugs are protected by a metal conduit. Firing order is 1-5-3-6-2-4.

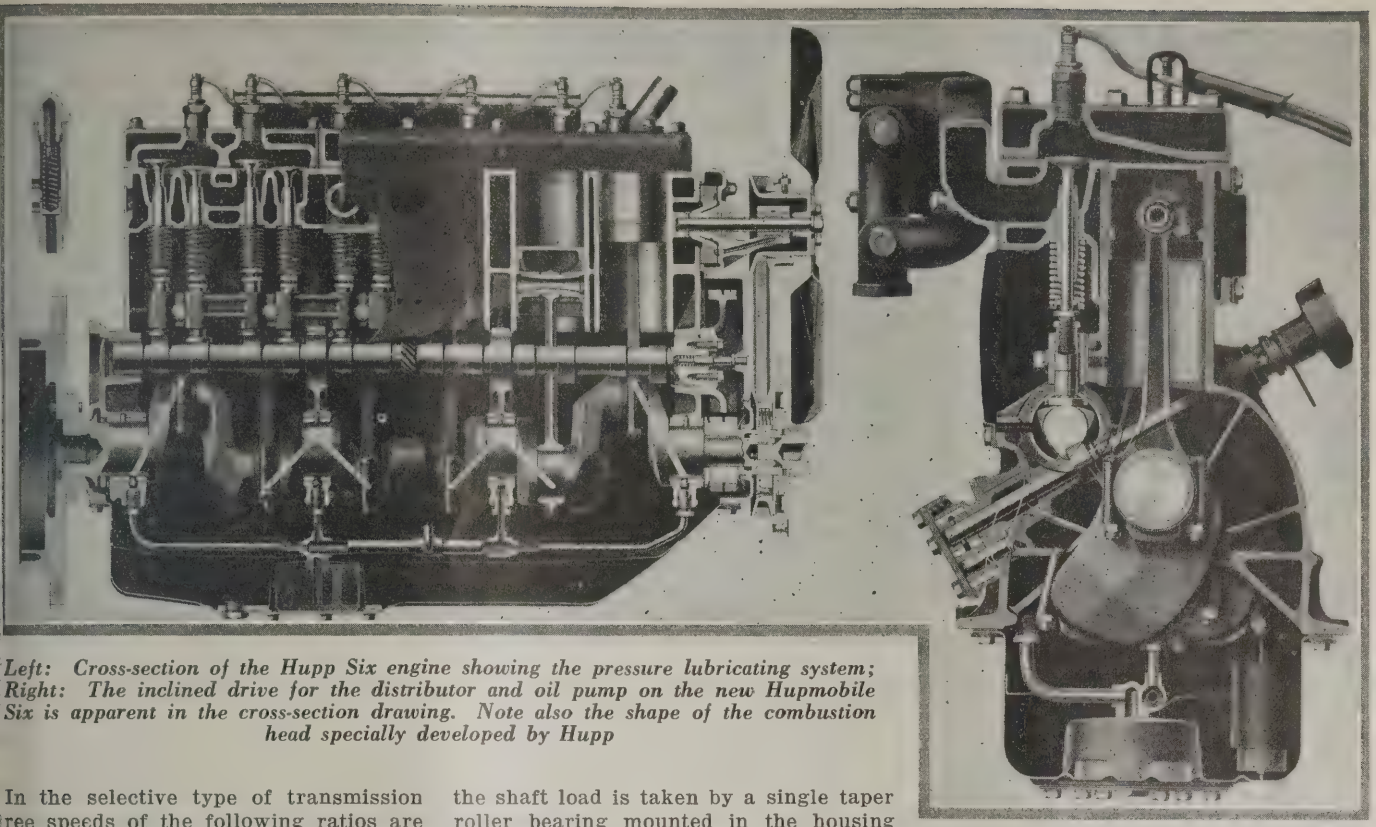
Forming a unit with the fan, the water pump assembly is attached to the front of the cylinder block by cap screws. The shaft carrying the impellor at the rear and the fan at the forward end, is of stainless steel and lubricated at the rear bearing by the Alemite system. On the forward end, the fan is carried on a special Hyatt roller bearing, this also being lubricated by an Alemite valve. The thrusts of both the impellor and the two bladed fan ar so arranged that they equalize one an other at all speeds. To reduce the neces sity of repacking the pump shaft, a spe cial arrangement in the form of tw metallic packings with an oil distributin ring in the center which are held in plac by an ordinary packing nut has bee adopted. The entire unit is driven by vee type belt which is adjusted by movable flange on the fan drive housing

Clutch Single Plate

Integral with the engine are the clutc and gearset. The clutch is of the singl plate dry disk type in which the drive member consists of one 9 in. diamete steel plate faced on both sides wit woven asbestos lining. One spring is em ployed which exerts a plate pressure i excess of 200 lbs. while special reductio leverages provide easy clutch control Adjustments are provided to compensat for the friction surface wear as well a for the pedal clearance, both of whic are accessible. Lubrication is necessar at only one point in the clutch assembly this is at the release bearing, the latte being of the radial thrust type. Hyat roller bearings are used to support th clutch shaft at either ends. The fron end is carried in a bearing in the flywhee and the rear is supported by the fron transmission bearing.

Top: Cross-section view showing the single plate clutch and transmission on the new Hupmobile Six. The roller bearing in the rear end of the crankshaft and carrying the front end of the clutch should be noted. Note also the roller bearing mounting of the secondary shaft; Bottom: The semi-floating rear axle on the new Six





Left: Cross-section of the Hupp Six engine showing the pressure lubricating system; Right: The inclined drive for the distributor and oil pump on the new Hupmobile Six is apparent in the cross-section drawing. Note also the shape of the combustion head specially developed by Hupp

In the selective type of transmission three speeds of the following ratios are provided:

Low, 3.24 to 1; Second, 1.71 to 1; Third, 1.00 to 1; Reverse, 4.15 to 1.

High carbon chromium steel is employed for the gears in which the teeth are given a burnish finish and have chamfered tooth ends to permit easy meshing. The sliding gear shaft is a six splined forging of 3½ per cent nickel steel and is supported at the forward end in a roller bearing and at the rear in a radial ball bearing. Countershaft gears operate on two Hyatt roller bearings which set on an inner bore of the shaft and ground to a mirror finish. The speedometer drive is taken off directly behind the main rear bearing. An approved lock is built into the housing while the gear shift lever is 26⅜ in. high.

Connection is made with the rear axle by a 2 in. diameter tubular propellor shaft carrying a metal oil-tight universal joint at either end. The rear axle is a spiral bevel, semi-floating design employing the Hotchkiss form of drive, and providing a standard gear reduction ratio of 4.9 to one. A pressed steel housing of the banjo type is employed with the differential carrier assembly bolted to the main housing. Supported on either side by an adjustable taper roller bearing, the differential assembly is detachable as a complete unit after the two high carbon chrome nickel axle shafts have been withdrawn. The drive gear along with the drive pinion, differential side gears and pinions are all formed of 3½ per cent nickel steel. Integrally formed, the drive pinion and shaft are held in an over hung mounting by two easily adjustable taper roller bearings. Drop forged wheel hubs are keyed to the tapered axle shaft while the shaft load is taken by a single taper roller bearing mounted in the housing near each of the wheels.

Spring bed plates are forged integral with the "I" beam 35-45 point carbon steel one piece front axle. To eliminate possibility of spring movement beneath the clips, the bed plates themselves are machined. The steering pivot pins are mounted in the axle in an inclined position while the steering knuckle thrust load is taken by special bronze and steel bearings. These two factors contribute largely to the easy steering experienced with the balloon tires. Steering knuckles and the steering arm are of forged chrome nickel steel with the tie rod of heavy construction and fitted with adjustable ball sockets at each end. Rebound snubbers for use with balloon tires are connected to the front axle only.

Exceptionally easy steering is a feature of the new car. The make of steering gear employed is the Ross cam and lever type which permits a 60 deg. total cut of the front wheels represented by two and one-half complete revolutions of the walnut 18 in. diameter steering wheel. The turning radius in either direction is given at 18½ ft.

Braking System

Two different operating principles are adopted in the application of four wheel brakes. The brakes on the rear wheels are of the orthodox external contracting band type consisting of a continuous piece of steel band lined with friction material. On the front wheels, the Bendix internal three shoe self energizing principle is adopted which uses the motion of the car to create and intensify its own stopping power. The three individually lined shoes are quickly replaceable and by means of an inspection hole in the totally enclosed brake housing, the shoes can easily be adjusted by the simple outside adjusting nut. After the drums have been assembled on the wheels, the interior braking service is machined insuring concentric drums, closer brake adjustments and adding to the smooth operation of the brakes.

Both rear and front brakes are actuated simultaneously by the brake pedal. From the equalizer located immediately behind the center tubular frame members, the brakes are applied by rods, those on the front wheels being operated through the Bendix-Perrot control device and connected directly to the lever mounted on the shaft between the frame and the wheel. A universal joint is provided at either end of the short shaft, the one on the inside being bolted to the car's frame and the other joined to the operating cam inside the drum. This arrangement is claimed to be self adjusting and self cleaning. To give more room in the front compartment and make for a direct pull, the hand or parking brake is attached to the frame on the left side of the driver and operates independently the same set of rear wheel brakes that comprise the service for wheel brake hook-up.

The straight tapered frame with channel side members 5 in. deep, 1¾ in. flanges and of stock $\frac{5}{32}$ in. thick, is fitted with four torsion resisting tubular cross members and one channel member, the rear motor support acting as an additional brace. Metal running boards covered with corrugated rubber are employed.

Spring shackles of new design consisting of drop-forged threaded links and a

series of laminated steel leaves are adopted. This type shackle requires no adjustment and maintains correct tension at all times and tends to eliminate noise. Springs are semi-elliptic being of high carbon steel with the main leaves of special alloy steel. Front springs comprise eight leaves 2 in. wide with a length of 37 in., while those on the rear which have ten leaves for the open model and eleven for the closed cars, are 54 in. long by 2 in. wide. Spring eyes are fitted with one piece bronze bushings into which fit ⅝ in. diameter case hardened spring bolts, except at the shackle at the front of the rear spring which carries a ¾ in. bolt. Chassis lubrication is provided for by 25 Alemite fittings. Twelve spoke natural finish artillery wheels together with straight side one piece demountable Kelsey rims are standard equipment. Minimum road clearance is 9 in. with standard 30 by 5.25 tires.

Both body models are built by Murray and are of composite wood and steel construction and finished in Duco. Taking into consideration the length of wheelbase, the amount of room, especially the leg space, is unusual in both bodies. The doors are extra wide, those at the rear being 27 in. across and the front 23½ in. wide for both the open and closed models. A new Olive Green color combination is adopted for both models being relieved by a fine line of striping in a contrasting shade. The sedan is upholstered in gray brougham cloth and fitted with a one piece vision ventilating windshield. The touring model also carries a one piece windshield and swings from the top of the side posts. In addition a cowl ventilator is provided. A gray mottled upholstery of genuine leather is employed on the open car while the side curtains of the folding type are stored in a compartment behind the front seat. The lines of both bodies are improved by a strip of moulding extending from the radiator entirely around the body, forming on the closed model the popular double belt effect. While of characteristi Hupmobile shape, the nickel plate radiator shell is of higher and narrowe design having its appearance enhance by fluting on the side nearest the cor

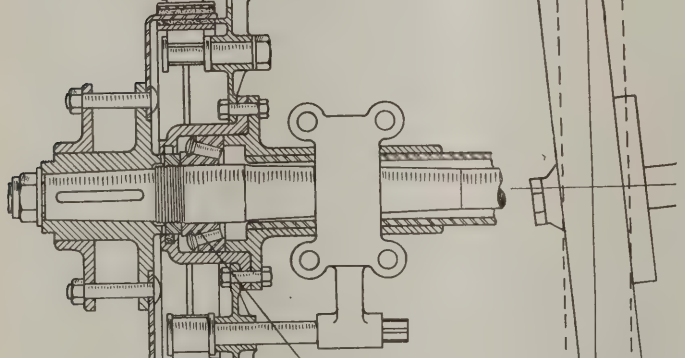
A tie bar upon which are mounted th interchangeable nickel plated barrel typ headlights serves as an additional brac for the front fenders and provides a plac for carrying the license plates. Twenty one c. p. headlight bulbs dimmed by resistance coil are furnished while th entire lighting and horn circuits are pr tected by a 25 ampere fuse. Non-glar lenses and a combination tail and sto light are fitted. Instruments enclosed b octagon shape frames are grouped i dividually and symmetrically on th walnut finish instrument panel. At nigh the flush set instruments are illuminate by an unusual design hooded light. Othe items besides the usual line and include as standard equipment are: Automati windshield wiper, rear view mirror, das gasoline gage, and transmission lock.

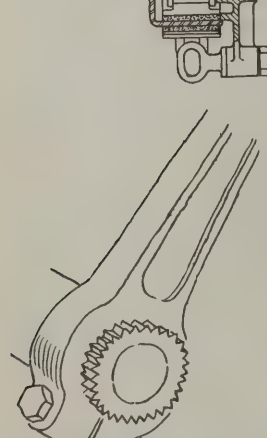
How to Adjust Brakes

(Continued from Page 15)

Usually the brake shoes are anchored at a point similar to that of an external contracting brake and the adjustment must be made here first to just clear the drum. After this the band or shoes is expanded slightly by means of an adjustment, such as shown at R in Fig. 4.

As in the case of external contracting brakes proper operating of the internal expanding brake can often be obtained by merely changing the position of the lever o the camshaft which actuates the brake. These levers a usually placed at the end of the cam operating shaft tube being held there by serrations or other means in th end of the tube or shaft and in the hole of the lever. clamping bolt on the lever keeps it in position and th bolt must first be loosened before the lever can be change to the new position. This is shown in Fig. 5.





Bottom: Fig. 5.—Serrations on end brake shafts by means of which the lever can be adjusted. A cam operated internal brake can be adjusted this way. A clamping bolt holds the lever in place; Top: Fig. 6.—Rear wheel bearings which must first be inspected and conditioned before adjusting brakes. A wheel out of alignment is shown at the right. Brake adjustment on such a wheel is difficult. A bent axle shaft may be the cause

As previously stated there is quite a difference betwee adjusting brakes with the rear wheels jacked up or wit the wheels on the ground, all depending on the adjustme of the rear wheel bearings. Obviously if a rear whe bearing is loose there is considerable up and down pla in the axle shaft and any brake adjustment made wit the wheel jacked up will be altered when the wheel rest upon the ground. For this reason repairmen frequent adjust brakes with the wheels on the ground unless very complete job of brake adjustment is desired. If th wheel is jacked up it should be turned by hand to see it runs true as a bent axle shaft will cause a wheel run out of line which naturally wears the brake linin rapidly and quickly spoils brake adjustment.

The wheels should be shaken by hand to test the bearin adjustment and if there is excessive play the wheel mu come off and the bearing either renewed or properly a justed. Every rear axle has some means of adjusting th bearing and a more or less typical layout is shown Fig. 6.

One of the common service operations performed in co nection with brakes is that of remedying squeaking brake This condition may be caused by several things and o of the most common is dirt forced in the pores of th lining when the brakes are applied. This dirt can temporarily removed with kerosene. A good preventati is to mix a small amount of resin and castor oil so th mixture is a fluid and then applying a small quanti to the brake bands. Application of soapstone sometim helps, but none of the remedies will do much good if th squeaking is due to the brake lining rivets scraping th drums.

Another article dealing with the matter of adjusting mechani four wheel brakes will be discussed in a later issue.

Surveys Show Automotive Merchants Lead as Radio Dealers

THE 1925-1926 Radio Advertisers' Data Book issued by Arthur Rosenberg & Co., New York City, contains a great deal of information of interest to all merchants engaged in the distribution of radio products. Quoting from a number of surveys that have been made, the book presents the conclusion that automotive merchants, including car dealers, garages and accessory stores, constitute the largest single class of retail outlets for radio sets.

One of these surveys, shown in chart No. 1, was made by the McGraw-Hill publications in a group of towns of 7,800 to 100,000 population. This survey concludes that automotive dealers lead as retailers of radio because of several factors, chief of which are:

1. Many radio manufacturers were (and still are) makers of automotive accessories, and they have used their old outlets.

2. Automobile dealers and garages are found universally throughout the country.

3. They have been seeking merchandise for non-automotive season sales.

A survey made by the Capper publications in four typical rural and small-town

CHART NO. 1

Who Sells Radio?

	POPULATION OF TOWNS							
	7,000 to 9,000	9,000 to 15,000	15,000 to 25,000	25,000 to 40,000	40,000 to 57,000	57,000 to 110,000	110,000 to 200,000	TOTALS
AUTO DEALERS, GARAGES, SUPPLIES	3	4	8	3	5	5	2	6	36
EXCLUSIVE RADIO RETAILER	3	0	1	9	1	2	1	9	26
MUSIC and TALKING MACHINE	2	2	1	2	4	1	3	6	21
ELECTRICAL DEALERS	0	2	3	1	3	3	3	5	20
DEPT. and CHAIN STORES	0	0	1	0	1	0	3	2	7
FURNITURE DEALERS	0	0	0	1	2	0	2	1	6
SPORTING GOODS	0	0	1	1	1	1	0	1	5
HARDWARE	1	0	1	0	0	0	0	2	4
MISC. STORES - DRUGGISTS etc.	3	0	0	1	0	0	1	2	7

This chart from the Radio Advertisers' Data Book published by Arthur Rosenberg Co. was compiled from figures gathered in eight industrial centers. It shows the kinds of merchants selling radio in the various cities

sections of the Middle West showed that in 176 towns in those communities there were 105 automotive merchants selling radio. In the same towns there were only 44 exclusive radio dealers, but other merchants selling radio were found in the following numbers: Hardware dealers, 60; electrical dealers, 62; music stores, 38; drugs and sports, 32; general and department stores, 10; miscellaneous stores and agents, 112.

The Capper survey indicated that in towns of more than 5,000 population the exclusive radio dealer occupies a leading position, but that in smaller communities the most important factor is the automotive merchant.

It will be recalled that a survey made

CHART NO. 2

Who Sells Radio?

	POPULATION of TOWNS						
	50,000 to 100,000	25,000 to 50,000	10,000 to 25,000	5,000 to 10,000	2,500 to 5,000	1,000 to 2,500	UNDER 1,000
NUMBER OF TOWNS IN SURVEY →	6	13	30	40	33	54	TOTAL
Auto Dealers, Garages and Supplies — DEALERS SURVEYED	8	17	12	21	22	25	105
Auto Dealers, Garages and Supplies — AVERAGE PER TOWN	1.33	1.30	.4	.52	.66	.46	.59
Hardware Dealers — DEALERS SURVEYED	3	1	5	12	20	19	60
Hardware Dealers — AVERAGE PER TOWN	0.50	.075	.16	.3	.60	.35	.34
Electrical Dealers — DEALERS SURVEYED	11	20	12	12	5	2	62
Electrical Dealers — AVERAGE PER TOWN	1.83	1.55	.4	.3	.15	.04	.35
Music & Phonograph — DEALERS SURVEYED	11	16	5	6	0	0	38
Music & Phonograph — AVERAGE PER TOWN	1.83	1.23	.16	.15	0	0	.21
Radio Dealers — DEALERS SURVEYED	7	4	9	12	7	5	44
Radio Dealers — AVERAGE PER TOWN	1.16	.30	.3	.3	.21	.09	.25
Drugs & Sports — DEALERS SURVEYED	1	5	4	10	4	8	32
Drugs & Sports — AVERAGE PER TOWN	0.16	.39	.13	.20	.12	.15	.18
General & Dept Stores — DEALERS SURVEYED	0	0	0	1	2	7	10
General & Dept Stores — AVERAGE PER TOWN	0	0	0	.025	.06	.15	.06
Misc. Stores Agents etc. — DEALERS SURVEYED	7	15	16	29	18	27	112
Misc. Stores Agents etc. — AVERAGE PER TOWN	1.16	1.15	.33	.72	.54	.50	.63

This survey made in sections of Ohio, Kansas, Texas and Iowa shows the rank of various types of merchants selling radio in the towns of those communities. Chart taken from Radio Advertisers' Data Book by Arthur Rosenberg Co.

by MOTOR AGE taking in 500 automotive dealer establishments showed that approximately 45 per cent are now selling some form of radio merchandise. The details of this survey were published in the Sept. 3 issue of MOTOR AGE.

Automotive Men Visit Radio Factory

TWENTY-FIVE officials and salesmen of the Washington Auto Supply Co., Washington and Peoria, Ill., recently visited the Neutrowound factory and Radio Station WOK, at Homewood, Ill., as guests of the Neutrowound Radio Manufacturing Co. After inspecting the factory and the radio station, they were taken to the Terrace Garden, in the Morrison Hotel, Chicago, where they visited WOK's studio, while the artists were performing, and were entertained at a dinner given in their honor. Following the dinner a sales conference was held with officials of the Neutrowound Company and plans discussed for a vigorous sales campaign for Neutrowound Radio Receiving Sets during the coming season. The visitors declared themselves as enthusiastic over the outlook.

The photograph below was taken while the visitors were at the radio station. Standing, left to right: Fred Ausbury, W. H. Smith, A. Mann, J. F. Strock, F. W. Gocker, H. G. Powell, A. P. Schmidt, R. W. Vogelgesang, C. Smith, R. Fredericks, H. A. Marshall, Lawrence Kans. Below, left to right: J. E. Ferguson, George Rinkenberger, H. I. Wallace, G. E. Trego, W. H. Stafford, Geo. W. Seay, Ed D. Waca, W. G. Blomeyer, W. H. Huber, H. J. Berlin, H. B. Herberger, Fred Yetter and M. H. Vowles.

Amateur Operators to Meet

TOLEDO, Oct. 9.—The Toledo Radio Club is sponsoring a convention of amateur radio operators from the first central division and third Ohio division here on November 6 and 7, preliminary to the annual radio show to be held at the county armory.

It is anticipated that possibly 500 may be induced to come to Toledo to talk over common problems and get the latest developments of the industry.

Details of the meeting have not yet been completed.

24-Hour Service Department

COLUMBUS, Oct. 9.—A radio service department, open 24 hours daily has been started by the Sell Electric Co., which is located in the heart of a good residence section. This is the first time that any Columbus concern has run a radio service department, which remains open at night. The company also carries a full line of radio sets and supplies and has made quite a name for itself in the radio as well as electrical fields.



Sales representatives visit Neutrowound factory

MOTOR AGE'S PICTURE PAGES



A FAITHFUL SERVANT. Electric ca driven 65,000 miles by Mark Hoffman R. F. D. postman, Manchester, N. H. Th car is 20 years old and is equipped with a Exide-Ironclad battery. It is a Waverl electric which first appeared in 1905. Mr Hoffman was one of the first of Uncl Sam's postmen to adopt the automobil for making deliveries, and the first in New Hampshire.





A NOVEL USE. The Weaver cranes shown in the photographs at the right were the means of saving the lives of starving cattle in Kansas following a severe drought. It is said that the cattle were so weak that when they lay down they could not get up without the assistance of the cranes.



1,700 PER CENT OVER HIS QUOTA. F. B. Fifrick of Marinette, Wis., hung up this record in a town of 14,000 population. As a publicity stunt he organized a parade of Velie owners. Then when the circus came along he put a car in front of the elephants and hung Velie banners on each of the six animals.

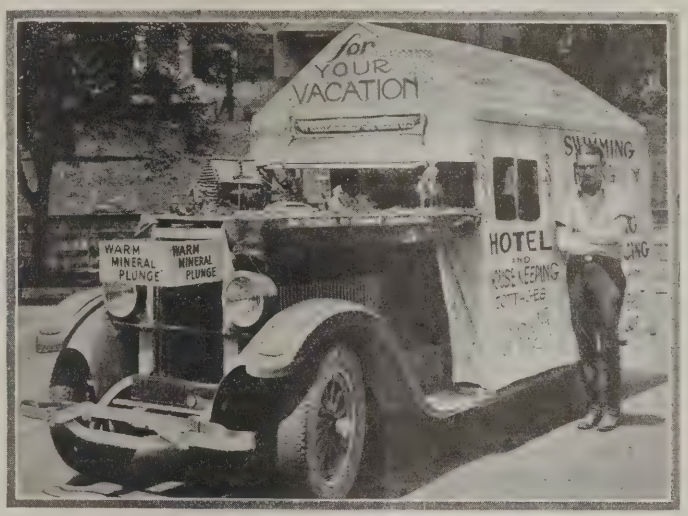
OF AUTOMOTIVE INTEREST



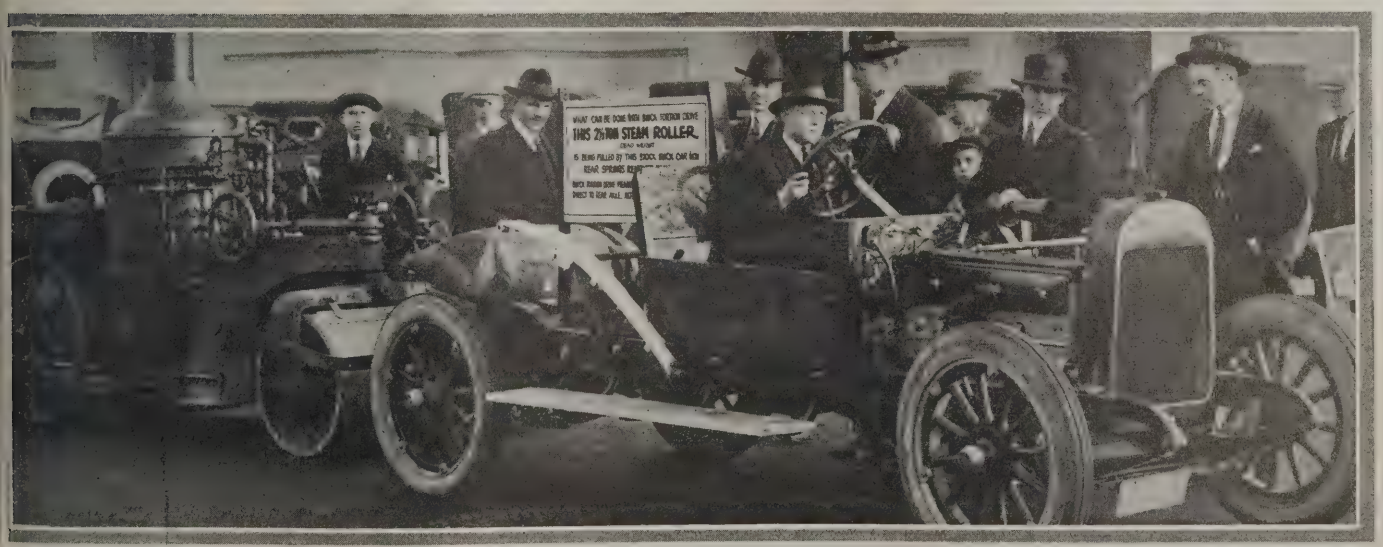
N AUTOMOTIVE TEAM. **Nine** members of the Philadelphia Athletics have bought Nash cars. The cars were placed through J. G. Roberts, local distributor



OU CAN'T MISS IT. Accessories at the Howard Automobile o. service station in San Francisco are carried in a specially uilt room in the service station designed in Mission style with ed tile roof. Automobilists driving in can't help seeing the accessories.



A HOUSE ON WHEELS. Wheeler Hot Springs, a vacation resort about 100 miles from Los Angeles, is being advertised with this Studebaker Special Six Duplex-Phaeton, on top of which has been built a tent house. A miniature replica of the springs has been set over the hood.



ROVING IT. For the purpose of demonstrating what could be done with the Buick tortion drive, a San Francisco automotive oncern pulled a 2½-ton steam roller through the streets with a stock car with the rear springs removed as shown in the photograph.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING - ELECTRICAL - FLAT RATES
SHOP - LEGAL - PAINT & TRIM - ACCOUNTING

Keeping Fordson Lubricant Where It Belongs

Q.—We have a Fordson tractor that is letting the transmission grease out of the transmission into the crankcase. Give instructions as to method of stopping this. When filled according to direction it will let about a gallon per day into the crankcase.—Jackson Brothers Garage, Wyanet, Ill.

Readers of this article are requested to refer to the Fordson Tractor Parts Price List. The mixing of lubricant referred to in the question takes place through part No. S-327, this being called transmission housing plate.

The large opening in the transmission housing plate carries the bearing No. S-351 and the bearing in turn carries the transmission drive shaft part S-335. The transmission housing plate oil shield No. S-345 is supposed to prevent the lubricant from working back and forth through the large opening in S-327. A possible explanation of the trouble referred to is end play in the transmission drive shaft part No. 335 which in working back and forth produces a sort of pumping action which in some cases allows the 600 W. to work forward into the engine and in some cases allows the oil to work back into the transmission.

In order to relieve the pressure or vacuum, whichever it is, which is formed in the transmission by this pumping action due to the slight end play, it is possible to remove the transmission cap screws just under the tool box and drill a $\frac{3}{16}$ inch hole the full length of each cap screw as shown in the upper portion of sketch. This gives a sort of breather pipe construction to the transmission and prevents the formation of either pressure or vacuum in it.

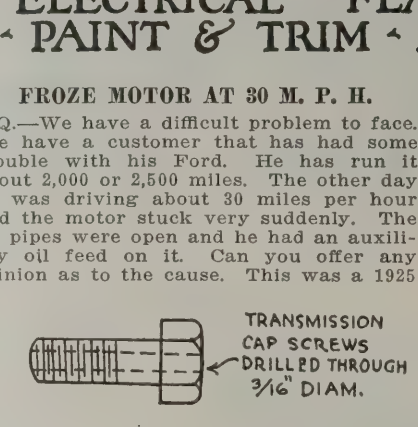
Another method of overcoming the trouble is to use from two to six of the transmission housing plate oil shields instead of the one which is specified.

Another method is to use one of these oil shields made into a sort of fan. This is done by cutting half-inch slits radially in one of these shields No. S-345, these slits being about ¼ in. apart all around the oil shield. The radial projections which are left by the process are then bent either one way or the other, depending on whether the tractor shows a tendency for the heavy lubricant to go forward or for the light oil to go into the transmission.

Sketch showing this construction is also given. If the trouble has slowly developed as the tractor got older all parts that a visual inspection shows to be worn will have to be replaced. This usually includes parts No. S-351, S-327, and S-345.

FROZE MOTOR AT 30 M. P. H.

Q.—We have a difficult problem to face. We have a customer that has had some trouble with his Ford. He has run it about 2,000 or 2,500 miles. The other day he was driving about 30 miles per hour and the motor stuck very suddenly. The oil pipes were open and he had an auxiliary oil feed on it. Can you offer any opinion as to the cause. This was a 1925



Hollow bolt and fan shaped washers effect Fordson repair

Ford roadster. Only about two months old. Glenwood Trouble Shooters.

One possibility is that the pistons were fitted rather closely and that the clearance was not sufficient to allow for a speed of 30 miles per hour for any length of time. Another possibility is that the engine was somewhat low on oil and a third possibility that there was insufficient water in the cooling system. We feel that lack of water or tightly fitted pistons are the most likely causes of this trouble.

CASHING IN ON FUEL COMPOUNDS

Q.—We have a 1924 model Buick 6 and a 1924 Chevrolet, on which we wish to raise the compression in the cylinders to get the best results from treated fuel. Will you kindly tell us how much metal to remove from the detachable heads in these motors to get best results.—G. W. Hamilton, Dalton, Ga.

On the Buick it would be well to check up the clearance you have between the ends of the spark plugs and the cylinder block, for when material is removed from the cylinder head it will bring the spark plug nearer to both the piston and the cylinder block. We would recommend removing $\frac{1}{16}$ inch and trying the engine. If the operation is all right you might try moving another 32nd and then later on a second $\frac{1}{32}$ inch, making a total of not more than ⅛ inch removed. On the Chevrolet remove material from block.

Pierce-Arrow Truck Valve Timing

Q.—Inform us how to time a two-to Pierce-Arrow Army type truck Model 1 I have tried all ordinary ways withou success. This truck has two camshafts —Automobile Electric Company, 215 E 6th avenue, Pine Bluff, Ark.

Although there is Model 18 listed in the Pierce-Arrow data we are of the impression that this is what is known as the X4 Army type truck. The original timing is different from that which we supply you, but the latest timing can be accomplished on the old model and with better results than the original. This information is supplied by the local Pierce-Arrow truck maintenance organization.

The inlet should open five degrees before top dead center and the exhaust close five degrees after top dead center. The flywheel of course, will not be marked for this timing and it will be necessary for you to figure out the equivalent of five degrees on the flywheel. This may be done by determining the circumference of the flywheel and then dividing the circumference into 72 parts. One 72nd of the total circumference of the wheel will equal five degrees.

ENGINE SPEED FORMULA

Q. What is the motor speed in revolutions per minute at 25 miles per hour car speed on the following cars: Chrysler, Paige, Peerless six and eight, Cadillac, Lincoln, Pierce Arrow series 80 and 83, Wills Sainte Claire six and eight, Marmon, Jordan six and eight, Hupmobile eight, Buick Master Six, Willys Knight six, Franklin and Hudson. G. A. Huddleston, Service Manager, Packard-Rochester Motors, Inc., 1042 University avenue, Rochester, N. Y.

The engine r.p.m. may be obtained by the following formula:

$$R.P.M. = \frac{336 \times S \times G}{D}$$

In this formula S equals the car speed, G equals gear ratio and D equals diameter of the rear wheel in inches. The specification tables in MOTOR AGE give the tire size and rear axle ratio from which information you can calculate the engine speed for any car in which you are interested. Additional information will be given by letter.

THIS WAY OR THAT WAY—IT'S ALL O. K.

Q—When installing a worm wheel on differential housing is there a right or left side of the worm wheel relative to the housing? The axle in question is a Timken.—J. B. Scott, Kelly Motor Co., Buckhannon, W. Va.

We are informed by the local Timken service station that it does not matter which way the wheel is installed.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Ford Sales and Service With Used Car Market

Q.—Inclosed you will find a sketch of a plot of ground that we want to use as a future home. It consists of six lots which front south on highway and principal street. Heavy coast to coast traffic. We want to get plans for erection of a new building on this plot. We are Ford dealers and have a good wide territory. We handle all Ford products. Our parts stock will average over $4,000 wholesale cost most of the time. We handle tires and a small stock of accessories, but we do not go very strong on this. We want separate bookkeeping office and a manager's office adjoining.—Clen E. Tope, Tope Motor Co., Prague, Okla.

We have placed the building on the half of the lot next to the corner with the used car market on the other half and the filling station in front of it. If carried out somewhat as we have shown, we believe the filling station would be just as effective here as it would be on the corner and would not cut into the building or spoil the showroom and office layout.

Good Exposure

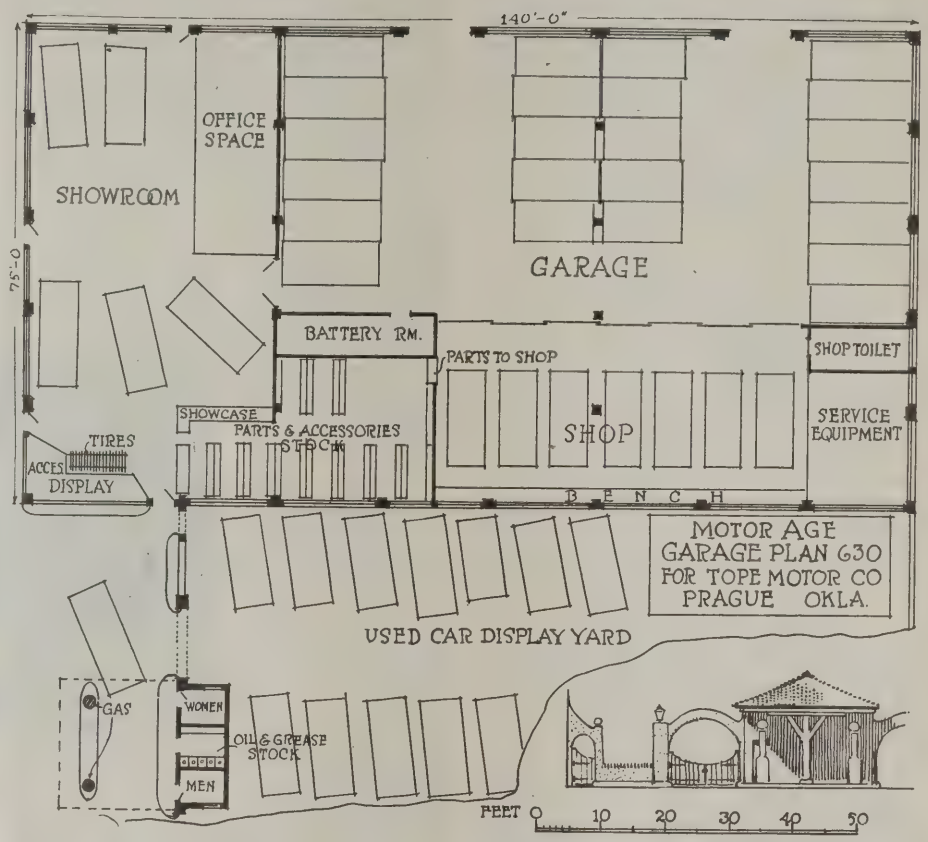
With the showroom on the corner and the accessory store on the other side facing the filling station, you have good exposure in both directions down the street, and the filling station will be wide enough to show up well also.

There is another advantage in the arrangement and that is that it brings the traveling public in contact with your used cars and your accessory display in such a way that it should result in business, and since parts are retailed with the accessories, it will be easy for Ford owners to pick up parts when they stop for gas.

It is often found that a filling station will make congestion around the garage entrance, but here there is no chance for that, the garage is provided with a drive through entrance and exit on the side street and is all that could be desired in enience.

If more office space is needed, we would suggest that the front 40 ft. section of the building be made high enough to provide for a balcony to extend way across the back side. Then there would be plenty of room for an office, women's waiting room, salesmen's offices, private offices and in fact, many features not possible in the limited space now shown. The higher ceiling also would give a more airy and pleasant room and make a better appearance from outside.

The roof is planned to lie supported by 2 series of 50 ft. and one series of 40 ft. trusses extending lengthwise of the building.



In the layout the filling station will not kill the building but will tend to set it off. The sketch in the corner is a suggestion for making the filling station and used car market attractive

Legal Questions Answered

BY WELLINGTON GUSTIN, OF THE CHICAGO BAR

COLLECTING FOR REPAIRS

Q.—Will you kindly advise us how long we are required by law to hold a car left with us for repairs before we can sell it to cover the charges and storage. We thank you.—C. H. Goble, Goble Motor Sales Co., Casey, Ill.

Under the Garagekeeper's Lien Law of Illinois the garagekeeper is required to file his lien claim with the recorder of deeds within 60 days from the date of delivery of the repaired chattel to the owner or his agent. This lien notice can be filed at any time and the garageman may proceed in the action to sell the car or other chattel. The first step is to give notice to the owner of the chattel of his intention to sell to collect on his charges. The owner is given 10 days to deliver to the sheriff a written and verified denial of the lien claims. If such denial is made then 10 days more are allowed for the lien claimant to prosecute his claim as in a foreclosure suit. If the suit is prosecuted then a decree is finally awarded and the property sold. This is an indeterminate time. But if the owner does not care to deny the claim within the first 10 days mentioned above, the sheriff shall advertise the property for a period of 10 days or more and shall then sell at public auction to the highest bidder for cash.

So, if no defense is interposed to the garagekeeper's action to sell for this charge, 20 days would be the least period within which a sale could be had. But this action can be started from the time that a copy of the lien notice is obtained from the recorder. To do this it is obvious that your claim must first be filed with the recorder. This is procedure under the statute and same must be strictly followed to be valid.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Vibration and Lubrication

Q.—What makes this Dodge Brothers motor vibrate so? It has new light weight iron pistons of equal weight and the compression is the same in all cylinders. This is a 1918 model. It started vibrating about a year before the pistons were replaced which was three months ago. Previous to this no parts had been replaced with the exception of the piston rings. A regrinding man says that by regrinding the cylinders this condition of vibration will be overcome. Explain if he is right. The cylinders will not take .003 oversize pistons.

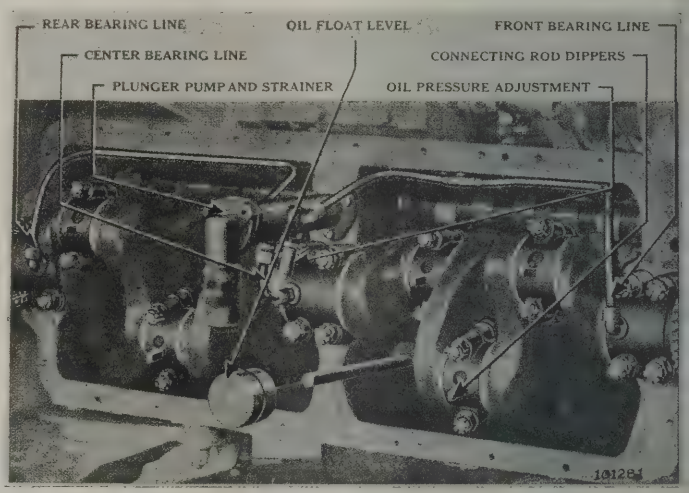
The standard alloy Dodge Brothers pistons will reduce the amount of vibration, for they will reduce the weight of the reciprocating parts. In these engines the crankshafts were not as carefully balanced as they are today. It is also possible that if the clutch has been worked on the clutch spider is not perfectly balanced. If the alloy pistons are used the first oversize should be installed and the cylinders honed to enlarge them so that the pistons will fit. These pistons should just be an easy push fit in the cylinders. In some cases regrinding and the installation of new pistons will reduce vibration, due to the fact that more even compression is obtained. However, if you are sure that the compression is even in all cylinders this will have no appreciable effect. The difficulty, of course, is in being absolutely sure that the compression is the same.

2.—In the case of a Paige 6-39 Rutenber engine that repeatedly burns out rods; can this oil pumping system be changed successfully to supply oil as on a Studebaker and Dodge or even as on a Chevrolet. I mean to feed oil directly to the rod troughs. Illustrate how best to use the leads of this pump for such oiling. I tried the ideas of other readers of drilling holes in the front and rear main bearing leads and tightening all joints in pump plunger, but the pressure then does not hold up. Bearings stayed well under this method except for the pump trouble.—Roy W. Fredrickson, Service Garage, Lane, S. Dak.

We are showing an illustration of this engine. The oiling system to which you refer has all of the oil delivered to the pan into which the connecting rods dip. It is then necessary to provide some method of oiling the main bearings and in engines of this type it is taken care of by means of funnel shaped holes together with grooves cut in the shape of a letter X in the upper half of each main bearing. In general it is not advisable to change over from the method originally used, although if you should decide to make such a change we would be interested in hearing the outcome. Where trouble with this oiling system is encountered, we would suggest checking up on the following items: See that all crankpins are round, measuring them with micrometer calipers. See that oil holes and dippers are clear and not stopped up, with sediment. See that the x-shaped cross grooves in the connecting rod caps are deep enough to carry oil to all parts of the bearings. See that rods are properly aligned. See that oil dippers go from 1/8 to 3/16 inch below the surface of the oil in the pan. This can be checked by careful measurements. Disconnect and blow out all oil lines to make sure they are clear. See that pump is working and screen is not clogged.

It might be a good idea to try to test the pump and piping assembly to see how it operates. If the engine is torn down it might be possible to insert the pump in a pan of oil and operate the plunger up and down rapidly by hand to see in what proportion the oil flows through the three pipes. Another test that might be made would be to remove the plunger from the pump housing or cylinder and stop up the upper end of this cylinder. Then in the lower end make a connection to a one-gallon tank in which oil is placed. Then close up this one-gallon tank and apply air pressure to it so as to force oil through the three oil lines going to the three main bearings. With a pressure system of this sort distributing through the pump cylinder it would then be desirable to have someone get under the car to see how much leakage comes from the different bearings. In this way one might get a fairly good idea as to the cause of connecting rods burning out. For example if all the leakage came from the front main bearing and very little from the center main bearing it would account for lack of lubrication at connecting rods Nos. 4, 5 and 6. In the oil line running to the rear main bearing it is sometimes customary to have one very fine hole somewhat less than 1/64 inch in diameter.

A No. 50 or No. 60 drill is used in making this hole.



View of Paige 6-39 Rutenber engine showing oiling system

ADJUSTMENT OF STUDEBAKER CONE CLUTCH

Q.—Tell how to adjust the spring tension in a cone clutch on Studebaker six serial No. 601576. This car is equipped with a Ferro six-cylinder engine.—Vernon O. Westrope, Mt. Etna, Iowa.

We believe that you have given the engine number instead of the serial number of the car and that the word Ferro is on the cylinder block and indicates the foundry which made the casting rather than the make of the engine. However, the construction of the Studebaker cone clutch is similar on the various models and trouble which you may have due to slipping or dragging can be traced to the condition of the leather clutch facing or else to wear in the bearings which support the cone. The spring tension itself is not adjustable. We would recommend your washing the leather with gasoline and then treating it with neats-foot oil. Do not use lubricating oil as this will cause the clutch to slip or grab.

After the leather has been treated with neats-foot oil it is also sometimes considered desirable to use a little fullers earth on the surface of the leather to assist the leather to take hold. If the leather is badly worn a new one should be installed. This is done by taking out the rear plug in the clutch hub, depressing the clutch pedal and inserting a small punch in plug hole, so that the clutch engaging spring will be held depressed on removing the retainer nut on the end of the crankshaft. The next step is to remove the clutch throwout, by removing the two bolts at each end which hold the shaft throwout bearings to the sub frame. Next take out the four bolts that hold the flexible disc to the transmission pinion flange, also the six machine screws which connect the flange to the clutch cone. This will permit the removal of the universal joint assembly.

Next take off the retainer nut on the crankshaft and remove clutch cone. New clutch leather obtained from authorized Studebaker dealers comes with the ends cemented together. The new clutch leather should be soaked in neats-foot oil and stretched tightly over the clutch face. The copper rivets used in attaching the leather cone should be properly clinched and should be driven down until the heads are well below the surface of the leather.

Clearing Up Electrical Trouble

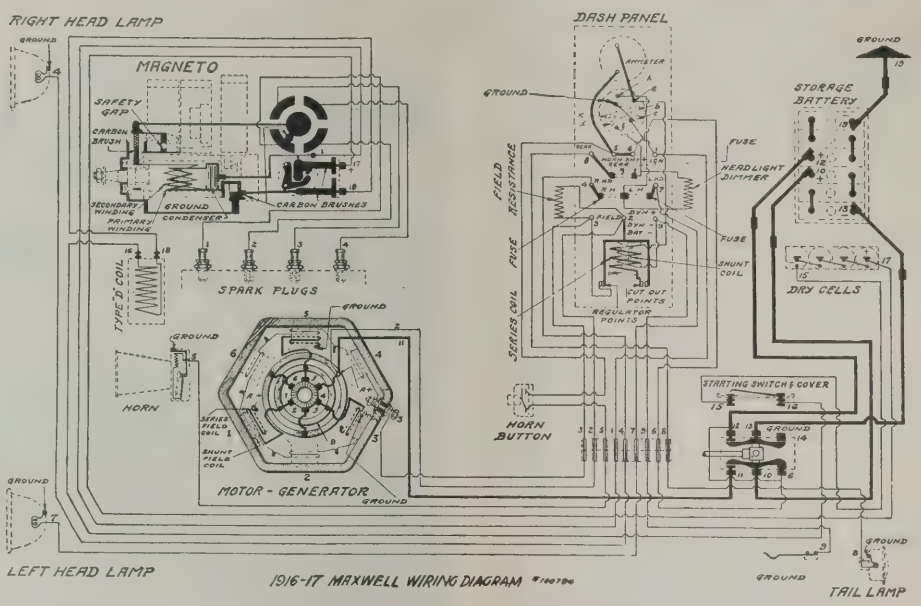
EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Reversed Magnets Affect the Spark in "Bat." Position

Q.—We would like to have a wiring diagram of the electrical system used on Maxwell motor car some years ago where a Simms magneto was used. Battery current was used with this magneto in order to induce the initial spark in starting the engine.—International Harvester Co., 2600 W. 31st boulevard, Chicago, Ill.

The diagram is shown in accordance with your request, a grounded battery not being permissible with the magneto. It is for this reason that dry cells are used instead of storage battery current. It is also necessary to have a certain polarity to the dry cells. If the dry cells are reversed it will weaken the sparks in starting instead of making them stronger. The same thing happens if the two wires at the magneto interrupter are reversed. Trouble will also be encountered if the magneto is overhauled at any time and the magnets are reversed. In this case successful operation will be obtained with the switch in the magneto position, but in the battery position the spark will be poor. This can be remedied by reversing connections at the dry cell or at the magneto, the reversal of dry cell current compensating for the effect produced by the reversed magnets.



Maxwell wiring diagram showing magneto circuit with which no ground is permissible. Dry cells are used in starting instead of storage battery current

Chronic Cases of Pitted Points

Q.—We have been in the garage business for the past fifteen years and have always taken MOTOR AGE but have never used your question department. We thought we would write to you in regard to burning or coating of distributer points. It seems that we have had more trouble in the past year with distributer points on almost all ignition systems. We have installed a large number of new points and have dressed or honed a large number of used points, and in some cases the cars have only been driven a month or six weeks until they corrode or burn so that a very small portion, sometimes as small as 1/16th of an inch is all that is making contact. We have also noticed this on regulation points, made by the manufacturers of ignition systems as well as on points made by manufacturers of ignition parts.

Our men have been cautioned lately against touching the contact surfaces on the points with oily or greasy fingers when installing, as we figured some trouble was from moisture on points when installing. Please advise if you think this at all possible.

We are authorized Stromberg carbureter service station and naturally we are called on a number of times to correct, what our customers think is carbureter trouble. In about eight times out of ten we find that the trouble is due to the distributer points and in some cases where the same car has come back to us frequently, we have changed condensers, but we are at a loss to know exactly when this should be done.—C. L. Armstrong, Armstrong Garage, Lima, Ohio.

Oil on interrupter points will cause more trouble than moisture. When the points separate there is always a flash or spark of some sort. If oil is present, the oil tends to carbonize and then the carbon helps to produce an arc when the points open. The burning action is therefore more intense when oil is allowed to get on interrupter points than when they are perfectly dry. One condition which will make the points burn rapidly is an ignition coil which draws more current than it should. For example if the coil which comes with the car is replaced with another coil which is not properly designed and draws too much current this current flowing through the points will tend to burn them. In some cases a ballast or resistance coil designed to be used with the regular ignition is left off by the mechanic making the installation and this will permit too much current to flow. Impure material, usually Tungsten in which there is slag will cause contact trouble.

Cleaning the contacts with a file or by honing will remedy the trouble for a short time and then it shows up again. There is no way to tell when a condenser is low in capacity except by substitution, testing the ignition device on a test bench and trying first one condenser and then another to see which one cuts down the spark the best. Another condition which will cause burning of the interrupter contacts is high voltage produced by overcharging the battery or by small wires or poor contact in the charging circuit which backs up the voltage and causes an abnormally heavy current to flow through the ignition coil and through the points.

This could be checked with a voltmeter in cases where point trouble seems to be chronic. If new contacts are installed and touch at one edge or only at a small percentage of the contact surface the burning will be more severe and there will be a tendency for pitting to start. This will cause a projection to form on one contact and a depression to form in the other, and the operation of the ignition will be poor. If you do not succeed in overcoming the difficulty would recommend your getting in touch with the nearest authorized electrical service station which operates as representative for the large makers of starting and lighting equipment.

FIELD COILS THE SAME, ARMATURE TURNS CHANGED

Q.—I notice that the first Ford armatures had 9 turns of No. 17 wire in each coil and that now they use 10 turns of No. 18. Did they make a change in the field coils when they made this change in the armature?—J. B. Galloway, 420 W. Lead avenue, Albuquerque, N. Mex.

According to information we have the first 2500 Ford armatures for the generator had 10 turns of No. 18 wire in each armature coil, and after that each coil had 10 turns of No. 17. This change was apparently made in order to reduce the armature losses and armature heating. We are advised that no change was made in the field coils.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Let's Have the Job Clean to Start With

GETTING ready to do the job often requires far more time than performing the job itself.

It often happens in a machine shop, for example, that days are spent rigging up a lathe or other machine to perform a cutting operation that requires but 15 minutes or so to perform. Yet all the preliminary work is necessary before the desired results can be had.

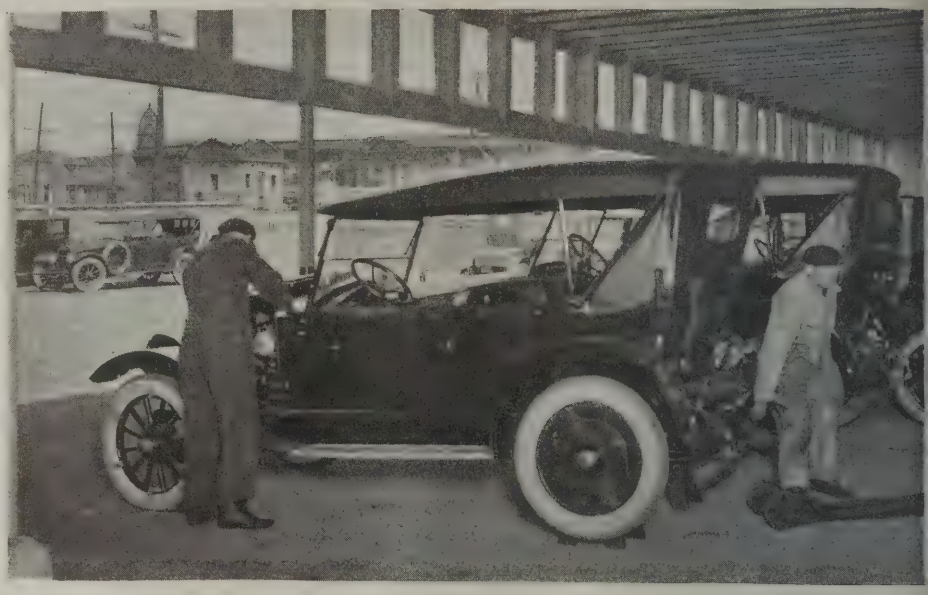
We have thought flat rate operations might be greatly speeded up by a preliminary operation of cleaning the parts or the chassis from mud and grease. This enables the mechanic to get at the work in question to better advantage and as a rule insures a better all around job.

There is a shop we know of in which every car is cleaned from top to bottom before it goes to the shop proper for any mechanical work. The chassis is cleaned with steam to remove all traces of dirt and grease and the body, fenders, etc., are washed. The car is as clean as it is possible to make it and then it is run into the shop.

This may seem like going to a lot of trouble, but it has the effect of giving the mechanics the best possible chance to work on the car, speeds up the operations and makes for a clean shop.

It is well to remember mechanics do their best work when shop conditions are right. It's no fun to lie on your back on a cold cement floor and get your eyes filled with dirt taking off a crankcase oil pan. Besides, it is not good business to have a high priced mechanic spend his time cleaning mud and grease off parts before he can work upon them.

We believe in the long run it will pay any shop to install some sort of cleaning system by which the chassis can be quickly cleaned before the car is turned over to the mechanics. There is then vastly more assurance that the various operations will be performed in the specified time, or even in less time. The shop morale is improved when working conditions are right and we know from past experiences that those shops which have given this question of preparatory cleaning thought and installed a cleaning system, have gained in many ways.



THINGS THAT HELP FLAT RATE

It is often a problem to know how to handle the quick service jobs which do not require over half an hour's work to perform. One way of doing this is to provide a "yard" as one dealer has done and which is shown above. Such a layout prevents congestion in the main repair shop by cars which need only adjustments or minor repairs

MOTOR AGE'S FLAT RATE FORUM

No. 35

FLAT RATES FOR CHRYSLER CLUTCH OPERATIONS

Manufacturer's Official Designation		Time
5700	Remove and install clutch assembly including removal and installation of floor boards, toe boards, clutch and brake pedals, propeller shaft and transmission. Includes complete overhaul of clutch, installing new parts as required	5½ hrs.
	(a) Overhaul transmission completely in conjunction with 5700, see Operation No. 7704	2½ hrs.
	(b) Install new universal joint in conjunction with 5700, add	½ hr.
5701	Remove only clutch and transmission assembly including removal of floor boards, toe board, clutch and brake pedals and propeller shaft	1½ hrs.
5702	Install only clutch assembly including installation of parts removed in operation 5701	2 hrs.
	(a) Install new clutch in conjunction with above, add	1 hr.
5703	Overhaul clutch completely when removed from car	2 hrs.
5704	Remove and install front pressure plate including removal and installation of clutch and transmission	4½ hrs.
5705	Remove and install rear pressure plate including removal and installation of clutch and transmission	4½ hrs.
5706	Remove and install clutch pilot bushing including removal and installation of clutch and transmission	4 hrs.
5707	Remove and install clutch shifter yoke including removal and installation of clutch and transmission	4 hrs.
5708	Remove and install clutch hub including removal and installation of clutch and transmission	4 hrs.
5709	Remove and install clutch drive disc, one or all including removal and installation of clutch and transmission	5 hrs.
5710	Remove and install clutch spring, one or all	4 hrs.
5711	Remove and install clutch anti rattler springs	¾ hr.
7704	Overhaul transmission completely when removed from car	2½ hrs.
	(a) Overhaul clutch in conjunction with 7704, add	1½ hrs.

(Chrysler clutch operations to be continued next week)

Operations Are Comprehensive

Bradford, Pa.

To the Editor of MOTOR AGE:

We have been greatly interested in your flat rate charts that have appeared in MOTOR AGE.

Please let us know if it will be possible for you to send us complete list of flat rates to date and what the charge would be.

STAR GARAGE COMPANY.

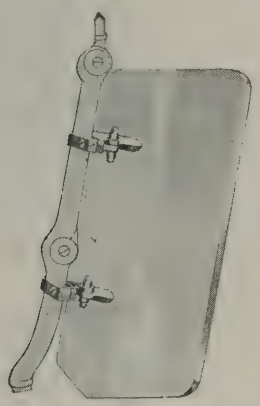
We are out of print on some of the issues containing the flat rate operations on various makes of cars and it is, therefore, impossible to send to you a complete set. You may or may not know that in the April 30, 1925, issue of MOTOR AGE, we published MOTOR AGE'S Flate Rate Manual which covered service operations on practically every American car. The car makers' flat rate manuals may be a little more complete as to the number of operations but the operations in our manual were carefully selected and should take in about every kind of work you ever will be called upon to perform in your shop on the various makes of cars. The manual is sold separately for 50 cents.

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

New Eagle Windshield Wing

A NEW model of the Kokomo Eagle Windshield Wing embodying several improvements and changes has been announced by the Windshield Wing Division of the Kokomo Automotive and Mfg. Co., Kokomo, Ind. The new model is in production and deliveries are now being made to the trade. One of the features of the new wing is the rubber pad with a molded rim which fits into a recess in the clamp and which prevents the glass from slipping. Brackets are designed for strength and good appearance. The Kokomo Eagle Post Clamp may be attached to any standard windshield post. All fittings are nickeled brass. Plate glass, beveled and polished is used.



Kokomo Windshield Wing

Another Stevens Catalog

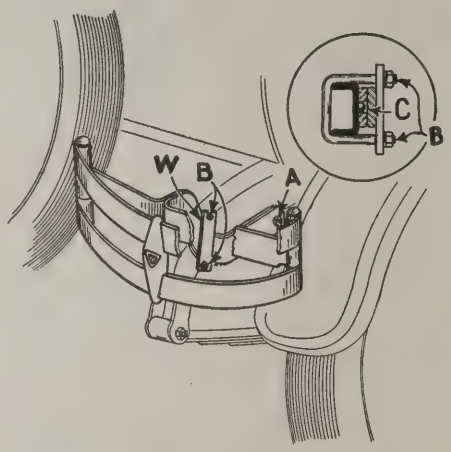
SO many new "Speed-Up" tools have been added to their line, that Stevens & Co., 375 Broadway, New York, have had to issue three catalogs this year. The third edition, designated as C-252, is now in circulation.

A feature of the new catalog is the convenient pocket size which will enable the shopman to make it an easy reference book.

The entire line of Stevens "Speed-Up" tools is shown—engine stands, valve face grinders, piston aligners, reamers, scores of universal tools and a large collection of special tools for Ford and Fordson.

Adapted for New Fords

THE Engineering Department of the Kokomo Automotive Manufacturing Co., Kokomo, Ind., announces that the Kokomo Checker, may be installed on the new model Ford cars with the same ease and convenience as on former models. The installation does not necessitate changing or removing any Ford parts, it is pointed out, and the springs are permitted to function normally when compressed.



Weed Ajax Fender Guard

Cut Shown Above

A SPECIAL rear fender guard for the Ajax automobile which differs from other guards of the Weed line in attachment details, is announced by the American Chain Co., 215 N. Michigan Avenue, Chicago. The new guard is installed by placing the fender against the automobile frame (see illustration) so the hole in the fender arm nests over the rivet as shown in insert C. A hook bolt goes over the lower flange of the frame and through the fender guard at A. Lockwasher and nut are assembled but not tightened until after U-bolt around frame and guard is fastened in place by plate W at B. The operations are the same for both right and left guards. List price, $15.

Put the Spotlight on Your New Devices

The motoring public is always interested in the new. That is a reflection of the modern world's spirit of progress.

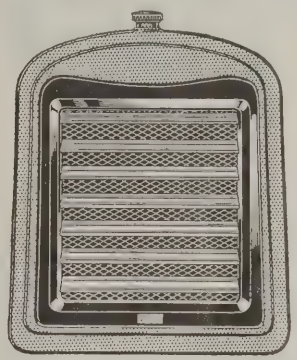
When a new accessory appears it is certain that a great many automobile owners would like to get the inside facts about it. If not to the point of possibly wanting to buy they are curious.

That is when they are in a receptive mood for the dealer's promotion. Some accessory merchants know this well enough and hence whenever they have anything new worth talking about they put it to the front.

Put your new stuff on parade. By that plan it will sell more readily and help sell other articles which you handle.

Pioneer Auto Shutter

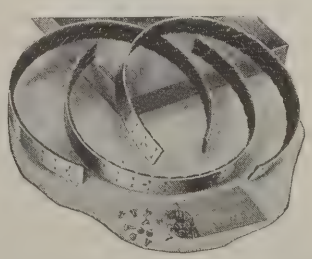
AMONG the new products which should interest the automotive merchant who is preparing to stock for winter business is the Pioneer Auto Shutter made by the Brewer-Titchener Corporation, Cortland, N. Y. This is an attractively finished radiator shutter which it is said will protect the radiator from freezing and keep the engine running steadily in cold weather. By means of a button on the dash the driver can open or close the Pioneer shutter according to the needs of his power plant. The makers say the shutter will not rattle and that it has no parts to get out of order. Price, $6.50. For Fords, $5.



Pioneer Auto Shutter

Oil Grooved Fibre Lining

RECOMMENDED by its makers for its durability and non-grabbing qualities an Oil Grooved Fibre Transmission Lining for Fords is offered the trade by the Multibestos Company, Walpole, Mass. The lining is made of pure asbestos fibre. highly compressed and supported by a thin brass backing. The oil grooving is said to permit a free flow of oil, thus reducing chatter to a minimum. These linings are thoroughly treated with a heat and wear resisting compound which it is declared renders the fibre impervious to the action of the hot transmission oil. Assembling is quickly and easily accomplished. One set of three linings, along with necessary rivets, is packed in each carton, the list price per set being $4.

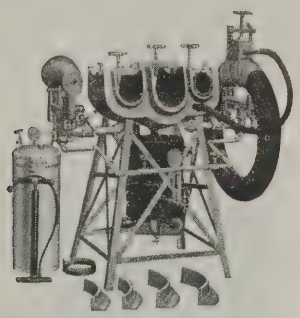


Oil grooved transmission lining

GETTING MORE OUT of the SHOP

Balloon Tire Vulcanizer

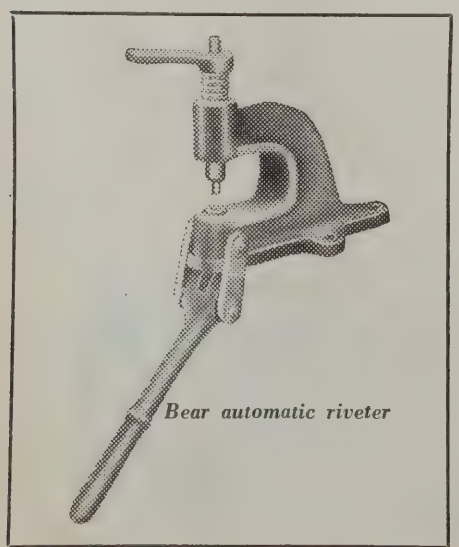
Charles E. Miller, Anderson Rubber Works, Anderson, Ind., manufacturers of tires, vulcanizers, and rubber specialties are meeting the demand for a balloon tire vulcanizer with the new Model "C" Balloon and Cord Tire Vulcanizer. This vulcanizer has been designed to repair tires from 4.40 to 7.30 in. inclusive and can be furnished with or without stand for steam line connection, also with boiler for gas or gasoline fuel. The price of a three cavity balloon tire vulcanizer for steam line without stand is $112.50 and increases with the number of accessories added.



Miller balloon tire vulcanizer

Bear Automatic Riveter

The Bear automatic riveter is a machine for relining brake and clutch bands and is easily mounted on the bench. A complete job is done in one setting, the band with its new lining is set in place and pushing down a lever automatically completes three operations—punches the lining, inserts the rivet and deeply countersinks it. Then the rivet is headed with a couple of hammer blows. All of this requires only 5 to 10 seconds per rivet. A distinct feature of the Bear is that it uses the rivet itself as a punch. Tremendous pressure forces the rivet through cutting a clean hole in exactly the right place to correspond with the hole in the band. In using the machine any style or make of rivet can be used as it produces equally good results with either solid, split or tubular, brass or copper rivets. The price complete is $19.50 and the machine is finished in combination nickel plate and enamel. It is made by the Bear Mfg. Co., Rock Island, Ill.



Bear automatic riveter

Robertson Tire Spreader and Inspecting Machine

The Robertson tire spreader and inspecting machine is powerfully built and will open high pressure tires including 6 in. and all size balloons including 7.30. It supports the tires top and bottom on rollers and the top row has a spring adjustment for all sizes. The hands are left free to turn the tire. The slotted side levers have five pulling positions whereby the fingers are made adjustable to small or large tires. This is a new feature. The bottom of the case is pushed upward while being opened thus stretching the cords and showing up trouble.

It is made especially for balloon tire work and by placing the segment plate on the machine tires are spread and pushed upward to a much greater degree making it easy to cut out cords and doing other work. The highest point of the foot lever is 60 inches from the floor. Its net weight is 64 pounds and the price including segment plate is $37.50. The machine is made by the Rockford Tire & Vulcanizing Co., 223 N. Church street, Rockford, Ill.



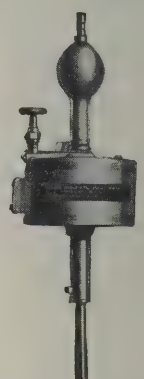
Robertson Tire Spreader and Inspecting Machine

Brunner Pneumatic Valve Grinder

The Brunner Mfg. Co., Utica, N. Y., has introduced a pneumatically operated valve grinder of unique design.

Hitherto, power operated valve grinders could be used only for the preliminary grinding—the valves had to be finished off by hand in order to obtain a perfect valve seat, the company states. With the Brunner Pneumatic Valve Grinder, the speed or number of oscillations per minute, can be varied from 10 to 1000 by merely opening or closing the handy control valve on the tool.

The frame is constructed of die cast aluminum and all working parts are case hardened and ground to exact size.



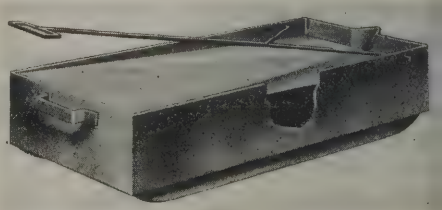
Brunner Pneumatic Valve Grinder in which the number of oscillations can be varied

Brookins Portable Drain Tank

The Brookins Portable Drain Tank, recently placed on the market by The Brookins Manufacturing Company, Dayton, Ohio, is an inexpensive article that now makes it easy for every garage and filling station to give crankcase service without drain pits or racks.

This new product is a combination pan and tank. The sloping top acts as a pan that catches the oil and conducts it into the tank underneath. It is equipped with a folding handle and steel runners that make it easy to move about or place under cars. When desired it can be conveniently carried by a metal strap at one end. Several cars can be drained before emptiying the tank. It holds about 5 gal. and is emptied by simply turning on end and letting the oil pour through a V-shaped spout.

The drain tank is also useful in draining radiators and oiling car springs.



Brookins portable drain tank

EDITORIAL

Now Slick Up the Used Car Lot

IN a recent issue of Motor Age a photographic feature was presented illustrating how the Burwell-Harris Company, Nash distributors in Charlotte, N. C., "slicked up" a used car lot. This company converted an ordinary vacant lot into an attractive automobile market place. There is little doubt that the lot's more inviting appearance will prove a stimulus to used car sales. In fact, it has.

The vacant lot is a good selling place for used cars but like any other market place it can be made inviting or unattractive. And like all market places the more attractive it can be made, within the limitations of profitable business, the greater will be its selling force.

Where the dealer expects to make use of the lot regularly it will pay him to "doll it up" a little and give thought to the orderly and attractive arrangement of cars. In many used car lots the arrangement of the cars suggests that they were shaken up in a box and dropped, to fall where they would. We noticed one a few days ago where small cars were displayed alongside large cars in a manner that might have helped the sale of the large cars but which by reason of the unfavorable contrast could only serve to check buying fever of persons interested in small cars.

Moreover, the cars in this lot were arranged in a most disorderly manner and there were two or three places where prospects had to walk in mud. Where many vehicles are shown on a used car lot they should be grouped according to class—and they should be "displayed."

Graveled walks for the prospect to walk on and graveled squares on which to display the cars, along with some possible fence painting and obliteration of rubbish piles and other eyesores—suggest some of the things that can be done to improve the setting.

Take the aerial artist in the circus for instance. He measures his profits altogether by the number of turnovers he can make.

Better Registration Laws

RECENT investigation has shown that in many states automobile registration is so inefficiently carried on that actual new car registrations fall far short of actual new car sales, and not only do the states lose from 10 to 40 per cent of the income that they ought to receive from this source, but their total car ownership figures are considerably below the actual number of owners within their various state boundaries.

As a result of this investigation a very determined effort is being made to bring about better registration laws in many states, so that registration figures shall be accurate, and the money that these states should receive from car owners shall be available for highway purposes.

New Mexico has shown what may be accomplished along this line. Up to this year there was such a large discrepancy between the cars registered and the cars actually operated that the secretary of state started a quiet investigation. He enlisted the aid of leading automobile dealers throughout the state, and they furnished him a list of cars actually sold. This list he compared with registrations of each make, and as a result drafted a law that went into effect January 1st this year that brings to his office each week records of new car sales by all dealers. Checking these against registrations enables the state to collect practically all registration fees it is entitled to, and as a result the state is getting thousands of dollars that had been lost in the past.

Dealers, too, are now enabled to get accurate new car registration statistics to help them in the conduct of their business, and their state is getting credit for its full number of cars in operation, which it never had before.

One of the quickest ways to down a competitor is by letting him have all the sales that involve wild trade-in allowances.

A Neighbor Does Better

SOMETHING has happened in the automotive trade down in Mexico. Trade conditions in numbers of Mexican cities, notably the national capital, are reported to be better than they have been for a number of years. Behind it all can be seen the effect of an improved financial situation and considerable progress in the improvement of streets and rural highways. Mexican tradesmen who fought for years to keep afloat are now flushed with the joy of profitable business.

Let us hope that their prosperity continues on the upgrade. It means to them not only what profitable business means to all of us, but improved conditions in Mexico will make for still better conditions in the United States. They will open wider markets for our automotive factories and they will bring other Mexican money into the hoppers of America's foreign commerce.

This automotive prosperity in Mexico is considerably spotty at present, but the trend is in a delightful direction.

If anyone should say that the man still wearing his summer straw hat in November is a long-time allowance automobile dealer we would understand, anyhow—why he continues to wear his straw hat in November.

Profits in the Crowd

A CALIFORNIA dealer counted noses of persons who came to his show room to view a display of new cars. The total number of visitors was 2,054 and 50 of this number bought automobiles. This means that one out of 41 of the visitors was a buyer and that approximately two and one-half out of each hundred were buyers. Taking the visitors who call day after day at the show room that would not be a high average, but for a one-day special event it was. Get the crowd at the psychological moment and a good part of it will be yours if your salesmen do their work.

High Production Level Is Maintained

Final Figures Show Output Of 300,000 for September

Light Closed Car Holds Sales to Unusual Fall Mark— Rural Demand Heavy

PHILADELPHIA, Oct. 14.—September production of cars and trucks was at a record rate for that month for many of the large factories, and the level has been fairly well maintained for the last two weeks. From now on, however, except in the case of Ford, the general tendency will be gradually downward, with probably a sharp drop next month or in December.

Preliminary estimates of the production total for September show a gain of about 8 per cent over August for the industry as a whole, with Ford again excepted. In the case of Ford, the month showed an enormous increase, so that the final figures should be well over the 300,000 mark, against approximately 260,000 for August. The October total will probably be slightly higher than September.

An important factor in holding up production and sales to an unusually high Fall level is the light closed car. The price cuts during the past few months have affected the all-season vehicles more than the open cars. The two closses are now virtually on the same price level, so the normal seasonal demand for closed cars has been greatly stimulated.

Farm demand continues to be the backbone of the automotive market and is offsetting any losses in the urban centers.

Comparatively high production will be maintained for some time even if sales fall off materially, since the manufacturers in most cases have no surplus stocks, and will want to build up inventories in preparation for the new year.

Parts and accessories sales are generally holding the better than normal position that they have maintained throughout the summer. There was an appreciable falling off in some sections at the close of the touring season, but aggressive merchandising of winter necessities and staples by wholesalers is showing results. Tire business remains good in practically all sections. Retail business made the best showing in September with many merchants still carrying comfortable stocks purchased during the first weeks of the rubber shortage scare and the succession of price advances.

BENDIX OFFICES MOVED

CHICAGO, Oct. 10.—J. L. Price, president and general manager, Bendix Brake Company, announces the removal of the general offices to the plant at South Bend, Indiana. The general offices of the Bendix Brake Company have been in the Illinois Merchants Bank Building, Chicago, along with those of the Bendix Corporation, but orders from large automobile manufacturers made it necessary for closer contact on the part of all officials of the company with the factory. General offices of the Bendix Corporation will remain in Chicago.

City Cannot Act as Carrier

ALBANY, N. Y. Oct. 10.—The Court of Appeals has ruled that the City of New York has not the right to carry on the business of a common carrier of passengers. This decision voids the four bus bills passed by the New York Municipal Assembly on the insistence of Controller Craig, who introduced the bills to prevent Mayor Hylan from issuing short term franchises to bus operators now operating lines without legal authority. It is believed that the Board of Estimate in New York City will now proceed with the award of these franchises, for which more than 80 applications have been made.

N. Y. MERCHANTS MEET

NEW YORK, Oct. 15.—More than 500 members of the Automobile Merchants Association of New York, Inc., sales managers, salesmen and dealers attended the sales congress held at Hotel Astor today under the auspices of the National Automobile Dealers Association. Sales, sales plans, salesmanship, management, maintenance, used cars, profits and market analyses were discussed by Charles E. Gambill, president of the N. A. D. A.; C. A. Vane, general manager, A. R. Kroh, sales promotion advisor, Edward Payton, market analyst, and others.

PLEAD FEDERAL AID

WASHINGTON, Oct. 10. — Declaring that no Federal function is giving the country more for the funds involved that highways, the American Association of State Highway Officials here this week made a plea to members of Congress for continuance of Federal aid in developing the highway system of the United States. "Curtailment of the program of construction as it is now moving forward would not be a real saving," the association told Director of the Budget Lord. "There is plenty of evidence to show that it would be an economic loss. The work is only about half completed and should therefore go forward with sound business alacrity."

Spaces Drawn for National Shows at N. Y. and Chicag

Annual Events to Be Held Januar 9-15 in East and Jan. 30-Feb. 6 in Mid-West

NEW YORK, Oct. 10.—Drawing t space by automobile manufacturers fo the 1926 New York and Chicago nationa shows was held here in connection wit the fall meeting of the National Auto mobile Chamber of Commerce. The Ne York show will be held January 9-15 a the Grand Central Palace and the Ch cago show will be held January 30-Feb ruary 6 at the Coliseum.

The following is the list of cars t which space was assigned:

Ajax	Lexington
Auburn	Lincoln
Buick	Locomobile
Cadillac	McFarlan
Case	Marmon
Chrysler	Moon
Chandler	Nash
Chevrolet	Oakland
Cleveland	Oldsmobile
Davis	Overland
Dodge Bros.	Packard
Dupont	Paige
Durant	Peerless
Elcar	Pierce Arrow
Essex	Pontiac
Flint	Reo
Franklin	Rickenbacker
Gardner	Roamer
Gray	Star
Hudson	Stearns
Hupmobile	Studebaker
Jewett	Stutz
Jordan	Velie
Junior Eight	Wills Ste. Claire
Kissel	Willys Knight

Taxicabs

Dodge Bros.	Willys Knight
H. C. S.	Yellow Cab
Oakland	Bauer
Reo	Luxor

Dupont will exhibit only at the Ne York show.

Buick Will Maintain High Output Through Novembe

FLINT, Oct. 10.—Buick will continu its present rate of output of 22,000 ca a month or 1,000 daily during Octobe and November, E. T. Strong, general sale manager, said today. From this state ment it is likely that if the present de mand continues, December productio also will near capacity.

In reaching the present output fo September, the factory experienced n spasmodic production days but a stead and even daily output.

Mr. Strong said that the demand sti exceeds the output and that orders whic many dealers have on their book secured since the introduction of th Better Buick, are more in some case than they have secured during the cours of an entire year.

A-C Co. Plans Manufacture Of Mufflers About Nov. 1

New Division of Company to Be Housed in Plant Bought From Dort

FLINT, Oct. 10.—Manufacture of automobile mufflers by the A-C Spark Plug Company will start around the first of November, B. W. de Guichard, vice-president of the company, said today. An output of several thousand mufflers daily is contemplated.

The new division will be housed in a factory recently purchased from the Dort Motor Car Company. The building is rapidly being equipped with the proper machinery and will be completely finished at the present rate by the end of the month.

In speaking of the muffler which the company will manufacture Mr. de Guichard said, "It is a patented pressed steel muffler, the patent and manufacturing rights which we recently purchased. It is reasonable in cost and efficient."

September, Mr. de Guichard said, was the largest production month of speedometers in the history of the company. The estimated daily rate of production for October of 6,000 exceeds that for the last month. The A-C cleaner which did not get into production until last May is now being turned out at the rate of 500 daily. From 90,000 to 100,000 A-C spark plugs are also being made at the plant here each day.

NEW PLANT OCCUPIED

DELPHOS, O., Oct. 10.—The Gramm & Kincaid Motors, Inc., announce that the company has just moved into its new plant here, located fourteen miles from its general offices at Lima, O. The company manufactures motor trucks and coaches. The main assembly, machine, paint and body departments and final assembly cover 70,00 sq. ft. of floor space.

TAKES COLLEGE CHAIR

LOUISVILLE, Oct. 10.—George T. Holmes, manager of the Leyman Motor Company and former secretary-treasurer of the Louisville Automobile Dealers' Association, has accepted a place in the faculty of the Louisville Institute of Technology as a teacher of salesmanship.

MOHAWK HOLDS MEETING

AKRON, O., Oct. 10.—More than 200 of the larger distributors of Mohawk tires and 60 members of the sales force and branch organizations attended the annual sales conference of the Mohawk Rubber Co. here Oct. 6 to 9. Speakers of national prominence on the program included W. O. Seeley, of the George Harrison Phelphs Co., Detroit; M. Parlin, of the commercial research department, Curtis Publishing Co., E. S. Babcox, publisher of the India Rubber Review, and M. Latowsky, of the National Cash Register Co.

He Practiced What He Preaches

MILWAUKEE, Oct. 10.—George J. Devine, manager of the used car department of the local branch of Willys-Overland Co. has received much commendation of late. He was married last week to Miss Julia Voss, the ceremony being performed at St. Ann's church. Because he had always held that the used cars he sells are good enough for any occasion, he bore out his sales argument by riding with his bride to church in a 1912 model taxicab from his own used car stock. The entire sales organization of the Willys-Overland branch came to the wedding in used automobiles, instead of luxurious limousines usually seen on such occasions. All the salesmen brought their own breakfast, it was reported. Anyway the wedding was a distinct social triumph as well as a mechanical one, for all of the used cars stood up very well under the strain of the special occasion.

September Car Titles in Illinois Show Decrease

CHICAGO, Oct. 10.—There was a drop of 21 per cent in the total registration of new passenger cars in Illinois during September, as compared with August. The greatest decrease was shown by Fords with a loss of 60 per cent. This, of course, is not surprising, as buyers are waiting for the new models which they have ordered.

Losses in other price divisions were comparatively small, being 2 per cent for low-priced vehicles (excluding Fords); 5 per cent in the medium-priced class and 8 per cent in the high-priced group.

Following are the detailed figures for the first nine months of 1925:

Month	Fords	Low, excl. Fords	Medium	High*	Total
Jan.	4,060	2,275	5,748	808	12,891
Feb.	3,424	1,718	4,977	612	10,731
March	5,714	2,729	6,416	784	15,643
April	9,010	3,755	8,801	861	22,427
May	8,751	3,644	8,014	899	21,308
June	6,473	3,400	6,383	828	17,084
July	8,499	4,305	8,787	1,035	22,626
August	4,686	3,218	6,646	720	15,270
Sept.	1,831	3,145	6,292	661	11,930
Total	52,448	28,189	62,064	7,208	149,910

*Includes miscellaneous cars not named.

The foregoing figures were compiled from statistics furnished to MOTOR AGE by Robinson's Advertising Service, Springfield, Ill.

LONGAN TO DETROIT

CHICAGO, Oct. 10.—Lou W. Longan, engineer for the Link-Belt Company of Chicago, has been placed in entire charge of the Silent Chain "Front-End Drive" division of the Link-Belt Co. in Detroit, it is announced here. Mr. Logan succeeds George L. McCain.

Fifth Tire Price Advance Since May Is Seen Nov. 1

Manufacturers Said to Have Entered Crude Market, Stiffening Price at $1

NEW YORK, Oct. 7.—Another advance in tire prices, the fifth since May 1, is expected to go into effect Nov. 1. Manufacturers late in October are expected to decide upon advances of from 10 to 15 per cent. This would leave prices from 40 to 50 per cent under pre-war levels.

The chief reason for an advance is said to be the reported entrance of some manufacturers into the crude rubber market, buying at prevailing prices, which have stiffened around $1 per pound.

Demand for high pressure and balloon casings continues unabated. Earnings of leading manufacturers for this year will probably be far in excess of those for any year since 1920.

HUDSON TO SPEAK

NEW YORK, Oct. 10.—Among the speakers at the annual convention of the National Tire Dealers' Association to be held in St. Louis, November 17 and 18, will be R. M. Hudson, chief of the division of simplified practice, Department of Commerce, and Paul L. Palmerton, chief of the rubber division.

BOCK OPENS EXPORT OFFICE

TOLEDO, Oct. 10.—Foreign business especially in Continental Europe being booked by the Bock Bearing Co., of this city, has necessitated establishment of export headquarters at New York. Robert J. Clingan, general manager of the company, has announced the appointment of W. B. Cameron, 44 Whitehall street, New York, as export manager for his company.

WHITE NAMES LETSINGER

SAN FRANCISCO, Oct. 10.—P. E. Letsinger has been appointed district manager for the San Francisco district of the White Company. He has been for four years retail manager of the Seattle territory for this corporation. The White Company also has opened a Los Angeles factory branch, with J. L. Snyder as district manager, according to announcement by G. A. Urquhart, vice-president of the White Company. Snyder goes to Los Angeles from San Francisco.

MARATHON TO EXPAND

AKRON, O., Oct. 10.—Officials of the Marathon Rubber Co. are preparing to install additional machinery, which will increase capacity of the plant to 25,000 automobile tires a month, compared with the present schedule of 15,000 tires monthly. Marathon plans to market a new set of tires to meet the public demand for a heavy duty cord of rugged type for extraordinarily heavy service, officials state.

Chicago's Seventh Used Car Exhibit Opens in Coliseum

Daily Auction Will Be One of Show's Biggest Features This Year

CHICAGO, Oct. 10.—The seventh annual Used Automobile Show, under the auspices of the Chicago Automobile Trade Association, opened here today in the Coliseum. It will continue to October 18. Every space in the Coliseum was occupied on the opening afternoon, and a number of concerns seeking allotments were unable to obtain space.

A number of new features have been added to the show this year, making it more interesting both to the public and the exhibitors. The principal one of these is the daily auction, which will be held each evening in the Coliseum Annex. All cars that were unable to make the "green tag" as tested and approved by the committee, will be sold in this manner and are not exhibited on the main floor of the show.

The used car show heretofore has been held in the spring and the fall exhibition is somewhat of a novelty. So confident are the dealers, however, that these exhibitions are a great aid in a sales medium that there has been much enthusiasm among the members of the association and the demand for space was unprecedented.

Rules and regulations governing the show this year are similar to those of past exhibitions. Each car placed for sale on the main floor of the show must bear the green tag of approval by the committee. The committee is representative of nearly every make of car exhibited and has thoroughly gone over every detail of condition of the machine offered for sale.

The first inspection was held September 28 and daily inspections followed until the day before the show opened. An advance sale of these tested and approved cars has been held in the various salesrooms of the exhibiting dealers preceding the show opening.

The spaces on the east and wast walls of the huge hall have been held in reserve for additional used cars, to replace those sold and taken from the floor. A portion of the annex was reserved for the same purpose and the other section of the annex has been held for the auction each evening. Cars that could not make the green tag will be lined up in this section during the afternoon for the inspection of the public.

The show committee, in full charge of the entire display consists of the following members of the Chicago association:

W. E. Butler, Franklin-Butler Motors, chairman; George C. Norwood, Thos. J. Hay, Inc.; Gordon Bird, Bird-Sykes Co.; Harry P. Branstetter, H. P. Branstetter, Inc.; H. A. Wehmeier, Community Motors, Inc.; and O. G. Heffinger, Chicago Motor Car Co.

MARMON PROMOTES BADGER

INDIANAPOLIS, Oct. 10.—E. C. Badger, for several years comptroller of Nordyke & Marmon Company, has been promoted to the position of assistant treasurer, according to announcement of G. M. Williams, president of the company. In his new work Mr. Badger will assist Treasurer C. J. Sherer.

Chicago Plans to Observe "Management Week" Soon

CHICAGO, Oct. 10.—The fourth national observance of Management Week will be held Octber 10-24, it is announced by Herbert Hoover, secretary of commerce, honorary chairman. The observance of the week in Chicago will be arranged under the joint direction of the following:

Illinois Manufacturers' Association, Chicago Association of Commerce Advertising Council, American Society of Mechanical Engineers, Western Society of Engineers, The Society of Industrial Engineers, National Association of Cost Accountants, Industrial Relations Association of Chicago, Chicago Sales Managers' Association, American Management Association, Taylor Society and Executives' Club.

One of the principal speakers during the observance here will be Edward S. Jordan, president of the Jordan Motor Car Co., Cleveland, who will speak at the banquet in the Hotel Sherman October 23, on "Who Gets the Money for Motor Cars?"

TAX BILL UP OCT. 19

WASHINGTON, Oct. 10.—The House Ways and Means Committee will take up the tax reduction bill with hearings beginning October 19, it is announced today. Automotive interests will be heard by the committee October 24 and 26 and any interests desiring to be heard on these two dates should file their applications immediately with Clayton F. Moore, clerk of the committee, in order that they may have time assigned them on the calendars.

STORAGE IS IMPORTANT

SAN FRANCISCO, Oct. 10.—Storage of passenger cars during their owners' absences from the city either on vacations or for other reasons has proved a profitable department of the Don Lee interests here. The experiment of devoting an entire floor in the Lee building on Van Ness avenue to this storage was started about a year ago, and has proved profitable not only from a financial point of view, but in obtaining prospects for Cadillac cars, which Lee distributes, and in getting repair and replacement work, as well as sales of parts and equipment. The automobiles are covered, the cars jacked up, batteries kept charged and tires deflated, while employes inspect each car at frequent intervals. Cost of these services is included in the storage charge, which is nominal.

Olds Will Add Equipment To Care for Big Deman

Production Expected Around 5 Cars Daily by First of January

LANSING, Oct. 15.—Growing dema for the different Olds models and t prospective production schedule for 19 has caused the Olds Motor Works he to order additional equipment which w enable the factory to greatly increase present production.

I. J. Reuter, president and gene manager of the company, said today th by the end of January the daily produ tion would be around 400 to 500. T present output is approximately 250 ca a day.

In addition to the new equipme orders for the Olds factory, more ove will be installed in the Fisher body pla adjoining the Olds plant to enable it increase its present output of bodies.

Mr. Reuter also said that 5,541 Old mobiles were manufactured and sold the factory during September. Prac cally all of these cars were sold dealers to consumers as soon as they h been received.

WASHINGTON PLANS SHOW

WASHINGTON, Oct. 10.—The Washi ton Automobile Show will be held on t floors of the new Washington Auditori Building from January 30 to February inclusive, it is announced by Rudol Jose, chairman of the show commit and trustee of the Washington Auton tive Trade Association, under wh auspices the show is to be held.

PERSONNEL CHANGES MADE

SEATTLE, Oct. 10.—A number of i portant changes have recently been ma in the personnel of the Seattle branch the Western Auto Supply Co. by H. Baker, general sales manager. W. Boling, formerly field superintendent the San Francisco district is made d trict manager of the Seattle territo succeeding O. H. Pound. H. E. McKnig formerly field superintendent of the L Angeles district, comes north as fi superintendent of the Seattle territo Extensive enlargements in the number stores now maintained by the company this district are contemplated. This co pany now maintains more than hundred stores in the Pacific Co region.

CHICAGO SERVICE EXPANDED

CHICAGO, Oct. 10.—As another s toward greater development, the Chic Wheel and Spring Company, Budd Wh service station in the Chicago distr has established a substation in Gr Bay, Wis., known as the Green Bay A Parts Company. This latest addition the Chicago Wheel and Spring gr gives this organization the distinction being the service station with the larg number of substations in the country

Weather Has Bad Effect On St. Louis Car Auction

Prices Received Believed Lower Than Will Be Case at Next Two Sales

ST. LOUIS, Oct. 10.—Pouring rain the past two Saturdays had a very detrimental effect upon the used car auction being conducted for six allied automobile dealers by the Selkirk Auction Co. It has been decided however to hold the sale for at least one more week and possibly move the location for another week.

Should these two sales prove profitable the auction may be continued indefinitely as a weekly feature. The sales have been held at Sarah street and Laclede avenue in the St. Louis County Farmers' Co-operative market.

A list of the cars sold, on the last two Saturdays, models and the prices they brought follows:

First Auction

Chevrolet coupe	$437.50
Studebaker touring, 1921	90.00
Ford, 1922 coupe	175.00
Dodge coupe	65.00
Nash roadster	170.00
Chevrolet sedan, 1923	315.00
Ford coupe, 1923	200.00
Oakland touring, 1918	50.00
Ford touring, 1923	100.00
Chevrolet coupe, 1922	75.00
Overland touring	50.00
Ford touring	50.00
Oldsmobile touring, 1919	39.00
Nash touring	105.00
Gardner touring, 1921	50.00
Ford	35.00
Ford touring	35.00

Second Auction

Reo, 1921	$ 77.50
Dort touring, 1921	37.50
Dodge	30.00
Nash coupe, 1921	205.00
Overland sedan, 1920	150.00
Ford coupe, 1923	167.50
Ford coupe	105.00

Spring Clutch Co. Absorbs Central Gear in Merger

INDIANAPOLIS, Oct. 10.—The American Spring Clutch Company, which a few months brought out the L. G. S. Spring Clutch Starter Gear, has bought the property of the Hunter Dry Kiln, a plant two stories with about 15,000 feet of space and will manufacture automobile starters, shock absorbers and other devices with the spring clutch basic idea and also will produce other metal products.

At the same time the company announced that the Spring Clutch Company has bought the property of the Central Gear and Manufacturing Company, owned and controlled by individuals interested in the newer company. This concern has been the manufacturing end of the spring clutch company and has also produced gears and gear blanks and automotive screw devices.

Another operating company is to be formed by the officers and owners of the American Spring Clutch Company to be called the L. G. S. Company and this concern will lease the patents controlled by the Clutch Company. The officers of the concerns are Albert Lieber, president; W. Carlton Starkey, vice-president and general manager; Frank Gritt, secretary; and Charles Rutherford, treasurer.

The reorganization is for expansion and to draw the concerns which have been organized separately into a unit. The officers own all the stock of the interests and no stock is to be offered for sale.

Daily Ride Given Overland Sedan in Denver Proves Effective Introduction Plan



This is the way the new Overland sedan was introduced to the people of Denver. The display toured the business section every day and according to reports brought many prospects to the various agencies for a closer inspection

New Motor Coach Body For Ford Truck Planned

LOUISVILLE, Oct. 10.—The Kentucky Wagon Manufacturing Company has entered the bus body field after a close study of the developments in the motor coach industry, and, according to R. V. Board, president of the concern, will build a body to be known as the Economy Motor Coach, mounted on the Ford one-ton chassis. Officials of the company have concluded that the big field is in a unit suitable for this model chassis.

The new coach, which is said to be a pronounced departure from conventional bus models, is designed in both a sedan and street car type. The feature that is particularly noticeable is that the body projects a short distance beyond the front wheels, while at the rear it ends just back of the rear wheels like that of an ordinary passenger sedan, there being no rear overhang.

The driver's seat and the control elements have been taken away from behind the engine and brought forward. This provides room for eight passengers in the space a driver ordinarily occupies in common bus design. It seats sixteen passengers altogether.

Southern Parts Dealers Look For Active Fall Business

ATLANTA, Oct. 10.—That retail dealers all over the Southeast are looking forward to a very active accessory demand this fall, is noted from reports of the larger jobbers of accessories in Atlanta, who advise that September business was unusually good, and that not in some years have the dealer trades purchased as heavily of accessories for their early fall business.

September sales this year, in fact, were 20 per cent better than they were during the same month last year, and even showed a greater increase than this over September, 1923. The same is true of parts business, which has continued very active since early spring, every one of the last six months, September included, showing a substantial gain over the same month in 1924.

Tire jobbers and factory branches in Atlanta also report a decided increase in tire buying the past month, dealers ordering in quantity again now that there seems no likelihood of tire prices declining in the very near future.

Mexico Pledges Aid in Stopping Theft of Cars

LOS ANGELES, Oct. 10.—Two nations combined in warfare against automobile thieves at a conference recently held in the governor's palace at Mexicali on the border between California and Mexico.

No longer will the automobile thief be able to dash across the international border line of the southwest with his plunder, safe from molestation. Under the agreement reached, the Mexican military and peace authorities will cooperate fully with the American officials.

The conference was presided over by General Abelardo L. Rodriguez, governor of Lower California, and included R. H. Colvin of the United States Department of Justice, Captain J. E. Ervin, of the Los Angeles police department, and Walter E. Wood, head of the theft bureau of the Automobile Club of Southern California. Mexican officials included A. Murua Martinez, secretary of state and Francisco Peralta, inspector general of police of Lower California.

Miller Rubber Co. Planning To Increase Working Capital

Reorganization Will Be Voted on By Stockholders at Meeting Oct. 19

AKRON, Oct. 10.—Common stock of the Miller Rubber Co. will be split up on the basis of five shares of new no par common stock, to be issued to holders of each $100 par value share, if the reorganization plan proposed by directors is adopted, president Jacob Pfeiffer has announced.

A special stockholders' meeting will be held Oct. 19 to act on the proposal.

The plan includes selling $4,000,000 par value of the unissued cumulative preferred stock at $103.50 a share. Stockholders will be offered the right to subscribe for four shares of preferred for every five shares of old common held.

Total authorized capitalization under terms of the reorganization will be 600,000 shares, of which 400,000 will be common without par value and 200,000 8 per cent cumulative preferred.

President Pfeiffer, in a letter to stockholders, states the company has a large and profitable business on its books, and in immediate prospect. "In order to accept the business aavilable, it is advisable to increase working capital, he says. "Directors deem it advisable also to modernize the company's capital structure, and provide a better market for your common stock."

Kelly-Springfield Decides To Abandon Akron Plant

AKRON, O., Oct. 10.—Officials of the Kelly-Springfield Tire Co. have definitely decided to abandon the East Akron factory, Louis Mueller, general superintendent, has announced. The company plans to concentrate its production at the new factory in Cumberland, Md., he said.

Operations here are to be discontinued, the factory dismantled, and the property placed on the market for sale. Capacity of the Akron plant is about 3,500 automobile tires a day, but recently it has been running on a considerably reduced schedule. Approximately 500 workers have been employed.

Kelly-Springfield discontinued manufacturing tires here when the Cumberland plant was completed five years ago. Two years ago the local factory was reopened. It was reported at that time that the scarcity of experienced rubber workers handicapped operations at the new plant. Another theory advanced for the change was that the company was working on large orders for Detroit motor car manufacturers, which made it advisable to have production as near that city as possible.

NORTH EAST PICKS KELLEHER

ROCHESTER, N. Y., Oct. 10.—R. J. Kelleher has been elected vice-president and general manager of North East Service, Inc., it was announced at the convention of branch managers held at the plant of the North East Electric Company here. Mr. Kelleher has been manager of the Paris branch of the organization since 1920. Previous to that he was manager of the Kansas City office and later of the Detroit office.

Railway Engine Saves Day at Plant

AKRON, O., Oct. 10.—A railway locomotive was pressed into service at the plant of the Pharis Tire & Rubber Co., Newark, O., when one of the boilers failed. Steam from the locomotive was forced through an improvised connection into the steam mains of the factory, so that production went on as usual while the disabled boiler was being replaced.

The breakdown occurred while the Pharis company was at its peak production, with many thousands of tires on unfilled orders. The boiler failure would have curtailed their output several hundred tires a day, entailing a heavy loss.

MACHIA SALES MANAGER

CHICAGO, Oct. 10.—The Automobile Equipment Manufacturing Corp., 1908-10-12 Indiana avenue, manufacturers of the Balloon Bumper, announces the appointment of L. L. Machia as sales manager. The product is sold direct to car dealers. Mr. Machia is not new in automobile circles. He was formerly of the sales promotion staff of the Goodyear Tire & Rubber Co. of Akron, Ohio, where he was concerned with dealers' resale activities.

HUDSON DEALERS MEET

ST. LOUIS, Oct. 10.—Members of the Hudson-Frampton sales organization in St. Louis, including all its metropolitan dealers and their salesmen, attended an interesting sales meeting recently at which H. D. Bullock, sales expert of N. A. D. A. was the chief speaker. The Hudson-Frampton Co. distributes Hudson and Essex cars here.

FAMOUS DRIVERS ENTER

WASHINGTON, Oct. 10.—Eight nationally known automobile drivers have entered to date in the 250-mile race which will be staged October 24 at Laurel, Md., by the Baltimore-Washington Speedway officials. They are Peter De Paolo, winner of the opening 250-mile race July 11, on the same track; Earl Cooper, Bennett Hill, Jerry Wonderlich, Ralph Hepburn, Bob McDonogh, Ralph De Palma and Tommy Milton.

REYNOLDS MADE TREASURER

RACINE, Wis., Oct. 10.—C. B. Reynolds, formerly general credit manager, B. F. Goodrich Rubber Company, has been elected treasurer of the Racine Horseshoe Tire Company. Mr. Reynolds was with the Goodrich organization 16 years.

M. & A. M. A. Holds 3-Day Convention in Montr

Noted Business Authorities A Principal Speakers Before 200 Delegates

MONTREAL, Oct. 10.—Two hund delegates from member companies of Motor and Accessory Manufacturers sociation discussed modern methods management at a three-day convent October 7-9 at Montreal. With nc business authorities as speakers, am them Francis H. Sisson, vice-presiden the Guaranty Trust Co., and Merle Thorpe, editor of the Nation's Busin the parts and accessory makers exchan ideas on general and financial mana ment, merchandising and credit granti

From Mr. Sisson the delegates lear of the steady improvement of busin conditions throughout the world. He alyzed American and foreign conditi showing that continued prosperity is prospect for businesses intelligently aggressively managed.

Mr. Thorpe said that business is gc but there is an undercurrent of dis pointment due to business men hark back to the "golden days of 191 September, said Mr. Thorpe, fo volume of trade larger, industry m active, failures and liabilities smaller some of the leading crops in better sh than a year ago. Speaking of comp tion, he said that more business is be done and more dollars are being g after but more people are going a both business and dollars. He ur business men not to expect Congress legislate them into prosperity.

E. P. Chalfant, of the Gill Manufact ing Company of Chicago, president of M. & A. M. A., presided over the open sessions. W. T. Morris of the Ameri Chain Co., President of the Automo Equipment Association, discussed pr lems of management in the parts and cessory industry.

Alabama Cars Increase By 80,000 During Last Ye

BIRMINGHAM, Oct. 10.—During fiscal year ending September 30, 1 the number of motor vehicles in A bama has increased by about 80,000, cording to the report of F. C. Marq associate member of the state tax c mission. The gain for this pe brings the total for the year up to 2 000 motor vehicles now being opera in the state of Alabama. Of the incre reported Mr. Marquis states that at l 75 per cent of them are private or p senger cars.

The state two cent per gallon gaso tax brought in a sum for the montl August which broke all monthly rec to date. Net receipts from the tax for month of August totalled $200,793.94 this is the first time since the tax levied that the net receipts have reac the $200,000 mark.

N. A. F. C. to Hold Session In Chicago November 16-17

Committee Appointed to Arrange Program Presenting All Financial Phases

CHICAGO, Oct. 10.—Two days, Nov. 16 and 17, were set as the dates for the annual convention of the National Association of Finance Companies at a meeting of the executive committee here this week. The convention will be held at the Sherman Hotel, Chicago.

A committee to arrange a program was appointed, as follows: A. H. Rosenberg, Motor Car Securities Co., B. A. McDonald, Commercial Credit Trust; F. A. McGary, Mercantile Acceptance Corp.; J. R. McNamara, Walter E. Heller Co.; E. L. Price, Manufacturers Finance Trust, and C. C. Hanch, general manager of the association.

This committee was instructed to arrange a program which is expected to be a complete discussion of the automobile financing problem from the various standpoints of manufacturer, distributor, dealer, banker, insurance company, and finance company. An effort will be made to get capable speakers to present these different viewpoints.

One feature of the program which is looked forward to with considerable interest will be a report of the investigation now being conducted by Mr. Hanch into the experience of the finance companies with credits based on varying down payments and terms of repayment, especially from the standpoint of repossessions and losses. To gather material for this report questionnaires were sent to all known finance companies whether members of the association or not, and already more than 100 returns have been filed. Mr. Hanch is hopeful that at least as many more companies will fill out and return the questionnaire so that the final analysis will more accurately represent the experience of the industry.

Invitations to attend the convention will be extended to all finance companies, bankers and representatives of the motor vehicle industry, whether or not members of the association.

A metter of business to come before the convention will be the election of eight directors.

OLDS PICKS CARTER

LANSING, Oct. 10.—I. J. Reuter, president and general manager of the Olds Motor Works, has announced the appointment of J. J. Carter to the position of factory manager. Mr. Carter joined the Oldsmobile staff last March as assistant factory manager, coming from the Remy Electric company, another General Motors unit, where during his thirteen years association with Remy he had been superintendent of the tool room, master mechanic, and manufacturing engineer. He succeeds John Scott who recently resigned as factory manager at the Olds plant.

8 to 9 P. M. Zero Hour For Jay Walkers

WASHINGTON, Oct. 10.—The largest number of pedestrians are struck by automobiles in an average American city with a population approximating that of the national capital between the hours of 8 and 9 at night, it is revealed here through the comprehensive traffic and transportation survey being made under the direction of Maj. William E. R. Covell of the Public Utilities Commission of the District of Columbia.

It is further disclosed that the largest number of collisions between automobiles occur between 5 and 6 in the evening.

The conclusions are reached after analyzing 6,742 accidents, including both serious and minor injuries to persons and to property.

"The menace of heavy traffic has been so dinned into the minds of the people that they are alive and alert to the danger during the rush hours, when one would naturally think most of them would be hurt," said Major Covell. "But after dinner, as they are hurrying to parties and theatres, their minds are not on traffic. This lack of alertness, combined probably with low visibility and the fact that their eyes have not accurately become adjusted to the change from daylight to dark, is what sends pedestrians to hospitals and morgues between 8 and 9 p. m."

Kissel Reduces Prices $100 On 5-Passenger Brougham

HARTFORD, Wis., Oct. 12.—Effective today, the Kissel Motor Car Co. announces a reduction in the price of the five-passenger brougham in the six and eight-cylinder series. New prices, compared with the old are given below:

	New Price	Old Price	Reduction
Five-Pass. Brougham Model 55 (six)	$1695	$1795	$100
Five-Pass. Brougham Model 75 (eight)	$2095	$2195	$100

TO INCREASE CAPITAL STOCK

NEW YORK, Oct. 10.—Directors of the American Bosch Magneto Co. have called a special meeting of stockholders for Oct. 13, at which they will be asked to approve an increase in the capital stock from 175,000 to 250,000 shares. The management intends to offer 69,133 shares of the new stock to shareholders on the basis of one share of new stock for every two shares held, at a price of $33. The company has made no arrangements for underwriting. The sale of stock, if accepted by stockholders, will provide the company with $2,200,000 cash, which will be used to retire $2,125,000 outstanding 8 per cent notes, which are callable at 105.

St. Louis Chevrolet Plant To Speed Up Production

New Assembly Line, Making Three in All, Is Added to Facilities

ST. LOUIS, Oct. 10.—Another assembly line, making three in all, has just been put into use in the St. Louis Chevrolet plant at Union Boulevard and Natural Bridge Road. The plant is working at full capacity and overtime and for some time the two assembly lines, one devoted to passenger cars of open models and the other to closed passenger car models and trucks, have been overcrowded. The new line will be used for commercial cars while the two old ones will be devoted to passenger cars.

The plant here is continually close to the assembly record and with the new assembly line in use is likely to set a new record any day. One day recently 750 Chevrolets were assembled, loaded and all were shipped the same night. From 4 p. m. Saturday, August 31 to 4 p. m. the following Monday 1374 cars were shipped.

Installation of the new line has made it possible to increase production of Chevrolet commercial cars from 38 to 50 to 55 per hour.

The St. Louis plant claims that it is assembling as many, if not more cars than any other Chevrolet plant in the country.

Nash September Business Is 83 Per Cent Ahead of 1924

KENOSHA, Wis., Oct. 10.—The Nash Motors Company, in closing its books for September, reports a volume of business greater by 83 per cent than that of September, 1924.

"The last month," says E. H. McCarty, general sales manager, "was the thirteenth consecutive month to show a substantially material gain over the corresponding period of the previous year.

"The number of cars shipped in September was 10,314. This is but 361 cars less than the August total of 10,675—and August rolled up the biggest monthly volume in all Nash history. September, however, having one less working day than August, actually established itself as the period of greatest daily production since our company was founded.

"During August and September there were produced and sold 20,989 Nash cars. This constituted more than 39 per cent of our entire business for the year 1924.

CHAMPION VISITS EUROPE

FLINT, Mich., Oct. 10.—Albert Champion, president of the AC Spark Plug Company sailed for Europe from New York October 7 on his annual trip in the interest of the company's European factories, located at Birmingham, England and Paris, France. While abroad he will also attend the Olympia Show in London.

Rickenbacker Sees Demand About Even Through Season

Motor Company Head Believes Fall and Winter Sales Comparable to Summer Business

DETROIT, Oct. 10.—"Now that enclosed models constitute about 85 per cent of the entire production in all but very small cars; and since all manufacturers have adopted the policy of making important changes in July and August instead of in January as we used to do, we do not look for any noticeable slackening off in demand for automobiles" says Captain E. V. Rickenbacker, vice president and director of sales, Rickenbacker Motor Company.

"On the contrary, everything indicates that the fall and winter demand will be fully equal to, and some of us believe will exceed, that of the summer months.

"It is too early yet to know the total figures of production for the entire industry in September but it looks as if that will probably prove to have been the biggest month the industry has ever known.

"Deliveries and specifications for October are now about all in and they indicate an increase rather than a reduction of demand.

"I am speaking now for Rickenbacker Motor Company but I see no reason why the same rule should not apply to all those other companies who have a modernized product and one which is in favor with the public."

TO HANDLE TURNER LINE

KOKOMO, Ind., Oct. 10.—The Turner Manufacturing Co., has appointed Matthew Konz, 2101 Midwick Drive, Monterey Park, Cal., distributor for the entire line of Turner automotive devices in California. The company states Konz will carry a complete stock of Turner products in Los Angeles, and will maintain a sales organization covering California

KENNEDY INVADES EUROPE

NEW YORK, Oct. 10.—J. A. Kennedy, known as the champion tire changer of the world, and a brother of James Kennedy, president of the Pacific Rim Tool Co., of Cleveland, has sailed for contests at the Olympic Show in London and for visits in Holland, Sweden and other points on the Continent.

VICTOR PLANT MOVED

ST. LOUIS, Oct. 10.—Victor Motors, Inc., manufacturers of trucks, has completed the removal of its plant from twenty-eighth and Locust streets to East St. Louis and will devote the Locust street location to sales in the future. Guy Wilson, president of Victor Motors says he expects the new plant to enable the company to catch up on back orders which its previous limited production did not make possible. The prices of Victor trucks are now quoted f.o.b. factory, E. St. Louis, Illinois.

VELIE PICKS HAMEY

MOLINE, Ill., Oct. 10.—B. F. Hamey has succeeded J. C. Helbert as district representative of the Velie Motors Corp. in the Minneapolis territory, C. W. Hadden, general sales manager, has announced. Mr. Hamey was prominent for a number of years in the farm implement business and later was distributor of the Dort car in the Twin Cities.

Bus and Parts Builders to Hold Joint Detroit Exhibit

DETROIT, Oct. 10.—Approximately 25 bus manufacturers and between 80 and 90 parts and accessories manufacturers and 12 bus body builders, are expected to exhibit at the National Motor Bus Show, to be held here from November 16 to 21. The exposition will be held in Trindley Hall under arrangements by a committee headed by C. E. Stone, chief engineer of the People's Motor Coach Company.

According to Mr. Stone the show will be larger and will not be a duplication of the recent bus show held by the American Electric Railway Association at Atlantic City.

It will be strictly for the independent bus operator and not as a sideline for any other means of transportation. Buses to be shown will include the latest in city, surburban, and interurban express models. Parts and accessories will be of newest design.

Plans for the show are rapidly taking form and Mr. Stone considers it likely that the number of exhibtors who will show will be greater than the number already signed.

DURANT PROMOTES RUPPRECHT

NEW YORK, Oct. 10.—Colin Campbell, vice-president, Durant Motors, Inc., announces the appointment of B. A. Rupprecht as regional sales manager of the southeast region, comprising Cincinnati, Greensboro and Atlanta and two new zones with headquarters at Louisville, Ky., and Jacksonville, Florida. Mr. Rupprecht was formerly sales manager of the Cincinnati zone. His headquarters will continue as heretofore at Cincinnati. Mr. Campbell also announces the appointment of E. D. Knowles as regional sales manager of the middle west region, comprising the Denver, Kansas City, St. Louis, Memphis, Dallas and Oklahoma City zones. R. C. Nisbit is the new zone sales manager at Denver.

WALLER MOVES PLANT

WATERLOO, Ia., Oct. 10.—The Waller Manufacturing Company of Dubuque is moving its plant here and has leased a portion of the Miller Products Company building for occupancy. The company is employing between 50 and 60 men in its automobile accessory manufacture, which is centered on an aluminum composition heater, being widely distributed by jobbers throughout the United States. Proximity to aluminum and brass casting plants in this city influenced the change. C. L. Waller is president and general manager of the plant.

Revenue Collections Show Big Advance in Augus

Total for Month Is $3,936,10 More Than for Same Period Year Ago

WASHINGTON, Oct. 10. — Interna revenue collections from the automotiv industry for the month of August, 192 showed an increase of $3,936,108.95 ove the month of August, 1924, according t computations just made public here b the Internal Revenue Bureau.

The total August, 1925, collections ar given as $13,213,295.28 as compared wit $9,277,186.33 for August, 1924. The sta tistics show that the aggregate receipt of the bureau for the month of Augus 1925, totaled $117,493,918.46 or $29,139 673.34 more than for August, 1924, whe the aggregate receipts were only $88,354 245.12.

The bulk of the August, 1925, collec tion increases was accounted for in th classification, "other automobiles an motorcycles" this group rolling u $10,197,896.15 for August, 1925, as com pared with $6,156,299.17 for August, 192

Collections from "automobile truck and automobile wagons" for August, 192 were $557,603.28 as compared with $701 899.87, being the only classification t show a loss while collections from "auto mobile parts and accessories" were prac tically the same in August, 1925, wit $2,457,795.85 as in August, 1924, whe they were $2,418,987.29.

It is further shown that the collec tions from the automotive industry fo the period from July 1, 1925, to Augus 31, 1925, were $28,050,904.47 or $7,300 298.91 greater than for the period fro July 1, 1924, to August 31, 1924, whe they were $20,750,605.96.

Gustin—Clearing

LUTHY BUYS MICH. CO.

JACKSON, Mich., Oct. 10.—The F. A Luthy Company, manufacturers of LU THE automotive tools and equipment ha purchased the assets of the Michigan Pi ton Ring Company, Hastings, Mich., an will manufacture and market a comple line of leak proof, oil grove and plain ste cut rings under the LU-THE trade mar The factory for the present will be l cated at Hastings under the manageme of R. D. Bourdon, who has a wi experience in the automotive equipme industry, having formerly been with th Piston Ring Company of Muskegon, Mich and the Michigan Piston Ring Compan of Hastings.

IOWA TAX COLLECTION

DES MOINES, Ia.—Iowa's gasoline ta bill for August was $531,409.64, the high est since the tax was inaugurated la spring, and bringing the total collectio in four and a half months to $2,012,878.1 The cost of collection in August wa $2,406.36 and refunds, allowed comme cial and agricultural users, $13,459.2 Thus 98.862 per cent of the revenue we direct into road funds for the state.

Pierce-Arrow Is Upheld by Board in Appeal on Taxes

Income Return Deductions for Depreciation in 1917 and 1918 Are Sustained

WASHINGTON, Oct. 10.—A decision of far reaching significance in the automotive industry was rendered here by the United States Board of Tax Appeals when the body declared reasonable deductions claimed by the Pierce-Arrow Motor Car Company for depreciation on special tools and patterns in the company's tax returns for 1917 and 1918.

The evidence showed that the taxpayer in its original return for 1917 claimed $176,940.76 for depreciation of special tools and patterns and in its original return for 1918, $849,462.72 for depreciation and amortization. A revenue agent having objected to the 1918 deduction, the taxpayer filed, in 1922, amended returns, claiming $489,438.74 for 1917 and $776,708.07 for 1918. The Commissioner cut down the allowances to $287,361.95 for 1917 and $488,145.53 for 1918, causing the Pierce-Arrow Motor Car Company to take an appeal.

Taking into consideration that the tools and patterns were of three classes, having a life of from less than a year to three and a half years, the Tax Board figured that the motor car company was entitled to deductions of $506,184.15 in 1917 and $722,858.98 in 1918 or within $37,103.68 of the deductions claimed in the company's amended returns.

Best Equipment Shop Is Basis of McCullough & Son Contest

PHILADELPHIA, Oct. 10.—The four-day exhibit of shop equipment, automotive accessories and radio put on by the wholesale firm of J. H. McCullough & Son brought out a good dealer attendance and a satisfactory volume of business is reported to have been done.

A prize contest for the best equipped shop in the territory was run in connection with the exhibit. Eleven prizes were offered consisting of various items of shop equipment. Prior to the show, questionnaires were mailed to the entire trade with the request that the dealer check off the items of equipment in his shop. Prizes will be awarded on the basis of the returns, consideration being given to the size of the town in which the individual is situated. Of course, from the McCullough standpoint, the contest gives a census of shop equipment and will be used in future sales efforts.

The show was also used as a means of training McCullough salesmen. Each exhibitor was furnished with a list of the salesmen. The salesmen were instructed to spend some time in each booth listening to the manufacturer's representative explain his products to dealers and the exhibitors were requested to check off the salesmen on the lists and report to the McCullough company.

Exhibitors at the show included Oakes & Dow; Central Brass & Fixture Co.; American Chain Co.; Berger Mfg. Co.; Manley Mfg. Co.; Weaver Mfg. Co.; Black & Decker Mfg. Co.; Hutto Grinding Co.; National Carbon Co.; Raybestos Co.; Bonney Forge & Tool Co.; Parker Mfg. Co.; Edison Lamp Works; Colin B. Kennedy Co.; Gates Mfg. Co.; Kellogg Mfg. Co.; Roth Bros. Co.; Imperial Brass Co.; Swift Lift Jack; Ernest Holmes; McQuay-Norris Mfg. Co.; and Hall-Thomas Co.

Attorney Ordered to Speed Bus

CINCINNATI, Oct. 10.—Something out of the ordinary in traffic court precedure took place when Prosecutor Joseph O'Connell was ordered by Traffic Judge George F. Eyrich, Jr., to drive a motor bus at the rate of 45 miles an hour on Hamilton avenue from North Bend road to the corporation line. The test was made to ascertain who was right in the testimony of policemen that Carl Achberger, bus driver was making 45 miles an hour when overhauled on the North Bend road. Both Achberger and an engineer of the bus company testified that the bus could not make more than 25 miles an hour because it was geared to restrict its speed to that figure. The test showed the bus driver was correct.

NASHVILLE HAS SHOW

NASHVILLE, Tenn., Oct. 10.—A number of car, truck and accessory dealers and jobbers in Nashville cooperated in the holding of an automobile show in connection with the annual Tennessee State Fair in Nashville, the show attracting the interest of thousands of visitors to the state fair during the week.

SHOW CARS AT KNOXVILLE

KNOXVILLE, Tenn., Oct. 10.—The annual Fall Automobile Show of the Knoxville Automobile Trade Association held in connection with the East Tennessee Division Fair, proved one of the largest automobile shows held anywhere in the southeast this year, with virtually all the members of the association having space for cars and accessories.

CAYWOOD PROMOTED

BOSTON, Oct. 10.—D. G. Caywood, who, for the last several years has been manager of the Boston branch of the Black & Decker Manufacturing Company, has been promoted and will now act as a special representative for the company on various types of special work. A. D. Geiger, formerly salesman in the Kansas City branch of the Black & Decker company, has been selected to take Mr. Caywood's place in the Boston branch and has taken over his new duties.

Dealers Win in Fight for Lower Coast Freight Rates

California Inland Towns Given Decision Against Roads by I. C. C.

WASHINGTON, Oct. 10.—The Interstate Commerce Commission this week held that freight rates on automobiles and parts, in carloads, from Detroit and South Bend to all points on the Northwestern Pacific Railroad north of Willits, California, were unjust and unreasonable to the extent that they exceed the rates to California coast group points. The railroads were ordered to equalize the rates on or before December 21, and awarded reparation to automobile dealers who have paid the unreasonable rates.

The complaint which won the favorable ruling of the Interstate Commerce Commission was filed by nine separate passenger and freight automobile firms engaged in business at Eureka, California. Two of the firms, the Studebaker Sales and Charles Green Company are corporations while the other seven are co-partnerships. Collectively they sell at Eureka practically all of the different styles of standard automobiles manufactured in the United States.

While the rates assailed were to all points on the Northwestern Pacific, north of Willits, the rates to Eureka were those of principal interest. Attorneys for the complainants showed that the rate to points south of Willits in California and in Oregon was $4.65 as compared with a rate of $5.49 charged to Eureka.

The names of the seven co-partnership complainants are: W. H. Jewett, G. A. Fulton, Jewett Rhodes-Motor Company; O. L. Knudson Company, E. J. Reed, Lundblade and Jewett, A. E. Hermanson, and Ferndale Iron Works Garage.

Pierre duPont Is Appointed Delaware Tax Commissioner

WILMINGTON, Del., Oct. 10.—Though his time is now fully occupied as chairman of the board of the General Motors Corporation, chairman of the board of E. I. duPont deNemours & Co., and many other similar business enterprises, Pierre S. duPont of Wilmington, one of the wealthiest men in Delaware, has accepted appointment by Governor Robinson to the office of state tax commissioner. He will have charge of the collection of income and school taxes.

According to the governor, Mr. duPont was selected because of his great interest in educational matters, having given about $4,000,000 to the cause of education in the state; also because of his well-known financial and executive ability; his great interest in state welfare generally and his belief that when a person is asked to serve the public it is his duty to do so.

He did not seek the office, which pays $4,000 a year and is for four years, but he willingly accepted when asked to do so.

Along Automobile Row

SHREVEPORT, La.—The building at Spring & Milam Streets, occupied by the S. B. Hicks Motors Company, has been purchased by George T. Bishop, Inc., Dodge Brothers distributors, from the Hicks Building Company for $80,000. Mr. Bishop announced that five additional stories will be added at a cost of from $130,000 to $175,000. The building will house all departments, with the roof used for storage.

TOLEDO, O.—Charles E. Doan, distributor of Nash and Ajax cars in the Toledo territory, has announced the opening of the Riley Nash Company, 4020 Lewis Avenue, West Toledo, headed by Harley S. Riley, as a new dealer and the fourth dealership to be established by Doan in Toledo this year.

RALEIGH, N. C.—The Marmon Motors, Inc., state distributors for Marmon automobiles, have announced that they will move into their permanent home at 113 South Salisbury Street, Jan. 1. In the meantime they will be housed with the Motor Service Company at 312 South Salisbury Street.

ST. LOUIS, Mo. — Hudson-Frampton Motor Car Co., St. Louis Hudson and Essex distributors announces appointment of the Spiegelberg Automobile Co., as a Hudson and Essex dealer. Carl P. Spiegelberg is president of the Spiegelberg Company, which is located at 6504-08 Olive Street road.

ASHEVILLE, N. C.—Brown Motor Sales, Inc., has been chartered with authorized capital of $100,000 and $32,000 subscribed by Oscar D. Brown, Grover G. Brown, and J. L. Groome, all of Asheville.

COLUMBUS, O.—The Ohio Motors Co., Central Ohio distributors for the Willys-Knight and Overland has occupied new quarters at 32 S. Fifth St. The structure is 141 by 192 feet. A portion of the building is occupied by the Columbus postoffice as a garage. L. S. MacPhail is president of the company.

NEW ORLEANS, La.—Coincident with the removal of Abbott Motors, Inc., to a fine new home for Packard cars, at 1711 St. Charles Avenue, Ginder Abbott announced a change of name to the Packard New Orleans Co. William Leftwich is president of the Packard New Orleans Co., and Mr. Abbott is vice-president and active executive.

ST. LOUIS, Mo.—Walter Shawvan has been appointed manager of the St. Louis factory branch of the Duesenberg Motors Co., of Indianapolis, which has been opened at 5802 Delmar Boulevard. Mr. Shawvan, a newcomer in St. Louis, has spent most of his time in Detroit and New York selling high-priced cars.

OGDEN, Utah.—The Ford Nelson Motor Company has taken on the Paige-Jewett lines. Scott Nelson said the company would continue to handle the Rickenbacker car.

LOS ANGELES.—A. R. Reedall has been appointed general manager of the Greer-Robbins Company, Chrysler and Hupmobile distributors. Mr. Reedall has been retail sales manager of the company at San Francisco. Another important acquisition by Greer-Robbins involves the appointment of Arthur H. Klein, former racing driver and automotive engineer, to the position of general superintendent of service.

MEMPHIS, Tenn.—Bert Bates, for the past year head of the Bert Bates Motor Co., Ford dealers, at Bartlett, this county, has sold out his business to J. M. Harley, Ford representative in Corinth, Miss., and Selmer, Tenn.

SPOKANE, Wash.—Charles Lind of Seattle has been appointed branch manager for the Western Auto Supply company store here. C. I. Hood of Tacoma will come here as assistant manager. Roy Felmley was the former manager. The company recently moved into new and larger quarters.

CHARLOTTE, N. C.—Newton-Alexander Motor Company has been chartered for wholesale and retail automobile business with authorized capital of $50,000 and $10,000 subscribed by C. E. Newton, Thomas M. Alexander and John B. Alexander, all of Charlotte.

DES MOINES, Ia.—The Ford Motor Company has announced appointment of two new authorized Ford dealers in this city. The C. E. Cochran Motor Co., will serve the East Des Moines district and the Matthews Motor Co., will handle sales and service in the Urbandale district. C. E. Cochran is owner of the Cochran Motor Company. E. G. Matthews is at the head of the Matthews Motor Co.

ST. LOUIS, Mo.—The Wonder Spark Plug Co., 1531 Pine Street has changed its name to the Schmid Sales Company. The company handles a number of automotive accessory lines. Joseph H. Schmid is president of the company and Harry C. Heeft vice president and general manager.

COLUMBUS, O.—The Ohio Motors Co., distributors for Overland and Willys-Knight cars has moved into its new home at Capital and Fifth Streets. A formal opening was held. Numerous floral displays sent by competitive and Columbus concerns decorated the large salesrooms. C. B. Todd is manager of the Ohio company and H. E. Whitney, service manager.

PEKIN, Ill.—Louie Hoff has entered the automobile business here and will represent the Oakland car. He will open his sales rooms soon with an exhibit of five models of the Oakland Six.

ALLIANCE, O.—The Mahoning Auto Service, Inc., 1511 E. Patterson Street, has been chartered with an authorized capital of 500 shares, no par value designated, to deal in automobiles, trucks and accessories. Incorporators are I. S. Fink, Joe Sarchione, Franz Simon, Harry E. Moreland and F. W. Andrews.

MILWAUKEE, Wis.—A new sales and service building for the Bay View Nash Co., Inc., of Milwaukee has just been completed at 401-403 Lincoln Avenue. The new building embodies all of the latest ideas to facilitate servicing automobiles, and has one of the most attractive show rooms in Milwaukee. Walter M. Blonski is president and general manager, with E. A. Runkel as treasurer and manager of service. Arthur Goetsch, Art Weidner and Glen Fons are in charge of sales.

TERRE HAUTE, Ind.—The Yellow Garage Company has been organized here and will distribute several lines of motor cars and do a general storage and repair business. Capital stock has been fixed at $10,000. The incorporators include J. L. Lenhart, H. E. Lenhart and J. H. Steffen.

YOUNGSTOWN, O.—The Gulliford Bearing Co., 815 Market Street, has been chartered with a capital of $5000 to deal in parts and accessories. Incorporators are Samuel B. Gulliford, Dorothy S. Gulliford, Mark Perkins, Thomas J. Rees and Katherine Aurelius.

CHICAGO.—M. C. Johnson, former distributor of Roamer automobiles at Atlanta, is now service superintendent for Roamer Motors, Inc., 2429 South Michigan Avenue. President C. Y. Kenworthy, of the company, has announced also that all service on Roamer cars has been placed on a flat rate basis.

MILWAUKEE, Wis.—R. C. Inbusch, formerly with the West Side Buick Co. of Milwaukee has joined the sales force of the Hoppe Motor Car Co., Lincoln dealers in Milwaukee.

AKRON, O.—The Akron Auto Wrecking Co., 1035 South Main Street, has been chartered with a $10,000 capital to deal in automobiles, parts, accessories and scrap iron. Incorporators are Max Segel, Carl Mirman, William Heisler, D. Admon and M. Aidman.

CHARLESTON, Ill.—The Austin Moto Company has been organized here by C. Austin, and a garage and sales agenc opened at the corner of Fifth and Mon roe Streets. Capital stock has been fixe at $5000.

COLUMBUS, O.—Joseph B. Litter, wh has been associated with the Litter Moto Machine Co., on North Fourth Street, fo 14 years has withdrawn and formed company to do all kinds of automobil repairing at 244 West Ninth Avenue.

MILWAUKEE, Wis.—A change in th corporate name of the Woodside-Bries Co., Hudson-Essex dealers in Milwaukee has been made and hereafter the firm wi be known as the Briese Motor Car Co.

CLEVELAND, O.—The Glide Co., is th name of a new concern recently chartere with a capital of 1000 shares, no par valu designated, by W. J. Bunyan, T. J. Gate Frank E. Baker, L. E. Giel and E. Gambetta to deal in accessories and part

CHICAGO.—James Levy, president the James Levy Motors Company, Buic distributors, has returned to Chicago fro a six weeks' tour of Europe.

MINNEAPOLIS.—The Harmon Diana Moon Sales company, 112 Harmon plac is a new retail sales company and serv icer, the outgrowth of the Broadway Aut Co., 1322 West Broadway, which retaile Moon cars. The Diana line is added.

SAN FRANCISCO. — The Fry-Schlos Motor Company has been formed to se Chrysler cars in the Mission district San Francisco, with headquarters o Valencia street. The firm is composed George W. Fry, who for ten years was i the sales department of the Howard Aut mobile Company, and Ansel J. Schloss, fo five years with Chester N. Weaver Com pany, both in San Francisco.

SALT LAKE CITY, Utah.—Joe's Ti Shop has been opened by Joseph Brewer at 318 24th Street. Mr. Brewe has been located at Wall Avenue and 24t Street. He handles General and U. tires.

COLUMBUS, Ohio.—The E. H. Huffman Sons Co., operating a sales room and serv ice station at 343 South Third Stree Columbus, Ohio, has been made distribut for the Jordan in that territory.

BALTIMORE. — The Jones Chevrol Sales Co., Inc., 1533 Mt. Royal Avenu Baltimore, has been incorporated wit $15,000 capital stock by Walter L. Jone William P. Norfolk and R. Ellsworth Jones.

ASHTABULA, O.—The S. C. Peterso Co., has been chartered with an authorize capital of $30,000 to deal in motor veh cles, parts and accessories. Incorpora tors are S. C. Peterson, William E. Pfa K. M. Clair, E. L. Williams and E. Clair.

DETROIT.—David Clamage, general mar ager of the Republic Truck Sales Com pany, has announced removal of head quarters from 51 Selden Avenue 282-284 East Milwaukee, where the com pany will have approximately three time as much room as at the old address.

EL PASO, Tex.—G. J. Gilbert, for man years active in the retail automobile bus ness of El Paso, has been made genera manager of the Border Motor Co., Chrysle dealers for the El Paso territory. He wi succeed J. S. Oliver, who has taken charg of Chrysler distribution in the lower Ri Grande Valley.

SPRINGFIELD, O. — The Brubaker Saunders Co., 222 North Fountain Stree has been chartered with an authorize capital of $25,000 to do a retail automo bile business, handling accessories. Incor porators are Henry J. Brubaker, Charli M. Brubaker, Clyde Saunders, Ellen Saunders, Karl Frankenberg and Ada Hatton.

With the Associations

Getting Full List for Tires

LOUISVILLE, Ky., Oct. 10.—In a recent resolution the Louisville Tire and Accessory Dealers Association requested all automobile dealers to refrain from selling tires and accessories to purchasers of automobiles unless the full list price was received for the merchandise. Response from the automobile dealers indicates that tires and accessories are rarely sold under list and that the dealers much prefer to have all tire purchases by automobile owners made from the tire dealer in order that the automobile dealers may avoid the demands for tire service which they are not equipped to supply.

The tire and accessory organization which was formed in June of this year, is making rapid strides. Many new members are being added each month. A credit exchange system, operated from headquarters, has saved the members thousands of dollars and is the outstanding accomplishment of the association. A novel system for arriving at the amount of dues each member will pay has been inaugurated since the dues were originally set at $30 a year. Each member is now asked if he can pay more than the stipulated amount and the majority of the dealers are now paying dues based on a percentage of their yearly turnover. This method has strengthened the association treasury materially.

Heads Automobile Branch

CHARLOTTE, N. C., Oct. 10.—Fred Anderson, dealer in Chevrolet cars, was elected chairman of the automobile dealers' division of the Charlotte Automotive Merchants' Association. The automobile service division will elect a chairman later. The association was divided by action of the executive committee with the view of increasing the value of the association to its membership.

Tendered Life Membership

DENVER, Colo., Oct. 10.—The Denver Automobile Dealers' Association has tendered an honorary life membership to F. L. MacFarland, recently retired Buick distributor for this territory. Mr. MacFarland is a veteran of 25 years' experience in this business.

Discuss Credit Problems

CHARLOTTE, N. C., Oct. 10.—Many credit problems were discussed at a special meeting here of the credit men's division of the Southern Automotive Jobbers' Association. The association's annual meeting will be held at Atlanta, Ga., next May.

Unlicensed Garages Hit

MOBILE, Ala., Oct. 10.—The automotive committee of the Mobile Chamber of Commerce has recently been conducting a concerted campaign to eliminate from that city what is known as the "back-alley" garage. Branding the garage of this type as "a menace to life through incompetent work on automobiles," the automotive committee, membership of which includes the leading dealers of the city, is doing all in its power to force incompetent workmen from the automobile repair field, doing so by the elimination of licenses to those mechanics who cannot pass a rigid examination. The aid of the police department has been sought in checking up on such firms, many of which it was learned had been operating without licenses, and also employing unlicensed and incompetent mechanics. Thus the service business of the legitimate dealer and distributor firms is being materially benefited, and the business generally placed on a higher plane throughout the city and suburban territory, while the effort also is resulting in giving the automobile owning public more confidence in the trade.

New Manager



Claude S. Klugh, newly appointed manager of Pennsylvania Automotive Association

Toledo Elects Van Dusen

TOLEDO, Oct. 10.—C. A. Van Dusen, head of the Van Dusen Auto Repair & Machine Co., was elected a member of the board of directors of the Toledo Automotive Trades Association at its annual election. He will represent the electrical supply and battery division. Van Dusen is the only new face on the board.

Other members are Charles Doan, passenger car division; John Hupman, trucks; George Bender, accessories; Burt Sage, garage and repairs; T. J. Cooper, secretary and trustee at large, all of whom were re-elected.

President Paul Jones presided at the meeting at which there were nearly 100

Parking Survey Made

LOS ANGELES, Oct. 10.—In order to obtain accurate data in support of their contention that there are adequate parking facilities near the downtown section of Los Angeles for shoppers, the Los Angeles Motor Car Dealers' Association recently completed an exhaustive survey that revealed some interesting figures. The survey showed that approximately 40,000 cars can be parked in or immediately adjacent to the downtown business district. About 10,000 cars can now be parked in curb space since the Motor Car Dealers' Association persuaded the authorities that more curb parking restrictions were being enforced than were necessary. Automobile parks provide room for 20,000 more cars, and garages have room to take care of another 10,000 cars. Of the garages, about 1,000 capacity is private, leaving room for about 9,000 cars, which space is divided among 103 garages, all located in or near the main business district. About 15 of the 103 garages have parking space for 100 cars or more.

Service Men to Meet

CHARLOTTE, N. C., Oct. 10.—Approximately 200 representatives of gasoline, tire, and battery and accessories concerns are expected to attend the first annual convention of the North Carolina Automotive Service Association, at Greensboro, Oct. 20-21, according to Keeley A. Grice of Charlotte, president of the association. Mr. Grice said every operator of a service station in this state, whether or not a member of the association, will receive a welcome at the meeting.

Extended addresses will be important by their absence as the directors have decided that the program will be made up largely of short, snappy talks, with discussions being led by group leaders.

This state association, formally launched here last May, is growing rapidly and already "it has exerted a tremendous influence for better business relations and conditions involving not only the members but also others interested in automotive service," said Mr. Grice.

Carolinas Plan Show

CHARLOTTE, N. C., Oct. 10.—The Charlotte Automotive Merchants' Association at its last meeting decided to hold a Carolinas auto show in 1926. The shows are usually held in February and although no date for the 1926 show was set at this meeting, it is expected that it will be held at the usual time.

No committees were appointed, members of the association saying that it would be at least 30 days before this stage is reached. The 1926 show will be the seventh annual show and is expected to be as elaborate as any previous show.

Fageol-Hall-Scott Merger Hits Snag in Legal Form

Bus Company's Stockholders Also Fail to Ratify Terms of Sale Agreement

OAKLAND, Cal., Oct. 10.—The corporation laws of California appear to be the snag on which the merger of the Fageol Motors Company, Hall-Scott Motors, Inc., the American Car and Foundry Company and the J. G. Brill interests are temporarily hung up, according to announcement issued here by officials of the Fageol concern. The two purchasing companies—the American Car and Foundry and the Brill Company—had planned to organize the Fageol and Hall-Scott interests into one California corporation, subsidiary to the two eastern firms.

Into this plan entered the issuance of non-voting preferred stock, which was to be taken by the American Car and Brill interests, and of no-par-value common stock to the amount of 150,000 shares with which the Fageol stockholders were to be paid for their present stock.

The state of California here stepped in, however, with the ruling that new corporations having non-voting preferred stock and no-par-value common stock should not be permitted to file their articles of incorporation in this state. This necessitated an entirely new plan for the merger-corporation, and this plan is now being worked out in the East.

Aside from this delay, Fageol stockholders have not yet voted the necessary two-thirds confirmation of the sale agreement between the Fageol directors and the representative of the American Car and Foundry Company and the J. G. Brill company. It is generally presumed, however, that the agreement will be confirmed by the stockholders. The San Francisco firm of industrial engineers which is now making an appraisal of the Fageol plant and assets, will make its report about October 1, and this report will be the basis of payment for the Fageol plant, patents, contracts, business and good will.

It is understood, from the same official source as the above, that, in the event that the stockholders do not approve the merger, the Fageol company will try to continue to purchase Hall-Scott motors. Officials of the Fageol company claim that the Fageol bus and truck motor is of their own design, and merely manufactured by the Hall-Scott Motors, Inc., of Berkeley. In case this plan to purchase motors falls through, the Fageol interests announce that they will float a bond issue and errect a manufacturing plant of their own, building the Fageol motor for themselves.

Automobile Display Biggest Attraction at County Fair

OSHKOSH, Wis., Oct. 12.—An exceptionally fine display of motor cars was on exhibit at the Winnebago county fair here with most of the active dealers in this territory participating. The Krueger Auto Co. had a showing of the Packard, Franklin, Nash and Ajax, Baranowski Auto Co., the Hudson-Essex line, Bogda Chevrolet Co., Chevrolets, Hollister Auto Co., Overland-Willys-Knight, Lorin H. Miller, Hupmobile, Uhlhorn Motor Co., Dodge Brothers line, Winnebago Auto Co., Fords, Lawrence Larson, Jewett and Reo, Schneider Motor Co., Oldsmobile, and Curry Motor Co., Chrysler. The Oshkosh Motor Truck Co., had an exhibit of four-wheel drive trucks at the fair. The display of automobiles was housed in special quarters this year and attracted more attention than any one other display at the fair.

Coming Motor Events

Automobile Shows

Jackson, Miss.—Oct. 19-24
Automobile Show by local trade in connection with State Fair. Dr. R. S. Curry, manager.

Shreveport, La.—Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

Chicago—Nov. 16-17
Annual convention, National Association of Finance Comanies, Hotel Sherman. C. C. Hanch, secretary-manager, 76 W. Monroe St., Chicago.

Chicago—Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

New York—Nov. 15-21
Twenty-first Annual Automobile Salon.

Chicago—Nov. 16-18
Convention and exhibition of the National Standard Parts Association, Hotel Sherman, C. B. Fraser, secretary, 310 Hofman Bldg., Detroit.

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Louisville, Ky.—Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Races

Rockingham (Salem, N. H.)—Oct. 17
Baltimore—Oct. 24
Charlotte, N. C.—Nov. 11
Los Angeles, Cal.—Nov. 26

Conventions

Buenos Aires, Argentine—Oct. 8-13
Pan-American Road Congress.

Montreal, Que.—Oct. 7-16
Fall convention of the Motor and Accessory Manufacturers Association.

Pittsburgh, Pa.—Oct. 12-14
Pennsylvania Automotive Association Convention.

Montreal—Oct. 13-14
Convention of the National Association of Automobile Insurance Companies.

Des Moines, Ia.—Nov. 12-13
Automotive Merchants' Association Convention.

St. Louis—Nov. 17-19
Annual Convention of National Tire Dealers' Association.

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Foreign Shows

London, England—Oct. 8-17
Olympia Passenger Car Show.

London, England—Oct. 29-Nov. 7
Annual Truck Show.

Berlin, Germany—Nov. 26-Dec. 8
Annual Automobile Show in the Kaiserdamm.

FORD MAY SHOW ALONE

PHILADELPHIA, Oct. 10. — Sesqui-Centennial Exposition authorities say the Ford Motor Co., Detroit, intends to have a large exhibit, entirely independent of the other automobile manufacturers and may even erect an exposition building of its own on the grounds. This would be in the event that other automotive interests should take most or all the floor space in the Palace of Automobiles.

"If the other factories take only 75,000 square feet of floor space, as some have proposed," said an Exposition official, "we will place their exhibits at one end of the building and Henry Ford's at the other; but Ford will put up a building of his own for exhibit purposes if he thinks he will not have room enough to make his showing."

1926 Italian Grand Prix Will Admit Single Seaters

PARIS, Sept. 25.—(By Mail).—Single seater bodies will be admitted in next year's Italian Grand Prix 500 mile race for 91½ inch cars, irrespective of any decision taken by other European Clubs, according to a statement made by Arturo Mercanti, general manager of the Monza Track. This decision has been taken as the result of Duesenberg experience in Italy. It has been proved that under European conditions the narrow type American body does not give any speed advantage; on the other hand it allows the car to be better balanced, and it places the driver in a safer position.

The French club, while limiting the crew to one man, maintains that there must be two seats side by side, which of necessity puts the driver out of the centre line. This rule makes it difficult to secure interchange of cars and drives between Europe and America.

CONTINENTAL PAYS DIVIDEND

DETROIT, Oct. 10.—At the regular meeting of the board of directors of the Continental Motors Corp. the quarterly dividend at the rate of 80 cents per annum, was declared. The dividend is payable Oct. 30 to stockholders of record Oct. 15. With the payment of this dividend there will have been paid to stockholders this year $1,408,676, the corporation announces.

Letters Indicate Ford Has Banned Low Down Payment

Metropolitan Dealers Told Old Method of Third Paid is Best Policy

NEW YORK, Oct. 10.—Has the Ford Motor Co. definitely abandoned the plan whereby in some sections cars have been sold for as little as $12.60 down payment? Metropolitan dealers have been asking this question as the result of letters recived through the New York branch carrying the statement that 25 per cent down, with 12 months for the payment of the balance, are the minimum term that can wisely be accepted by dealers.

One thing seems certain, that there is little likelihood of the $12.60 plan being put into effect in the New York district. This plan is condemned, indirectly, in the letters, one of which says:

In line with good merchandising and our experience we do not believe it advisable to accept time payments on Ford cars for a less down payment than 25 per cent and we believe that 12 months should be sufficiently long to clean up the transaction. This letter is induced by the fact that many dealers are selling on plans of 20 per cent down and in some cases even less. We do not believe this necessary, nor do we believe that it serves our best interests.

Another letter, sent out when the new models began coming through, amplified this position:

At the outset and for the average business on deferred payments, we believe in a standardized system of handling, we believe in uniformity of financing plans and our reasons are very obvious.

With the delivery of the improved models we suggest that all dealers sell on the old plan of one-third down and 12 months for the balance. If it is necessary during the heavier winter months, the inducement of a quarter down and 12 months might be the other barrel to use at that time, but not now. Any other plans or idea for the transaction of the general run of time payment business leads to certain questionable results. When endorsement is required on notes, the endorser never expects to make good and if he is required to do so, he doesn't blame his friend, he damns the car and the dealer.

When a car is repossessed, what do the friends hear? They get anything but the truth and again you and the product suffer. Then greatest of all is the attitude of the general banking interests toward our business. We want to retain their present interest and willingness to assist in the financing of our future transactions.

Four-Cylinder Bentley Wins World's 24-Hour Record

PARIS, Sept. 25.—(By Mail).—An average of 95 miles an hour was maintained for 24 hours by John F. Duff and W. Barnato, driving a 183-inch four-cylinder Bentley, on Montlhéry track, in a successful attempt on the world's twenty-four hour record. The British car covered 2,280.64 miles, compared with the previous record of 2,103.19 miles set up by a six-cylinder Renault.

Duff and Barnato took three hour spells at the wheel. Two front tires were changed after nine hours running and two rears after running 21 hours. The hood was never lifted.

A sleeve valve four-cylinder Voisin set out immediately after the Bentley had put up the new twenty-four hour record, but had to be withdrawn after running a distance of 1,523.8 miles in 16 hrs. 5 min. The Voisin secured two world's records, six hours at an average of 100.404 miles an hour, and one thousand kilometres at an average of 100.3 miles an hour, both these records being taken from the Bentley driven by Duff.

NEW AUBURN DEALERS

AUBURN, Ind., Oct. 10.—New dealers who have recently been added to the Auburn organization follow:

Ralph C. Calkins, Lake Huntington, New York; Rex O. Windship, Warsaw, Ind.; Stow-Barron, Inc., Detroit; Wyandotte Auburn Sales, Wyandotte, Mich.; F. A. Robinson Sales, Clyde, O.; East Buffalo Motor Sales Co., Buffalo, N. Y.; A. H. Sengstock, Antigo, Wis.; Cook Auto Co., Terre Haute, Ind.; Braswell & Stanley, Jacksonville, Fla.; H. R. Wainwright, Winter Park, Fla.; Fred Sollberger, Kendallville, Ind.; James J. McGuiness, New Haven Garage, New Haven, Conn.

SQUEEKS and RATTLES

ILLUSTRATED



"Youth will have its fling," murmured the neighborhood terror's indulgent mamma, as he "got" the passing windshield with the very first rock.

One thing to remember while driving an automobile is some other driver may be as crazy as you are.
—Columbia Record.

We do wish they could invent a non-skid noodle for chicken noodle soup.
—Hartford, Wis., Times.

IT CAN'T BE DONE

Let poets sing their lilting songs
And gayly strum the lyre;
Give me the man who whistles while
He's putting on a tire.
—Hartford, Wis., Times.

One small jack can lift a car, but it takes a lot of jack to keep it up.
—Parkersburg Sentinel.

"What do you do when she is cold and refuses to get started?"
"Choker."
—Pitt Panther.

Ned: Did your car turn turtle?
Ted: No, jack rabbit or kangaroo.

Crash! Bang!

Tess: What is a bumper crop?
Les: Pedestrians, I think.

A disposition asserts itself to refer almost every problem to Henry Ford, except that of traffic congestion.
—Washington Star.

Another pathetic little feature of everyday life is an interurban railway company hopefully waiting for the reaction against automobiles to set in.
—Ohio State Journal.

Defined

A **dance** is a place where you go with your girl, pay five dollars for a good floor and the best music in town—and then sit outside all nite in a car.
—Johns Hopkins Black & Blue Jay.

WITH PLEASURE



She: "Can you drive with one hand?"
He: "Ah—yes."
She: "Then pick up my glove."
—Buffalo Bison.

Standard Parts Show Dates Advanced to Nov. 16-18

DETROIT, Oct. 10.—The board of directors of the National Standard Parts Association has decided to hold the annual exhibition of standard parts in Chicago, November 16, 17, and 18 instead of November 5, 6, and 7, C. B. Fraser, manager of the association, has announced here.

The change of date was made in order that the parts show would come after instead of before the Automotive Equipment Association's annual show in Chicago, November 9 to 14. Many of the firms which are members of the A. E. A. also are members of the National Standard Parts Association.

The N. S. P. A. show will be held in the new annex of the Sherman House where 91 spaces already have been contracted.

Enough requests are in the hands of Manager Fraser to assure every space being taken before opening day, he said. More elaborate plans than ever before are being made by the N. S. P. A. board and according to Mr. Fraser, the enthusiasm among the association members has never been greater.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON		"41"	
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON		"6"	
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
------	4-p	Sport-Roadster	1,495
------	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
------	-----	Wanderer	1,845
------	7-p	Sedan	1,995
		"8-88"	
------	3-p	Sport Roadster	1,975
------	6-p	Touring	1,995
------	5-p	Brougham	2,250
------	5-p	Sedan	2,350
------	7-p	Sedan	2,550
------	-----	Wanderer	2,400
BUICK		"Standard"	
------	2-p	Roadster	$1,125
------	5-p	Touring	1,150
------	2-p	Coupe	1,195
------	4-p	Coupe	1,275
------	5-p	4d. Sedan	1,295
------	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
------	2-p	Roadster	1,250
------	5-p	Touring	1,295
------	5-p	Sedan	1,495
------	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
------	3-p	Sp. Roadster	1,495
------	5-p	Sp. Touring	1,525
------	4-p	Country Club	1,765
------	4-p	Coupe	1,795
------	5-p	Brougham Sedan	1,925
------	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line (132 in. W. B.)	
4075	2-p	Coupe	$3,045
------	5-p	Sedan	3,195
4155	7-p	Sedan	3,295
4240	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
------	4-p	Victoria	3,095
		Custom Built (132 in.)	
------	-----	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	----	Phaeton	3,250
------	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER		"35"	
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER		"Four"	
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND		"31"	
2345	5-p	Touring	$ 895
2435	5-p	Touring DeLuxe	1,025
2470	3-p	Coupe	975
2600	5-p	Sedan	995
		"43"	
2750	5-p	Touring	1,095
2910	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2950	3-p	Coupe	1,175
3050	5-p	Sedan	1,295
3190	5-p	Sedan De Luxe	1,595
3190	5-p	Sport Sedan	1,625
COLE		"MASTER"	
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,935
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3590	5-p	Sedan	2,445
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
------	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
------	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA		"St. 8"	
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$ 855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DORRIS		"6-80"	
4120	4-p	Pasadena Tour.	*
4115	7-p	Touring	*
4193	4-p	Coupe	*
4200	5-p	Sedan	*
4310	7-p	Sedan	*

*Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
------	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
------	2-p	Sp. Roadster	900
2225	5-p	Touring	810
------	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
------	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
------	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
------	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
------	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
------	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
------	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	795
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4 d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
------	5-p	Oxford Sedan	3,172
GARDNER		6A	
------	5-p	Brougham	$1,495
3070	5-p	Touring	1,395
------	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	-----	DeLuxe Sedan	1,895
		8A	
------	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3360	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		D-1	
3860	5-p	Sedan	$1,695
HUDSON		"Super Six"	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,195

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HUDSON (Cont'd)			
3425	4-p	Brougham 4 d.	1,495
3675	7-p	Sedan	1,695
HUPMOBILE		"A"	
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,595
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		"23-25"	
3060	4-p	DeLuve Road.	$1,500
3000	5-p	DeLuxe Touring	1,320
2990	5-p	Coach 2d.	1,245
3160	5-p	DeL. Coach 2d.	1,400
3325	5-p	DeLuxe Sedan	1,680
JORDAN		"J"	
------	4-p	Playboy Road.	$1,695
------	5-p	Sedan	1,845
		Series "A"	
3330	2-p	Playboy Road.	$2,275
3340	5-p	Touring	2,275
3450	3-p	Friendly "9"	2,575
3625	5-p	Brougham	2,575
3520	4-p	Victoria	2,475
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		"55"	
3130	2-p	Speedster	$1,795
------	2-p	Sp'dster De Luve	2,085
------	4-p	Speedster	1,895
------	4-p	Sp'dster De Luxe	2,185
3530	2-p	Enc. Speedster	2,085
------	4-p	Enc. Speedster	2,185
------	4-p	Enc. Spdstr. DeL	2,685
------	2-p	Enc. Sp'd'r DeL.	2,585
3190	4-p	Tourster	1,795
------	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
------	7-p	Touring	1,685
------	7-p	Touring De L.	1,885
3430	4-p	Coupe	2,085
------	4-p	Coupe De Luxe	2,485
3540	5-p	Brougham Sedan	1,995
------	5-p	Broug. Sed. DeL.	2,485
------	5-p	Brougham 2 d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Berline Sed. DeL.	3,185
3530	5-p	Victoria	2,185
------	5-p	Victoria De Luxe	2,485
		"75"	
------	2-p	Speedster	2,195
------	2-p	Speedster De L.	2,485
------	4-p	Speedster	2,295
------	4-p	Speedster De L.	2,585
------	2-p	Enc. Epeedster	2,485
------	2-p	Enc. Sp'd'r DeL.	2,985
------	4-p	Tourster	2,195
------	4-p	Enc. Speedster	2,585
------	4-p	Enc. Spdstr. DeL	3,085
------	4-p	Tourster De L.	2,385
------	5-p	Phaeton	1,985
------	5-p	Phaeton De Luxe	2,185
------	7-p	Touring	2,085
------	7-p	Touring De Luxe	2,285
------	4-p	Coupe	2,485
------	4-p	Coupe De Luxe	2,885
------	5-p	Brougham Sedan	2,395
------	5-p	Broug. Sed. DeL.	2,985
------	5-p	Brougham 2 d.	2,095
------	7-p	Sedan De Luxe	3,485
------	7-p	Berl. Sed. De L.	3,585
------	7-p	Victoria	2,585
------	7-p	Victoria De Luxe	2,885
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,845
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
------	------	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

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Special "Yankee" construction prevents blade from turning in handle. Does away with the chief trouble usually found in screw-drivers.

You don't have to coddle a screw-driver that bears the name "YANKEE"

In a hurry. No time to look for a tool. "Hand me that screw-driver!"

Every day in your shop your screw-drivers are called on to do jobs for which they are not intended.

A "Yankee" Screw-driver will come through those rough jobs without chipping, bending, or turning.

Overstrength is built into it. Blade tempered for toughness and stiffness.

A "Yankee" device (found in no other screw-driver) makes blade and handle practically a one-piece tool.



"YANKEE" Plain Screw-drivers

Every individual blade is tested twice before leaving factory. That's why a "Yankee" Screw-driver is certain to last longer.

You can get giant sizes with blades up to 30 inches in length, with which you can reach in anywhere and drive the heaviest screws.

No. 90—Standard style, 15 sizes, 1½ to 30 in. blades.

No. 95—Cabinet style, 11 sizes, 2½ to 15½ in. blades.

Some other "YANKEE" Tools

Ratchet Bit Brace
Ratchet Screw-drivers
Ratchet Breast Drill
Ratchet Bench Drill

"Yankee" on the tool you buy means the utmost in quality, efficiency and durability.

Dealers everywhere sell "Yankee" Tools

NORTH BROS. MFG. CO., Philadelphia, U. S. A.

"YANKEE" TOOLS

Make Better Mechanics



FIGURE it this way—commission on gross sales, less sales expense, used car handling and overhead equals PROFIT—or LOSS.

Every man in an important executive position in this company has had long, actual dealer experience.

If YOU want to talk actual FIGURES and FACTS, we believe our understanding of YOUR problems and market should be of value. Every plan for Stutz development is based upon these figures.

FREDRICK E. MOSKOVICS
President
STUTZ MOTOR CAR COMPANY-
OF AMERICA, Inc.
INDIANAPOLIS, INDIANA.

MOTOR AGE

Vol. XLVIII | Chicago, October 22, 1925 | No. 17

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

AUTOMOTIVE production is being kept at low level and although sales point downward no sudden slump is expected this year. Page 32.

Used car show in fall instead of spring proves great success in Chicago. Page 32.

Auburn plans increase in capitalization and note issue to provide for manufacture of 4-cylinder line. Page 34.

Ford sets new record for production when output of new models reaches 8,135 Oct. 16. Page 33.

McFarlan now producing eight-cylinder series in eleven body types. Page 34.

Pennsylvania Automotive Association elects George A. Hoeveler president. Page 33.

Dealers in St. Louis well pleased with fall sales volume and with prospects for winter. Page 42.

Hupp Motor Car Corp. already building more than 100 of new six models daily, officials announce. Page 42.

Automobile manufacturers make tentative plans to buy vessels from U. S. Shipping Board to cut European transportation costs. Page 35.

Floyd Clymer, inventor of windshield spotlight, forms new company to manufacture and distribute patent air gage. Page 35.

Grey Goose Traveler and cabriolet roadster on eight-cylinder chassis are latest models in Wills Sainte Claire line. Page 35.

Automotive industry is given only one hour in which to present plea for tax reduction before House committee. Page 36.

General Motors sales to consumers in September show gain of 35,047 over same month year ago. Page 36.

Bert Dingley is named new service manager for Stutz. Page 36.

Thirty-nine different makes of cars are shown at Second Annual Closed Car Salon in Los Angeles. Page 43.

Colin Alfred Campbell is named sales promotion manager for Marmon. Page 43.

President H. H. Durr of Victor Rubber Co. is named receiver of that firm. Page 43.

Rating committee of Motor Truck Industries, Inc., plans session to consider plans for standardization of trucks. Page 37.

French racing board, alarmed at list of fatal accidents, plans to make rules lessening danger to drivers. Page 37.

Many changes are recorded in the trade personnel in Boston industrial territory. Page 37.

Safety instruction in schools helps reduce number of fatal accidents, survey shows. Page 38.

Nash reports net income for last three months of $3,840,268. Same period a year ago shows net income of $1,205,766. Page 38.

French automotive engineer advises European manufacturers to build but one model of car and build that in quantity. Page 39.

Increased business in San Francisco territory causes many staff expansions and personnel promotions. Page 39.

In Next Week's Issue—Stopping the Leaks That Drain Profits

Strict Practice of Association Code *Brings Success*

Value of Practical Program Followed by Kansas City Organization Proved in Business of Its President—Yearly Leases of Garage Space Return Profits

By BEN S. BROWN

IN the October 8th issue of Motor Age an article was contributed by Ben S. Brown under the heading, "A Practical Trade Association Program." This article dealt with a number of the constructive accomplishments of the Automotive Trades Association of Kansas City, Mo., which, to a large extent, have resulted from application of principles applied in the private business of the association's president, George W. Arnold.

Mr. Arnold is so much a part of the Kansas City association and there is so close a relationship between his policies in his own business and his policies as head of the trade organization that Mr. Brown's first story naturally called for another—

A close-up of the business of George W. Arnold.

This is an intimate and graphic behind-the-scenes picture of an automotive business that has been exceptionally successful. Sit in on Mr. Brown's second installment.

ABOUT March 1, 1917, George W. Arnold opened a small garage on Oak Street, at Thirteenth, in Kansas City, Mo., and began to render a service which was different. It had not only honest work in it, but a thoroughness which was exceptional, and a courtesy which was quite refreshing. And people liked it—liked it so well that they told their friends about it, and they in turn told others. And thus his business grew.

There was plenty of room for growth, for he began with practically no cash capital, but plenty of "nerve," as he called it. His determination was to give good and satisfactory service. He would make sure that it was satisfactory, for he would check it up with the customer and make him say that everything was O. K. before he would allow him to go out of the shop. This check-up often resulted not only in a pleased customer, but also additional service, or the sale of additional equipment.



The man with the flag is Mr. Arnold—here as president of the trade association flagging down a car in a brake test

By the end of his fourth year, or in 1921, he was running to capacity in a garage with 100 feet front, and a floor space of 1300 square feet, and found that he would have to move to larger quarters if he continued to meet the demands of his growing business. When a man is compelled to turn business away because of a lack of room, he is apt to look around for larger quarters.

At 1124 Locust Street he found the location which he decided would place him in close touch with the business that he would like to develop, and would be suitable for the building he wished to erect.

Having found his location, he proceeded to erect a building after his own ideals.

Windows occupy the larger part of the outer walls, so that the garage is filled with light, and the working conditions are as nearly ideal as possible. The inside walls are painted white, and the legs of the work benches are repainted once a month to insure that they always look up to standard.

In keeping with the idea of cleanliness and beauty, the floors of the garage are gone over daily with sawdus and a chemical solution; the windows are washed regu larly, and the outside walks and approaches are kept clean The workmen wear uniforms, with "Keystone" displaye on the backs, and when there is occasion for one of th men to get into a car to drive it out for a customer, h slips into a white coat which is kept hanging conveniently for his use.

In the arrangement of the building, he has devoted th first floor to storage, bu has a small shop dow there and a tire and part department which entice the customers to spen their money with him. O the second floor, reache by a short ramp from th street, as well as by stairway from the inside is located the main office the accessory shop, th main work shop, and addi tional storage space. Alto gether, there is floor space to the amount of 30,00 square feet in the building.

One of the most profitable departments of his business is the storage of cars, and the care and service which is connected with it. It is his plan to develop 100 per cent customers—those who buy from him all the service which they may need on their cars.

To this end he makes yearly leases with his customers, he to furnish them 24 hour storage privileges the year around, and render such other service as may be agreed upon. Sometimes it takes months to get a man ready to sign up the annual lease, but that is the end to which he works with each one.

To the storage privileges, which places the customer in Class A, he adds other service, which is classified as to the amount. For Class B customers he adds the washing of the car, complete, twice a month, battery water service and the wiping off of the car as often as necessary. Class C customers receive all this and in addition have their cars thoroughly oiled and greased once a month. Motor oil, transmission and differential grease are charged for extra, according to the amount used.

All other services are extra, except of course water and air. All repairs and replacements are contracted for as they are needed, and it is the policy of the business to make the work done so satisfactory that the customer will gradually have everything he needs to have done attended to by the Keystone.

Lest there should be any misunderstanding as to the price of service in the storage and washing department, there is posted conspicuously a list of services offered and the rate charged for each. It contains the following items:

STORAGE

4 hours or less	35 cents
4 hours to 12 hours	50 cents
12 hours to 24 hours	75 cents
Per week, in advance	$ 3.50
Per Month, in advance, Class A	10.00
Per Month, in advance, Class B	15.00 and up
Per Month, in advance, Class C	17.50 and up

SERVICE CHARGES

Putting on Chains	25 cents
Putting on Curtains	25 cents
Wiping off car	25 cents

WASHING RATES

Body Wash, all open cars	$1.00
Two Passenger Coupes, Ford, Chevrolet, etc	1.00
Four Passenger Sedans, Coaches	1.50

COMPLETE WASH

Open cars, average size	2.00
Extra large, Cadillacs, etc.	2.50
Two Passenger Coupe, Ford, Chevrolet, etc.	2.50
Four Passenger Coupe, Sedans or Coaches	2.50

EXTRAS

Nickel polish, pump, radiator, etc.	50 cents
Body polish, all cars	50 cents
Wire wheels, all cars	50 cents
Vacuum cleaner, 2 passenger coupe	50 cents
Vacuum cleaner, all other enclosed cars	$1.00
Cleaning Motor	1.00

While admitting that these prices are a little higher than many garages charge, he says that the better service rendered by him is such that customers are glad to pay the increase in order to secure the more efficient and reliable service.

In the service department also, great precaution is taken to prevent misunderstandings. All cars are tested and their troubles carefully diagnosed, and a list of the items required made. These include both material and labor, and the cost of each is carefully entered. When this is completed the customer signs the slip, which is an order, and thus there can be no question arise concerning these items. If there is indication that additional work may be necessary to put the car in complete repair, the matter is fully discussed, the cost estimated, and the order secured to make the repairs if necessary.

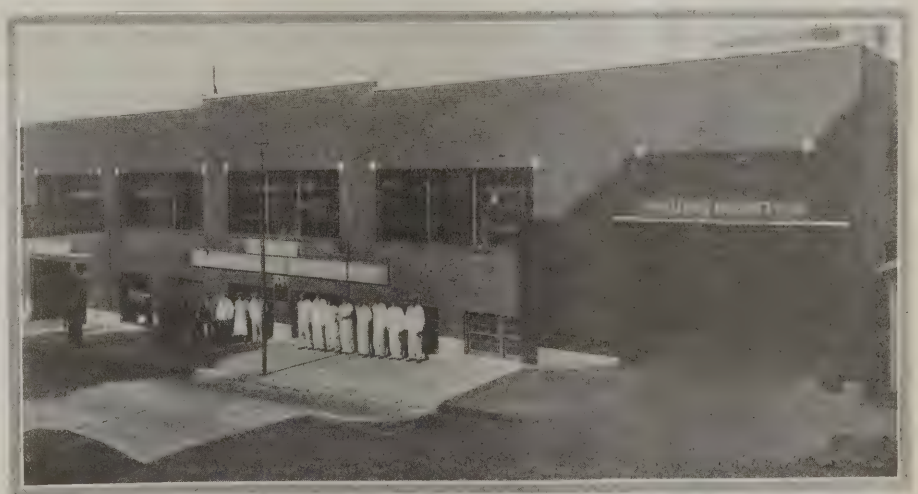
A flat rate price system is in use in the service department, but the mechanic is paid on the hour basis. Mr. Arnold finds this most satisfactory to himself and the men. Each order is numbered, dated, and the customer's name, address, the make of the car and the mileage recorded. The original sheet of this order is taken to the office. The duplicate is placed in a leather envelope which has a celluloid face, allowing the order to be easily read by the mechanic without taking it out and soiling it with his hands.

When one of the six mechanics takes a job, he punches his time slip, completes the work which is assigned him, times out, signs his name on the slip, writes the order number on it, and makes notations of the work he has done.

If another mechanic also works on the same car, he does the same thing. Every item on the order is timed, the mechanic writing his name opposite the time used, in the column provided on the duplicate sheet. From these records the flat rates are computed. Once every six months



George W. Arnold, president of the Automotive Trades Association, of Kansas City, and owner of Kansas City's Keystone Garage



Keystone Garage Building and Force. The grade from street makes possible the entrance of car to first floor (left) and second floor (right)

each operation is taken into consideration, all the data compiled, and the average actual cost is ascertained. Then the overhead cost is added, and the flat rate is fixed. When it is done Mr. Arnold knows he is not losing any money on the job, and that he is not overcharging his customers.

Mr. Arnold likes the plan of paying his mechanics by the hour rather than by the piece. He thinks that he is more likely to get the kind of service he insists on giving his customers by that plan for there is no temptation to the mechanic to rush the job at the expense of thoroughness.

Another reason why the hour plan is preferred is that in it there is no necessity to give a job to a certain man simply because it is his turn. The work in this shop is assigned to the man who is considered the best man to handle it, and this insures the best service it is possible to render.

Check Up Unproductive Time

There is always some non-productive time in every shop, and this is as systematically recorded as that spent on the jobs. This time is spent by the mechanic in keeping the tools of the shop in condition, and in cleaning up, etc.

A separate accounting is made for each department of the business—tires, oil and gas, accessories, shop and repairs, wash rack, storage, etc., and it is the determined policy of the management to make each one show a profit.

"The chief trouble with many garage men is that they do not know, and have no way of finding out just what it does cost them to do business in any department, and so they can go broke, and never know why," says Mr. Arnold.

To check up on the accounting system, and see that everything is absolutely O. K., a public accountant is employed to come once each month and verify what has been done.

Time-saving is one of the means by which the cost of service of all kinds is reduced. The front doors are opened by electricity. The accessories which workmen are likely to use are kept on both the first and second floors. The office, sales-room, work benches and everything else has been located so there will be the least time possible spent in going from one to the other.

There is no time lost in searching for tools. There is a white background against which they are hung up, and the outline of each tool is painted in black at the exact place where that particular tool is expected to be put away. Tools of the same kind are arranged according to size, thus making it easier to select the one needed. An assistant mechanic puts the tools in their places at regular intervals of the day, thus saving the time of the regular mechanics. These and other labor-saving and time-saving devices make it possible for this garage to handle nine hundred repair jobs per month—an average of thirty-three per day.

It is demonstrated in this garage that it pays to have plenty of good tools—those made especially for doing the work that is required to be done. Mr. Arnold has made every effort to install the latest and best in equipment. His work benches are bolted to the floors and the walls, and each is equipped with a five-inch jaw-vise and good drawers for mechanic's tools.

Money in Good Tow Truck

A dependable tow truck is another big asset. They use a truck chassis equipped with a two-ton crane, a dolly and tools for emergency roadside work. Quite a little revenue is derived from towing in work for other garages which are not as well equipped.

The shops are wide open for the inspection of customers, and they are invited to inspect the work on their own cars as it proceeds if they so desire. This results in confidence, which has been one of the deciding factors in the battle for success.

"Confidence," says Mr. Arnold, "is our biggest asset. We work with that in view all the time, and with all our customers. I have seen a man drive into our garage for storage for the first time, and insist on putting his own car away. Then he locked it up so tight that nothing short of dynamite could open it without the proper keys. Then he looked over every tire, and walked around the car several times so he would have every item in mind. Realizing the attitude which many men had toward garage men, we said nothing but gave him the most courteous treatment possible. In a few days, he would entrust our men to put his car away and get it out for him. Then he would bring it in, and turn it over without locking it up, and after a while, he would not even look over the equipment to see if it was all there. It is because our customers count us worthy of their fullest trust and confidence that they come back and bring others with them."

Looks like a man with things coming his way in that style would be satisfied, but not so with George W. Arnold. He is a close student of the trade magazines, he takes every opportunity to confer with others as to better methods of doing things, he listens closely to the messages of the experts who address the meetings of the Kansas City dealers association, and he gets all sorts of pointers from his employes. All these things he uses to increase his own efficiency, and then passes them on to the members of the association of which he is president.

Flat Rates for Electrical Work

A flat rate chart covering electrical operations on automobiles will be published in the Nov. 5 issue of MOTOR AGE.

This chart has been compiled, after extensive research, by A. H. Packer, associate editor of MOTOR AGE and specialist in automotive electricity. Practically every repair and maintenance operation that the tradesman is called upon to perform in connection with the electrical system of an automobile is listed and priced in this comprehensive chart. All the leading makes of passenger cars are covered.

A large proportion of the service work required on the average automobile has to do with the electrical system. This chart makes it easy to determine prices to be charged for this work.

In Motor Age Out November 5, 1925

What Is a SMALL CAR?

Judged by American Standards 90 Per Cent of European Production Would Fall in That Class

By W. F. BRADLEY
European Correspondent of Motor Age

JUDGED by American standards, 90 per cent of European built automobiles are small cars, for the average piston displacement in the Old World does not exceed 130 cubic inches. The small car, according to European ideas, however, is one having a piston displacement not exceeding 67 cubic inches a wheelbase varying from 85 to 100 inches, a narrower track than standard, and generally a two or three seater open or closed body.

This type of automobile now has nothing in common with the so-called cycle car, which has failed to secure public favor. It is built up in accordance with standard automobile practice, the only technical difference, in certain cases, being the absence of a differential. Four cylinder water-cooled engines are used in every case, the transmission is generally of the three-speed variety, final drive is by standard type bevel or spiral gearing; and electric lighting and starting are included. Low pressure tires are invariably used, and in some cases the cars have four wheel brakes.

Unquestioned Commercial Success

The permanent commercial success of the small European car on its home market, and its growing importance abroad can no longer be doubted. It is responsible for the big increase in the number of cars in France, and several other Continental countries because it provides cheap individual transportation. In addition, in France 20 per cent of the sales are made to people who own a bigger automobile, but who find that a small car is more satisfactory for city service for the following reasons:

Higher average speed because of smaller overall dimensions; greater ease of parking; low gasoline, tire and taxation charges. With gasoline at 46 cents a gallon and state taxation at an increasing rate on a horsepower basis, it is advantageous, even when a big car is essential to supplement it with a small car which will run 40 miles to the gallon, and pays an annual tax of only $12, compared with $41 for an automobile having a piston displacement equivalent to that of the Ford.

Four makers, Citroen, Renault, Peugeot and Mathis are in big production of small two- and three-seater cars, and together are averaging about 250 cars per day. In addition to these firms, which figure prominently in both home and foreign business, there are at least one dozen in France producing on a small scale or specializing in a sporting type of small car. The above four are distinctive in producing a utility type of automobile.

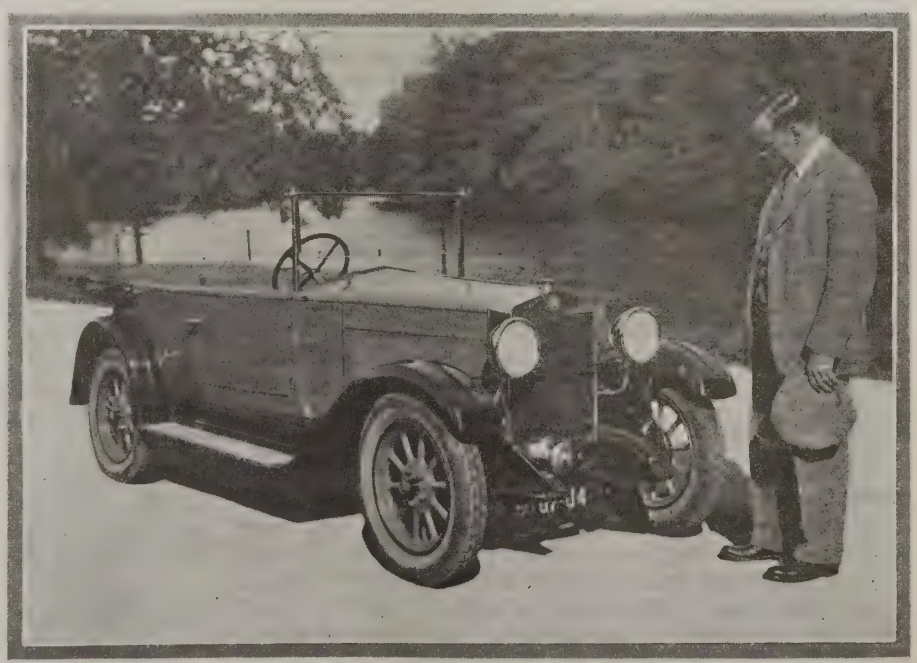
As a proof of the permanency of this development, not only under European but under world conditions, the Fiat Company of Turin has also decided to produce a small car with an engine of 60.2 cubic inches piston displacement. A new six-story factory has been built and is now being equipped with modern machinery which will give the firm a capacity, from next January, on this model alone, of 200 cars per day. The problem of the small economical car has been under consideration for several years by the Fiat engineers, but their final decision has been in favor of a chassis capable of receiving a four seater body. By coming in after the commercial success of this type of automobile has been secured, Fiat has been able to secure a thoroughly up-to-date design which, with their big production methods will give them an advantage over other competitors and will make them dangerous against American cars on foreign markets.

Europe's Leading "Bantam" Makes

	Piston displacement Cu. Ins.	Track Ins.	Wheelbase Ins.	Tires	Brakes	Price
Citroen	52.2	46	88	715x115	T-R	$590
Renault	58.	46	96	715x115	F-R	750
Peugeot	40.7	38	89	715x115	R	600
Mathis	60.7	46	108	715x115	R	645
Fiat	60.2	47	100	715x115	F-R	?

Prices include French 12 per cent luxury tax.

The above table does not attempt to cover all makes of small foreign cars, but merely those which are serious competitors for world's markets. Where price is indicated it is that of the cheapest type of body. The Fiat prices are not given, for these have not been determined for any other than the Italian market. It is believed, however, that the car will sell in competition with the leading French makes.



Tommy Milton takes an interest in new 7 horsepower Fiat

Radio Set Trouble Shooting

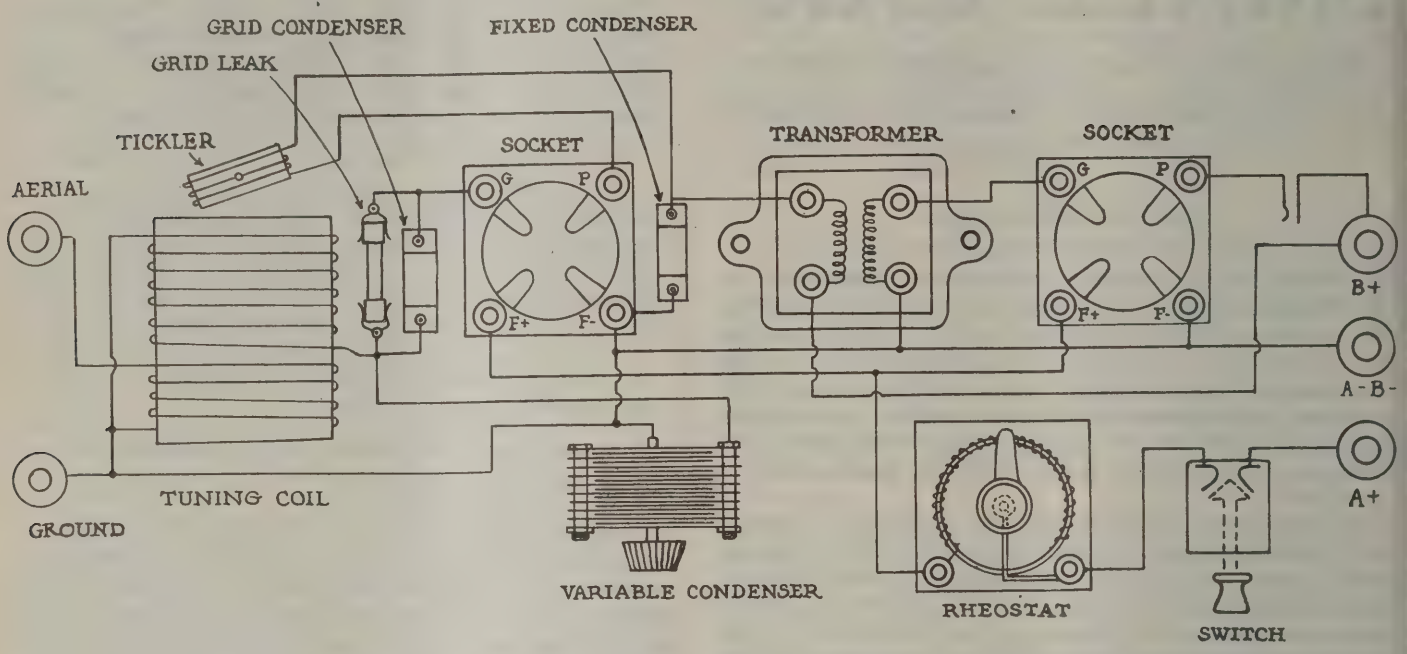


Fig. 1.—The radio diagram that Bill Fixit's men made from the set that Barney Oldfield Smith had discarded

The Red Head Shows How Some Electrical Tests Used on the Car Can Be Applied to the Circuits of a Receiving Set

By A. H. PACKER

FRIED frog legs and chicken the night before, feather beds to sleep on, pancakes with home made sausage and apple pie with real cream. What more could a couple of wandering trouble shooters want? And to make the Red Head and Valvy feel at home, Barney's mother spared no pains.

Valvy stretched and rose slowly from the breakfast table. "What time does the rural delivery fellow get here?" he wanted to know.

"Already gone by," said Barney, his manner showing his disappointment. "Guess we will have to wait another day for that condenser you ordered from Bill Fixit."

The Red Head was surprised. Of course something might have delayed the package in the mail, but as for Bill he entertained no doubts whatever, for promptness was Bill's first name. There was nothing to do about it, so the boys went out to the garage where Barney had his work shop. Barney showed Red and Valvy his equipment and tools and as they were about to go back to the house, Valvy's eye discovered a radio set, covered with dust and stowed away under the work bench.

"That looks like a good set; what's it doing there all covered with cobwebs?" he wanted to know.

"Looks—yes," said Barney, "but it's seen its best days. When I first got the thing I could get 'most any station. Then it went suddenly bad. New batteries would seem to fix it, then the set would be bad as ever. New tubes were tried and the same thing happened, so I gave it up in disgust."

Valvy was about to drag it out to take a look when there was a sound of wheels on the gravel drive at the side of the house. The boys looked to see who it might be. Valvy stared in astonishment while the Red Head gave a low whistle of surprise.

It was Bill Fixit himself driving a new Runwell straight line eight.

"It was this way," said Bill when he had greeted his two men and been introduced to Barney. "Your wire came a little too late to have a package make the afternoon train and I had for some time been figuring on a run down this way to see our folks. Then I wanted to try out this new car, so decided to start last night, drive until midnight and turn up here in the morning. And here I am."

"Some service," said Barney. "Can I always get special delivery orders taken care of that way?" And Bill laughed. "We go a long way to take care of our customers," he said. "But we let Uncle Sam do the work most of the time. And now that you have your magneto condenser I will be running along. Red can do a job like that as well as I can."

"Just a minute," said Valvy, "I want to show you something." And Valvy dragged Bill to the garage and showed him the radio set, once a wonder, now discarded, and told Bill Barney's story.

"You fellows better show Barney what's wrong, before you leave him," said Bill. "It's a shame to have a good set like that discarded because of some little thing."

"Radio's deep stuff," said Red. "You have showed us fellows how to shoot trouble on cars but we never had

ny dope on this. The Neutrodyne and Heterodyne and ll the other dyne family have my goat and I haven't the aintest idea why the coils are placed in the sets in certain ays or why they need condensers."

"Do you know why some cars have two pole generators, hy some armatures are wound one way and some another r why some commutators have 25 bars and others 33?" Bill wanted to know.

"Oh, that's different," said Red. "On the car you know he design is right and if you forget the details and just ee that there are no opens, shorts or grounds, you can igure on the generator and starter working.

"Then why," said Bill, "Can't you do the same with a adio set. Barney told you it worked once. That shows he design must be right and if it gives trouble now it nust be a case of shorts, opens or grounds, just as it is n the car."

"Well, I'll be," said Valvy, as he started to do a clog lance. "I'm a radio trouble shootin' expert and didn't now it."

"Better not hang out your shingle," advised Bill, "Until ou have tried out your luck on at least one case. This ne here seems to be a good one to start on, so I'll drive n now. We have started up a radio department back at Westville, so you fellows better make good now if you vant to keep up with the procession. Just now it's a case f making sales, but before long we will have to call on he service department, and that means you and Red."

And leaving his men with something to think about, Bill got into the big car and drove away.

"Now look what you went an' done," said Red, the seri- usness of the situation beginning to sink in. "Either we nake good on radio trouble shootin' or its good-bye job. If Barney has no objections we will see what we can find wrong with his radio set."

"That sounds like more fun than fixin' the magneto," said Barney. "I haven't any place in particular to go with he car now, so we can fix up the magneto tomorrow, and if you find the trouble I'll have my good set back again."

Valvy was dusting off the cabinet in which the units were mounted. "Where shall we start?" he wanted to know.

"Making a diagram," said Red. "It's the thing we do irst with an unknown car. We will take Bill's tip and work this job the same way."

It wasn't so hard after all, that diagram, after they made up their minds to tackle the problem. First the nits were laid out in their relative positions. The trans- former was shown in its position, then the two tubes, and the tuning coil, then the condensers, the grid leak and the variable condenser. After that the connections were traced and drawn and that much of the job was inished (Fig. 1).

Now Come the Tests

Next came the problem of tests to make.

"First the connections," said Red. "We will run from ive to ten amperes through each connection to see that here are no high resistances or corroded contacts. Radio circuits in a set like this will not carry much current, but a poor connection would cause trouble just the same be- cause its resistance is continually changing, which it would seem to me would cause funny noises."

"Funny noises is right," said Barney. "That's why I threw it out in disgust."

"Well, that's a clue," continued Red. "If you can scare up an old ammeter and some lamp bulbs we can start."

Barney thought a minute, then dug up a box of odds and ends and soon found enough bulbs to do for the test circuit. There didn't seem to be an ammeter lying around so Barney took the one from his Dad's car after Red and

BILL FIXIT STORY NO. 12

PREVIOUS installments in this series by A. H. Packer were published March 19, April 2, April 16, May 7, May 21, June 18, July 30, August 13, September3 and September 24, 1925.

SYNOPSIS: Bill Fixit's electrical trouble shooting men start on a trip in a Speedway car. Then stop at various places along the way and in a mining community are robbed of all their money. This necessitates getting a job with the local electrician, to whom they give some helpful information gained in working in Bill Fixit's garage. Directional radio is used by government agents in locating a gang of crooks and the boys' money is recovered. The trip is continued and the night after leaving the mining town they stop with Barney Oldfield Smith, an amateur race driver and help him with a magneto job, where a new condenser is needed.

Valvy had checked the wires to make sure they could quickly get them back on the right terminals.

"Now," said Red, "We are ready to start. First we will connect the lamp bulbs in parallel and the string of lamps in series with our ammeter and battery. After that we will put the two spare ends of wire together and see how much current the lamps draw. That will be our par score and we will see if all the connections can make it."

When the test set was completed it was found that with three 21 c.p. bulbs the current was 7.3 amperes. The next step was to try the test on the radio set and the first circuit to be checked was the one from the ground terminal to the socket contact of the F— terminal of the detector tube (Test No. 1, Fig. 2).

Barney and Valvy were all eyes as they anxiously watched the ammeter reading, but it showed 7.3 as nearly as they could tell and did not waver. Then Valvy had a bright idea.

"Why not check off each wire in the diagram as we test it," he said. "Then we will make sure we test them all and do not skip any." The plan was approved and the checking process started and all connections were checked up and with the lamp and ammeter test appeared to be all right.

"How shall we check the rheostat?" said Valvy.

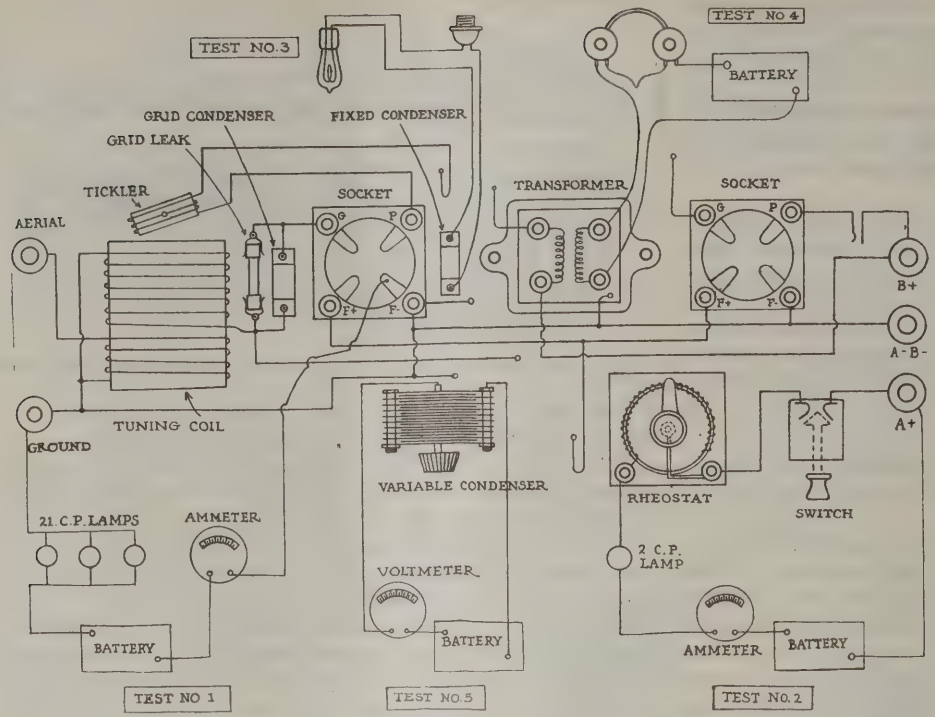
"The same way," answered Red, "Except we do not need as much current so we will use a 2 c.p. bulb (Test No. 2, Fig. 2), instead of the three big ones, and we will test the circuits to and from the rheostat with the heavier current."

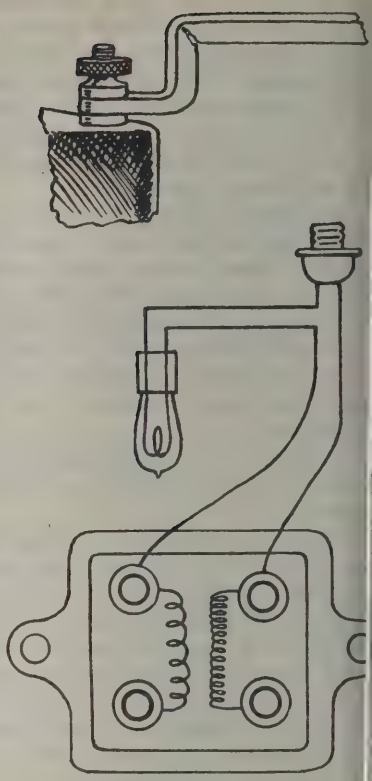
The ammeter test proved to be a failure in checking the rheostat, for with but little current going through it, it failed to show a reading that could be depended on, so the boys watched the light vary as the rheostat was turned and as it did not appear to flicker they concluded there were no poor connections in the rheostat.

"We go to the 110 volt test next," said Red, "To see how the condensers are. If a 110 volt test checks 'em on a car it should here, so we will take the condensers and disconnect them; then see if the lamp lights up through them. If it does it shows the condenser is shorted and if not it is probably O.K. (Test No. 3, Fig. 2).

"If we had a voltmeter we could check with a battery, using the voltmeter in series with it to check either the fixed condensers or the variable one used in tuning (Test No. 5, Fig. 2). With a test of this kind we would expect to get no reading on the voltmeter as the condenser does not have any metal connection from one terminal to the other. However, if the plates touch at some point when turning the knob, we will have a connection, and the voltmeter needle will suddenly jump up and show battery voltage. If it shows a slight reading at any time it indicates a leak due to defective insulation.

"Barney does not seem to have a voltmeter so we will use the same 110 volt test, and if the lamp lights when we





Above: Fig. 2.—Five different tests that can be applied to a radio set in checking the different units and connections; Right: Fig. 3.—The 110 volt test used to check for a transformer with primary shorted to the secondary; Above: The cracked wire that was found with the battery, lamp and ammeter test

turn the knob to any position we will know the condenser is shorted in certain positions. That test also seemed to indicate nothing wrong with the set.

"And now for the transformer," said Red. "It's Greek to me as far as construction is concerned, but I know there should be two windings that do not touch each other. Therefore we should have two circuits which are unbroken and neither of these circuits should show a connection to the other or to the frame of the transformer.

"Something tells me that they use fine wire in these transformers and if this is the case we can not get enough current through to show on an ammeter. We might use a voltmeter and battery test (Test No. 5, Fig. 2), and if we did not we would get a reading through each circuit, which might not be the full battery voltage reading on account of the high resistance of the transformer winding, but it would show a connection. We would also expect to get a different voltmeter reading on the primary from what we get on the secondary, the latter being the lower.

Head Phones Used in Test

"Without a voltmeter we will fall back on a pair of head phones and connect them in series with a battery, then disconnect the wires from the transformer and see if we can get a click in the phones when we touch the two terminals of the secondary winding (Test No. 4, Fig. 2). We should get a click when the circuit is made or broken and the click in testing the primary should be stronger than the click obtained when testing the secondary.

"Then we can make the final test on the transformer to see that neither winding is grounded. In this test we put one wire on the frame of the transformer and touch the other wire to each of the four terminals, one at a time."

This test gave a very faint click and Valvy thought at first that this meant a defect in the transformer, but Red explained that the transformer had some condenser action as the frame acted as one plate of a condenser and either winding as the other, so that a faint click could be accounted for by the slight battery current which would flow to charge the transformer. To make sure, however, Red decided to test the transformer with t 110 volt points. This was done and the lamp did not lig up, with one point on the frame and the other at varic terminals. The boys then concluded the transform was O.K.

"Well, what next," said Barney as Red completed t last test. "We have tested thoroughly and so far have found anything that would account for the trouble I ha

Red admitted he was stuck, but was interrupted Valvy.

"Looka here once. In checking off on that first test passed up one wire. It has no check mark on it."

"Oh, we checked it all right," said Red, beginning get disgusted with the job. "But test it again if want to."

Valvy said he would and hooked up the battery, la and ammeter test outfit. "We got it," he cried as the meter registered 7 amperes instead of the 7.3 value t had been checked as standard.

Red was skeptical. "Your battery's run down a while we were making the other tests," said Red, Valvy was vindicated, for even as they watched the me needle, it began to quiver. Down it jumped to 6.8 t up to 7 again, then down to 6.4 and back to over 7.

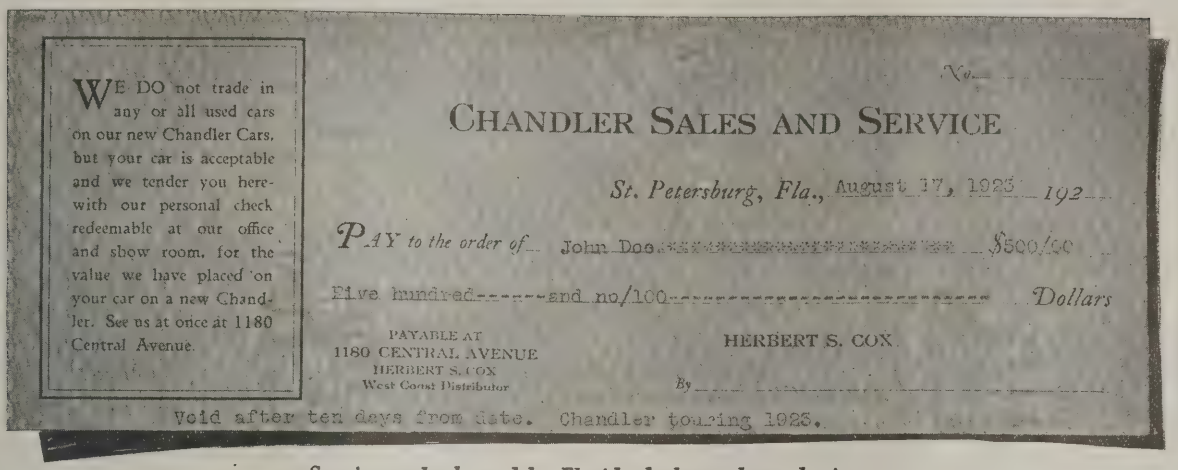
Problem Is Solved

Red began to get interested. "Let's take that wire and look at it." "Well, I'll be," said Barney when wire had been removed from the set. "A square bit bus bar, bent at a sharp angle and cracked at the be Notice, too, how the crack comes up from the bottom does not show at the top of the wire. You'd never in world find a thing like that without testing unless y tore the whole set apart and built it all over.

"It sure was a mystery why it went bad all of a sudd That wire must have been badly strained by too sh a bend when the set was built, and gradually the cr spread nearly through. But it isn't quite such a myste after you know the answer, is it?"

And Red and Valvy merely grinned.

Check System Aids Used Car Sales



Specimen check used by Florida dealer to boost business

HERBERT S. COX has devised a check system the use of which has been of aid to him in the handling of both used and new Chandler cars at St. Petersurg, Fla. Mr. Cox is Chandler distributor for Florida's vest coast.

The system used in distributing these forms is a simple ne, according to Mr. Cox. "Our salesmen upon seeing n old car make the appraisal, fill in the check and either vait for the owner or attach it to the steering wheel of he car in question," he said. "Besides this we have of ourse a list of all automobile owners in and around the ounty and we use the mails to transmit the checks.

"The result obtained from the use of these checks has een excellent. A number of inquiries have resulted from heir use and the writer knows of two new car sales made ecently which can be traced directly to the use of this orm of advertising.

"The used car problem here is, I presume, the same as it is all over the country. We are using the Blue Book as a standard for our used car values enabling us to show a prospective used car purchaser that he is getting full value for his money. Where the selling price of the car is not too high, that is not in excess of $500, we take as little as $100 in cash as a first payment for such balance as will not be handled by the finance companies.

"The efficiency of the method of merchandising our used cars is evidenced by the fact that we have been located here for less than two months yet every used car we have taken in, with the exception of three, have been sold. When we first started this system the results were remarkable. In nine days time we sold ten used cars; in the next succeeding five days we sold seven, which speaks for itself.

"Necessarily we use classified and display advertising for this department of our business, which no doubt is a contributing factor to the sale of used cars."

Taking Shop Equipment to the Buyer

AN extensive line of automotive shop equipment is carried direct to dealers, service stations and garages in the erritory of the Southern Hardware & Woodstock Co., of New Orleans, by a pecial truck equipped and operated by his company. This method of displayng and demonstrating shop equipment vas first tried by the Southern Hardware & Woodstock Co. last year and the results vere so satisfactory that the truck was ebuilt and re-equipped to go into the ield again this year.

The tools carried on the truck include:

Weaver 32 in. press with all attachments.

Weaver tire changer.

Curtis air compressor, complete.

Garco-Fleming brake lining machine.

Storm reboring outfit.

Black & Decker twist drill grinder.

Storm connecting rod aligner.

Sioux valve refacer.

Ames dial gage.

Black & Decker valve grinder and ¼ n. and ½ in. drills.

Storm hone.

Fleming flat rate kit.

National tools including all types of ullers for Chevrolets and Fords.



Shop equipment truck operated by Southern Hardware & Woodstock Co. L. M. Wolf, president of the company, and Richards Hinds are standing beside the truck

Rego welding outfit.
Greenfield screw plates.
Bethlehem sockets.
Micrometers.

The truck is in charge of Richard Hinds and each week he is accompanied by a factory man representing one of the lines of tools carried on the truck. The truck is expected to cover the territory in about 10 weeks.

HOW TO ADJUST BRAKES

Points That Must be Observed in Connection With the Maintenance of Mechanically Operated Four Wheel Brakes. In Which the Buick System Is Taken as an Example

By B. M. IKERT

(The second of a series of articles dealing with conventional rear wheel, mechanical four wheel and hydraulic fo wheel brakes)

THE proper adjustment of mechanically operated four wheel brakes offers no special difficulties, if the mechanic understands the fundamentals of adjusting the conventional rear wheel brakes.

In last week's issue of MOTOR AGE was given the methods that should be followed in the adjustment of the latter type brakes and much of what was said there applies equally well to mechanically operated four wheel brakes.

In order to make the matter more readily understood we have chosen in this article the four wheel brakes as applied to the Buick car. Different forms of mechanically operated brakes require different adjustments, naturally, but in the main, much of what follows here applies to all brakes of the external type. It is just as essential that levers and rods come to the stops provided when the brakes are in the off position in one car as in another of different make. Hence with certain modifications the following will apply in a great many cases.

Information pertaining to other forms of mechanically operated brakes, such as the internal type, three—shoe type, etc., will be published in a following issue.

There are four important things to observe in the adjusting of the Buick four wheel brakes and before a work is attempted they should be checked. They are ferred to in Fig. 1 and include,

1—The foot pedal being the unit which operates t system should be checked for clearance. There should 3/16 in. between it and the floor board and the pe should have a 5 in. travel.

2—The levers must come all the way back against th respective stops. In Fig. 1, the rear brake lever O m rest so the stop A is against the bracket on the bra camshaft in back of it. Also, lever E, in the middle the car frame on the right side must rest fully agai its stop.

3—The equalizer bar must at all times be parallel the brake cross shaft above it and this applies with t brakes in the on as well as off position.

4—There must be a uniform clearance of 1/32 around the brake band.

If a complete adjustment is required the following necessary:

First of all place the car on jacks so all four whe are off the ground.

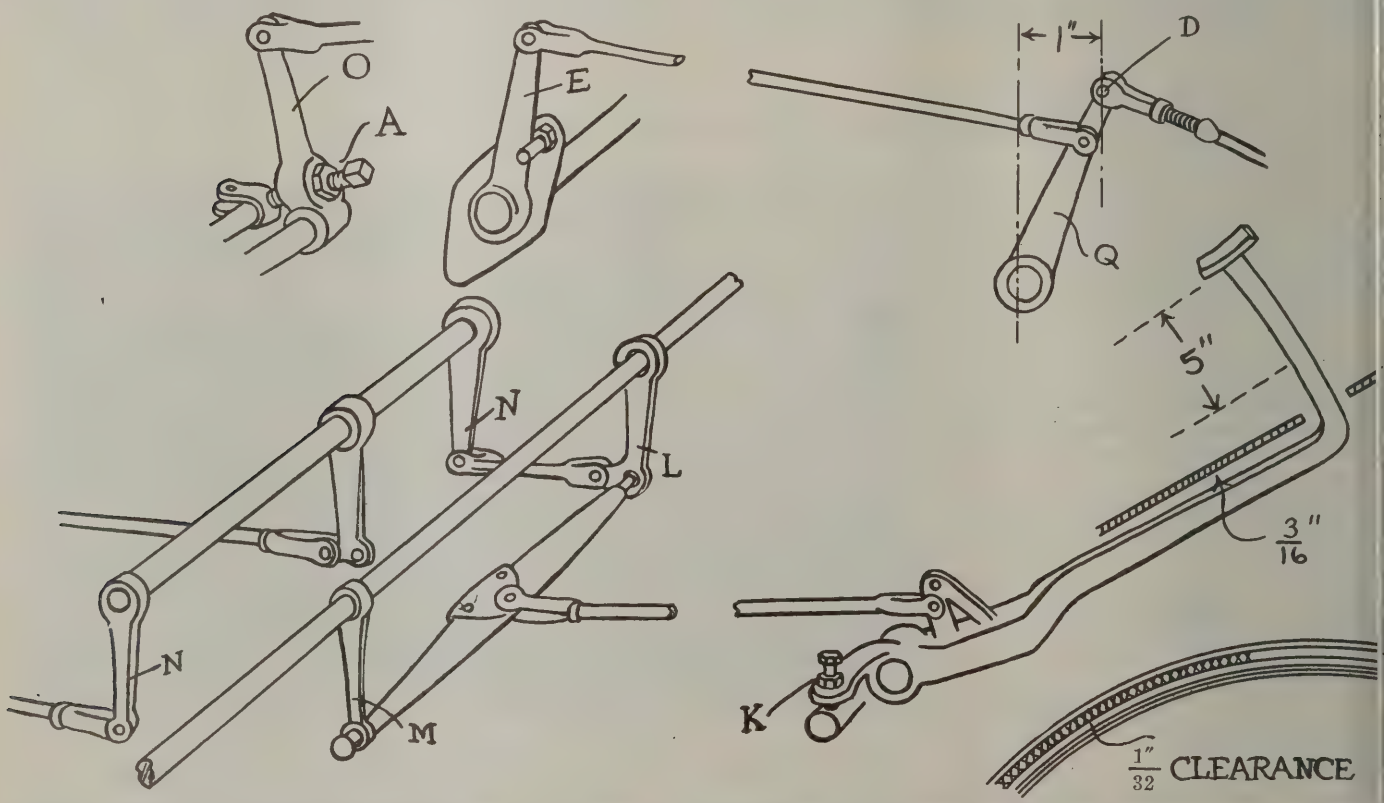


Fig. 1. Four of the chief things which must be observed in the adjusting of the brakes used on the Buick models. The levers must come all the way back to their stops when the brakes are released. The equalizer must be parallel to the cross shaft at all times and the pedal must have the required clearance, as shown. In addition the clearance between the lining and drum must be 1/32 in.

Next all of the working parts should be thoroughly lubricated. Then all of the working parts should be tested to see that the joints work freely and that the shafts operate properly. See that the foot pedal has the proper clearance.

Inspect the lever O in Fig. 1 to see that it comes back against the stop shown at A. The stop should bear against the clamp B on the hand brake camshaft and the correct setting will bring the pin B, Fig. 3, in line with the center line of the adjusting rod C, Fig. 3. The stops for the front brakes are located inside the drum and are non-adjustable. However, the front brakes can be tested to see if they return to the full release position by disconnecting the pin D, Fig. 1, and working the brakes by hand, letting them snap back into the release position. The lever E also should return to its stop.

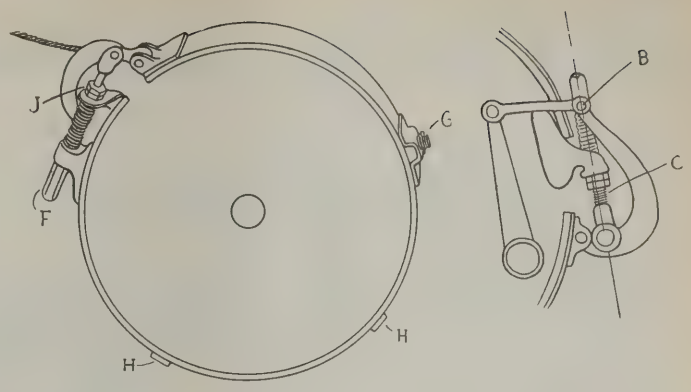
In order to get the correct setting of the equalizer bar, that is, to have it parallel at all times to the supporting shaft when the brakes are in the On or Off position, release the right front and rear brakes by turning the adjusting nuts F, Fig. 2.

Then obtain the correct pedal travel, which should be about 5 in. and also a square pulling movement of the equalizer bar by turning the adjusting nuts F at the left front and rear brakes. Then adjust the right front and rear brakes by turning the adjusting nuts so the right and left brakes in each set hold alike. After this the adjusting nuts F should not be turned, as it will affect the holding of the brakes.

The next step is to get a clearance of approximately 1/32 of an inch between the brake band lining and drum. To do this, adjust the anchor pin G so that when the wheel is revolved the lining just clears the drum at this point. Then adjust the brake band guides H on the upper side of the rear brakes and lower side of the front brakes of each band. There are two small hexagon nuts for this, one being the adjusting nut and the other the lock nut. Next turn the adjusting nuts J, Fig. 2, after which the wheels should be revolved and the clearance of the bands tested with a feeler gage.

It is very essential, in doing this that the brake bands be round and if flat spots are found they should be removed by means of a brake band rounding tool in connection with the feeler gage. Do not use a screwdriver for this because being a wedge shaped instrument it will not round the band uniformly.

Incidentally it is a good thing to mention here that in all cases where adjustments are made by turning hexagon nuts to use proper wrenches instead of pliers. Adjustment of brakes is much like valve tappet adjustment since it is necessary to properly lock the adjustment once it has been made, and to do this a pair of wrenches are used.



Left: Fig. 2. Layout of the brake band mechanism of the Buick, showing where the adjustments for clearance are made. The anchor pin adjustment, G, is first made after which the brake band guides, H, are adjusted. Finally the adjusting nuts, J, are turned to secure uniform clearance around the band; right: Fig. 3—Diagram showing the position of the rear brake lever when the brakes are released. The pin, B, should coincide with a line drawn through the center of the adjusting rod, C

Sometimes the above adjustments cannot be had by adjusting at the bands only and when that condition exists it is a good thing to check the brake operating rods and cables for correct length. In order to do this proceed as follows:

Make sure that the lever E rests against its stop with the brakes in the off position.

Next, get the proper position for the brake pedal and to do this, remove the pin from the yoke at the rear end of the rod and adjust the pedal by turning in or out on the screw K. The proper clearance is 3/16 of an inch between the foot board and pedal.

The next step is to check the rear rods and levers. Lever L must be parallel to lever M. If it is not, remove the pins from the adjusting yoke ends of the levers N and with levers C and E against the stops turn the yoke ends so that the holes in the levers and yoke ends are in a line. This will insure the equalizer bar being parallel to the brake cross-shaft.

With lever E resting against its stop and lever L hanging straight downward, equalizer parallel to its supporting shaft, turn the adjusting yoke so that the holes in it and the center hole in the equalizer bar are in alignment. Then replace the pin. This will adjust the brake pedal rod and the rod should be just short enough to take up any looseness between the equalizer bar and levers L and M.

In order to check the front rods and levers see that the lever E rests against its stop. The front pull rod should be of such length that the center of the upper pin in the lever Q, Fig. 1 is 1 in. ahead of a vertical line drawn through the center of the bolt retaining the lever. This is also shown in Fig. 1.

Finally the cables should be checked for length. In order to do this, turn the front wheels to the extreme right position and adjust the cable on the right side so the pin D can be replaced with the fingers. This naturally must be done with the brakes released and the lever E and the front brake lever against their stop positions. The left cable should be adjusted in a like manner with the wheels, of course, turned in the extreme left position.

In testing a car after making this adjustment the usual procedure is to drive the car forward and locking the rear wheel brakes and running it backward to lock the front brakes.

Before Doing the Work

IN checking up some of the difficulties which mechanics have with the adjustment of mechanical four wheel brake mechanisms we find almost always these difficulties are due to not freeing up the system properly before any attempt is made at adjustment.

In mechanically operated brakes there are numerous yoke ends, clevis pins and levers which must work freely before the brakes can be adjusted.

Oftentimes owners are careless about the lubrication of these points and when a car comes in for brake adjustment the mechanic should always make sure that everything works as it should. To do this he should disconnect the rods or cables and allow the brakes to snap back to see if they release properly. It also allows him to check up on the operating rods and levers.

Star Six Furnished in Three Body Models

Some Features of the Four Cylinder Model Found in Six. Wheelbase Is 106 in. And Engine Is of L-Head Design. Car Has Low-Hung Appearance

By DONALD BLANCHARD

SHIPMENTS of the new Star Six are now being made to zone offices and deliveries to distributors and dealers will start shortly. For the present, only coach, coupe and coupster bodies are being offered on the new chassis and prices on these models have not been announced.

The wheelbase of the new chassis is 107 in. and its L-head engine has a bore of 2¾ in. and a stroke of 4¾ in. giving it a piston displacement of 169.3 cu. in. Although the rated horsepower is 18.15, the actual output is said to be 40 h. p. at 2400 r. p. m. and the torque at 800 r. p. m. is given as 100 lb. ft. In view of the fact that the weight of the coach model is but 2375 lbs. the performance of this new car should be unusually good.

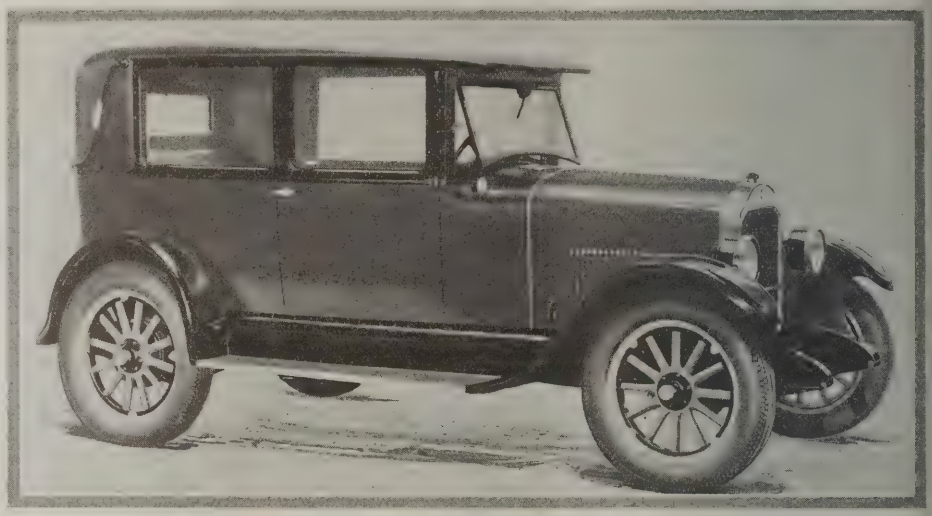
Some of the features of the present Star Four are found in the Six but in a number of respects the new job is quite different. The "tubular backbone" construction is not employed and the frame side rails have a kick-up over the rear axle. The latter feature together with a drop-center front axle reduces the height of the chassis and contributes to the low-hung appearance of the cars.

The characteristic Star radiator is retained in the six but the appearance of the various models has been greatly improved by reductions in the overall height which give them the long, low appearance so popular at the present time. In addition, the stream lining is better and the integral sun visors furnished on the closed models add to their general appearance.

Bodies are built by the Hayes-Hunt Corp. and are finished in sage brush green lacquer with black tops and fenders. In the coach, which has nickel trimmed landau irons at the rear quarters, the folding seat has a hinged mounting which permits its being swung towards the driver thus providing ample space for entrance to or exit from the rear seat. An unusual amount of leg room, particularly for the rear seat passengers, is provided in this model. Standard equipment includes automatic windshield wipers, rear view mirror, cowl lights and usual instruments. Hayes wooden wheels with natural finish are used on all models, 29x4.40 tires are used on the coupe and coupster, while the coach is equipped with 30x4.95 tires.

The engine is a Continental model 14-L supported at four points by feet cast on the crankcase. The forward supports consist of malleable brackets which are secured to the frame side rails and to the frame cross member which carries the radiator. At the rear, the engine is supported by the second cross member.

The cylinder block and crankcase are cast integral and the latter is carried down 2½ in. below the center line of the crankshaft for stiffness. The Oil pan and timing cover are of pressed steel while the detachable cylinder head is of cast iron. The compression ratio is 4.95 to 1.



Star Six Coach one of the three body models of the latest car produced by Durant Motors, Inc. Rearrangement of the transmission affords more leg room than in the four

Four main bearings support the crankshaft, the upper halves being die-castings and the lower halves babbitted in the caps. They are all 2⅛ in. in diameter and have the following lengths from front to rear respectively: 1¼, 1$\frac{3}{16}$, 1$\frac{3}{16}$ and 1$\frac{9}{16}$ in. The connecting rods are 9 in. in length and have babbitted-in-place big end bearings, 2 in. in diameter and 1⅛ in. long. Laminated shims are used to fit the caps.

Pistons are cast iron with three $\frac{3}{16}$ in. rings all located above the pin. The lower ring is an oil scraper type and relief holes are drilled in the piston. The piston pin has its bearing in a bushing in the rod and is secured in the piston by a set screw and snap rings. Dimensions of this part are 47/64 in. diameter and 2 21/64 in. in length.

Front End Drive

Front end drive is by a Morse chain 1¼ in. wide with 81 links and a .40 in. pitch. It has a conventional triangular layout passing over sprockets on the crank, cam and generator shafts. Tension adjustment is effected by moving the generator which has slots in its supporting flange through which the mounting bolts pass.

Cooling water is circulated by a centrifugal pump which is driven through a rubber hose coupling from the rear end of the generator. The pump differs from that use on the Star Four in that it has two bearings, one on each side of the impellor, and each lubricated by a grease cup. A bracket, which also serves as the water inlet to the jacket, supports the pump from the side of the cylinder block near the rear on the left side.

The cooling fan is driven by a flat, endless belt from a pulley on the forward end of the crankshaft. Adjustment for belt tension is the same as on the Star Four except that the slot in which the rear end of the fanshaft clamps, is open at the top thus facilitating removal of the assembly. Lubrication of the fan bearing is provided for by a reservoir, the bearing at this point being the cast iron hub on the hardened steel shaft. The radiator is a Fedders honeycomb and the capacity of the cooling system is 3 gal.

The camshaft is carried in four bearings which have the following dimensions, diameters and lengths, from front to rear respectively: 1$\frac{7}{16}$x1⅜ in., 1$\frac{13}{16}$x1$\frac{15}{16}$, 1¾x1$\frac{15}{16}$ and 1$\frac{9}{16}$x1$\frac{13}{16}$ in. The valves are operated through round nose tappets which are mounted in blocks of four, each pair being restrained by a spring and plunger arrangement similar to that employed on the Four. Both inlet and exhaust valves have nickel steel heads, the nominal diameter of the former being 1⅜ and of the latter 1¼ in. The lift is $\frac{5}{16}$ in. and the valve spring pressure is 77½ lbs.

Engine lubrication is by pressure feed to main, connecting rod, camshaft bearings and to the timing chain. The oil pump is mounted on the left side of the crankcase with its shaft horizontal and is driven through helical gears from the camshaft. It has the pressure relief valve incorporated with it and as the

valve is readily accessible in this position, the oil pressure adjustment is changed by substituting a stronger or weaker spring as the case may require. The lubricant is distributed through tubing to each of the main bearings and thence through the drilled crankshaft to the crankpins. Ducts drilled in the crankcase webs provide for the camshaft bearings.

The fuel system comprises an 11½ gal. tank at the rear of the chassis, a Stewart vacuum system and a Tilletson 1-in. carbureter. Intake and exhaust manifolds are cast integrally and the former has a heating jacket.

Generator, starter, cutout, coil and distributor are all of Auto-Lite make and the battery is a USL. The generator is a third brush unit and carries the distributor, coil and cutout. The starter is strap mounted on the right side of the engine and has an outboard Bendix drive. The lighting and ignition switch is a Clum.

Durant practice is followed in the design of the single plate clutch. The facing material is compressed asbestos, the rings having inside and outside diameters of 6½ and 9½ in. respectively and a thickness of $\frac{5}{32}$ in.

Between the clutch and the amidships mounted transmission there is a Spicer universal of novel construction. In it, sixteen rubber balls are used to provide the necessary flexibility. There are two, four-pointed spiders, one a spline fit on the clutch shaft and the other on the transmission shaft. Between each of the points of these spiders there are two rubber balls which are held in position by triangular spacers which in turn are bolted to a channel section ring located between the two spiders. Pressed steel covers are provided for the assembly.

The transmission is a three-speed unit providing reductions of 3.32 to 1 in first, 1.77 to 1 in second, direct in third and 4.3 to 1 in reverse. Except for the fact the cover plate is designed so that the center of the ball on the gear shift lever is about 6 in. forward of the neutral position of the shifter forks, the transmission is conventional. By bringing the gearshifter forward in this way it has been placed in a more convenient position for the driver. The mainshaft is supported in ball bearings and the countershaft and reverse idler in bronze bushings.

Transmission Mounting Different

The mounting of the transmission differs greatly from that used in the Star Four. In the new six, it is supported in a sub-frame consisting of two longitudinal members between the second and third frame cross-members. Its forward end is carried by a cross-member connecting the two longitudinal members while at the rear, a bracket bolted to the third frame cross-member supports the load.

Power is transmitted to the rear axle through a tubular propellor shaft with Spicer universals at each end. While conventional practice is followed in the rear axle, it is an entirely new semi-floating unit and has the two-piece, built-up type of housing. The helical reduction gears, which have a 1-in. face width, provide a reduction of 4.87 to 1. Two Timken bearings support the pinion-shaft in a carrier which bolts to the differential housing, shims being provided at the joints for adjustment. The two-pinion differential is carried in ball bearings and the outer ends of the axle shafts in Timkens.

The service brakes act externally and the emergency internally on 11-in. drums at the rear wheels. On the external brake, the operating links are located above and behind the center of the axle, the brake hand lever extending downward and the rod which operates it, passing under the axle. Two pieces of Thermoid lining, each 14½ in. long by 2 in. wide with a $\frac{5}{32}$ in. thickness, the lining being cut away for a short distance on either side of the anchor which is located at the center of the band. The internal brake is cam operated and takes a single piece of lining 31 in. long, 1¾ in. wide and $\frac{5}{32}$ in. thick.

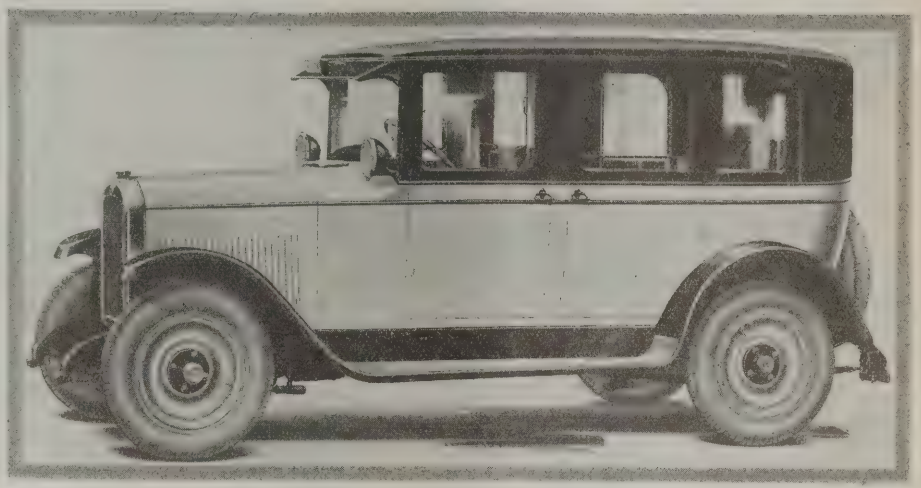
Links connect the brake pedal and hand brake lever respectively to short levers on two cross shafts. These shafts extend through the frame side rails and short levers on outer end are connected by rods to the operating levers at the rear wheels. Equalization of braking is obtained by clearance adjustment.

Semi-elliptic springs are used front and rear. The rear springs, which take the torque and propulsion reactions, are underslung, have nine leaves and lengths and widths of 53¾ and 1¾ in. respectively. The front springs also have nine leaves and are 1¾ in. in width, but the length is 35⅞ in. Spring eye bushings are hardened steel and the bolts are $\frac{9}{16}$ in. in diameter and 1¾ in. long.

The front axle is a reverse Elliot drop-forging of I-beam section with a drop center. The king pin and tie-rod bearings are bronze bushings and the thrust at the pivots is taken by steel washers. A worm and wheel steering gear, with a 8 to 1 reduction and similar in design to that used on the Four, is employed and it is supported by the left front engine mounting bracket.

In addition to the cross-members supporting the engine and the rear end of the transmission there is a cross-brace at the front rear spring hanger and another in the form of a wide plate over the gas tank at the rear. The frame side rails have a depth of 4½ in. a flange width and a thickness of $\frac{5}{32}$ in.

New Limousine Type Yellow Cab With Knight Engine



The Mile Merchant model Yellow cab powered with a 4 cylinder Yellow Knight sleeve valve engine

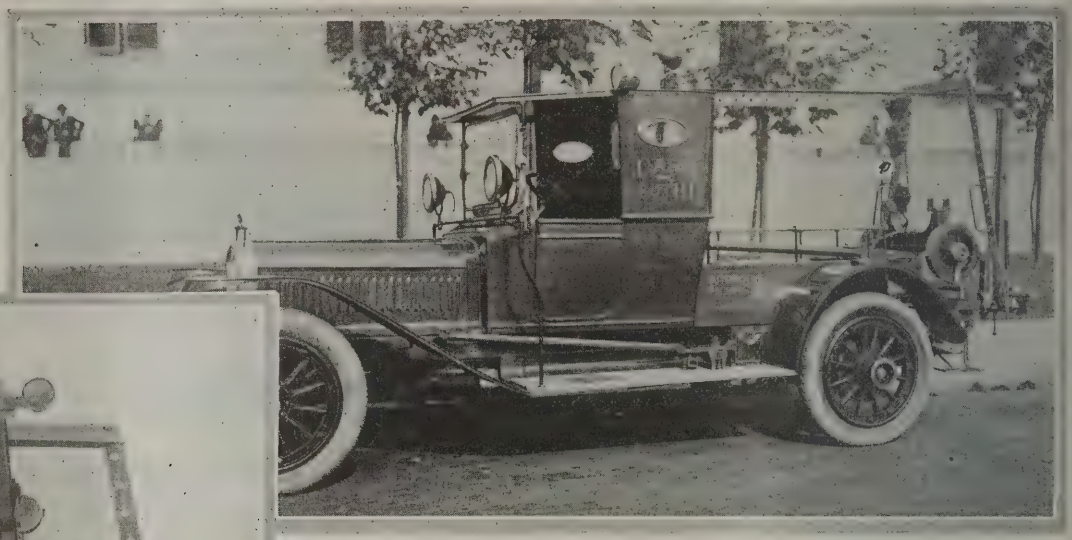
MAJOR changes incorporated in the new type O-5 Yellow cab, which is known as the "Mile Merchant" model, are a fully enclosed driver's compartment, giving the vehicle the appearance of a sedan; and a larger, roomier passenger compartment seating 6 persons. It is powered with a 4-cylinder Yellow Knight Sleeve Valve Engine, manufactured in the company's own plant at East Moline, Ill. The wheelbase has been increased from 109 in. to 114 in., although the turning radius remains the same. Rubber shock insulators, adopted more than two years ago, are retained in the O-5. Other improvements include balloon tires, air cleaner and throttle controlled oil pressure.

Hudson and Essex Prices On Closed Models Reduced

DETROIT, Oct. 19. — Announcement was made here today of the following price reductions on Hudson and Essex models:

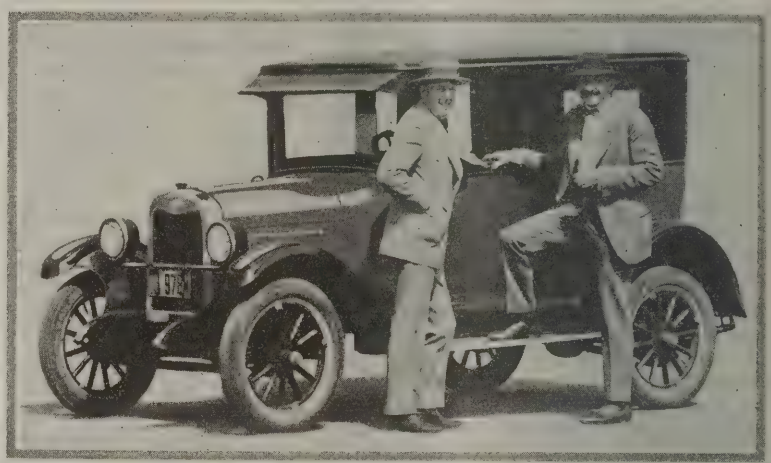
Essex Coach	$30
Hudson Coach	30
Hudson Brougham and Sedan	45

MOTOR AGE'S PICTURE PAGES





TRUCK CARRIES COMPLETE WRECKING EQUIPMENT: It has two towing dollys, two wrecking jacks, and a universal one-man tow bar, all manufactured by Kimmerly Bros. of San Francisco, whose salesmen use it in calling on garages and other possible prospects. Wrecks can be raised without the use of jacks. When so used two rods extend from the rear of the car frame to the street, which take the strain off the wrecking car.



A PRODUCTION RECORD. Here is shown the two-millionth Chevrolet, built Sept. 8. The company is the first maker of selective gear shift cars to attain this production. The first "Baby Grand" touring model was turned out at the Flint plant in 1913.



TRANSPORTATION EVOLUTION. At the left is an ox team and Ezra Meeker, who blazed the Oregon trail in 1852. At the rear is an original stage coach of the "Deadwood Dick" era; in front and at the right we have an original curved dash Oldsmobile, the first automobile made commercially in the United States and at the extreme right Mr. and Mrs F. M. Richards who are driving a modern Oldsmobile around the world.

OF AUTOMOTIVE INTEREST



INCOGNITO. The Republic truck above, heavily camouflaged with beautiful flowers—and beautiful maidens—won first prize as the entry of Montgomery Ward & Co. in the Dons of Peralta parade at Oakland, Cal.



SAYING IT WITH MUSIC. To advertise the new Diana, Casperson & Snyder of Salt Lake City, Utah, organized an orchestra which holds forth at regular intervals to the enjoyment of its audience.



SPEEDY VEHICLE. Lieut. Cyrus Bettis, U. S. A., is shown beside the Curtis "bullet" plane which recently established a speed record of 302.8 miles an hour. The plane is only 20 ft. wide from tip to tip. A new model Mack parlor car is shown in the background.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Let's Blame It on Kinetic Energy

Q.—We would appreciate your advising us of a curative to "shimmying" on a 1924 Chrysler six roadster. We have been servicing this car throughout its career and have been unable to overcome such action as above. This shimmy commences on slightly rough roads at 50 miles per hour increasing to its worst at 55, then leaving gradually within the next 3 mile per hour increase in speed. Suggestive cures by manufacturers have been unavailing. Wisconsin Shimmier.

About the only thing uniformly admitted regarding shimmying is that it is a form of kinetic energy producing periodic vibration in certain parts of the steering system at certain road speeds. Generally speaking it can be eliminated or at least alleviated by removing all lost motion in the steering system and spring layout. This includes tightening all spring shackle bolts or rebushing them if necessary, tightening all spring U bolts, axle king bolts, spindle arms and tie rod connections. In some cases balancing the front wheels so that each will remain stationary when jacked up and stopped will cure the trouble. In other cases wheel balance seems to have no effect whatsoever. The local maintenance organization handling Chrysler in this city advise that the tie rod assembly be removed and that the left hand end ball and cup assembly be removed. With this removed the spring should be cut off about ⅛ of an inch so as to give the tie rod floating bushing one-quarter of an inch overlap instead of the ⅛ which is regular when the car comes from the factory.

Above all things we would recommend a thorough tightening of all parts of the steering system, springs and front axle, as before stated including the spring clips, steering arm of the steering gear and the ball end of this same arm, also shock absorbers and spring clips. It might be that experiment with the inflation pressure in the tires will enable you to change the period so that it will occur higher up in the speed range. Off hand we would be inclined to believe that an increase in the pressure would tend to place the period farther along in the speed range. The factory recommendation is that the tires on the open models be inflated with not less than 35 pounds and it is our suggestion that you experiment with pressures from 35 down to 32 and up to 45 pounds.

We have known of some cases of wheel shimmy that have been cured by removing the spring from one end of the drag link and also from one end of the tie rod or connecting rod. As a last resort to be used only in case that other suggestions do not produce results, you might try changing the castor angle of the front axle. This of course, can be accomplished by inserting sheet metal wedges between the spring seats and bottom of springs on the axle.

LEAVE THE COUNTER-WEIGHTS

Q—Is it advisable to remove the counter-weights from Essex crankshaft in order to get the pistons out from below. —G. & J. Stromer, East Main Street, Gillett, Wis.

No, if the counter-weights are removed the balance will not be perfect when they are put back again. In the Clearing House section under date of October 1, 1925, there was published one item and in the July 9, 1925 issue there was another item on removing Essex pistons.

Q—Recent Essex instruction books advise the use of heavy oil instead of medium. Has the oil pump been changed in order to handle the heavy oil?

The oil pump has not been changed, but it has been found that the heavy oil works better. In winter it would be advisable to use medium oil.

The Readers' Clearing House

THIS department is conducted to assist dealers and maintenance station executives in the solution of their problems.

All questions are answered direct by letter, so the name and address should be given in full. This saves waiting for the answer to be published, which sometimes occurs several weeks late, depending upon the space available.

Readers' names will not be published with articles, if a request to this effect is received with the letter.

Inquiries not of general interest will be answered by personal letter only. Emergency questions will be replied to by letter or telegram.

Also state whether a permanent file of MOTOR AGE is kept, for many times inquiries of an identical nature have been made and these are answered by reference to previous issues.

Addresses of business firms will not be published in this department but will be supplied by letter.

Technical questions answered by B. M. Ikert and A. H. Packer; Legal, by Wellington Gustin; Paint, by G. King Franklin; Architectural, by Tom Wilder; Tires, by a Practical Tire Man; General Business questions, by MOTOR AGE organization in conference.

Peculiar Knock After 7000 Miles

Q—I have been reading MOTOR AGE for ten years and have profited by same. I have been servicing an Oakland Sedan, car No. 3038654, 1925 model, which has developed a peculiar knock. It can be heard at idling speed and up to 15 miles an hour. At any speed over that it cannot be heard. Sounds like a piston pin knock, but is not quite heavy enough. By shorting out No. 1 plug the noise is stopped. Have taken out the pistons and examined the bearings, taken up the timing chain, adjusted the valve clearances and examined the oil pump, all to no advantage. By turning crank with pan off can hear compression leak pass the rings. Car has been driven 7,000 miles and has been well taken care of. The knock is almost the same at all speeds up to 15 miles an hour and after that it disappears. Have reached my limit and am calling for help.—C. B. Eagan, Alma, Ill.

As shorting No. 1 plug eliminates the knock it appears that the trouble is in the No. 1 cylinder. We would suggest your removing the piston and rod assembly from the No. 1 cylinder and running the engine that way merely to check your previous test. A similar condition was encountered on another well known car and it was found that the cylinder bore was worn hour-glass shape. This condition meant that the piston in moving up and down passed over a sort of ridge and in doing so produced a slap which did not seem to have the characteristic sound of any of the well known knocks. The trouble was found by carefully measuring the cylinder bore at various places. A hone was then used to take the ridge out and after that the knock had disappeared. The fact that the compression is not good and that the gas blows by the piston rings also seems to indicate a condition of this sort. A half way method of testing for a condition of this sort is to put a small quantity of 600-W in the cylinder affected and run the engine. While the 600-W is acting as a cushion between the piston and cylinder wall, a knock of this kind will be temporarily eliminated.

"EASY WHEN YOU KNOW HOW," SAYS HE

Q—I just happened on a question by Edgar D. Best of Charleston, Illinois, on page 24 of the July 9, 1925, issue of MOTOR AGE where he says he is having trouble getting the Essex pistons out of the engine. I want to say there is not an Essex made that the pistons and rods will not come out the bottom and then very easily and any one who wants to know how can write to me and I will tell them the method I use. I remove spark plugs, take off pan and lay the six pistons on the floor in less than 30 minutes and they go back just as easy.—Roy Bowser, Gibson, City, Ill.

Planning Your New Building

By TOM WILDER

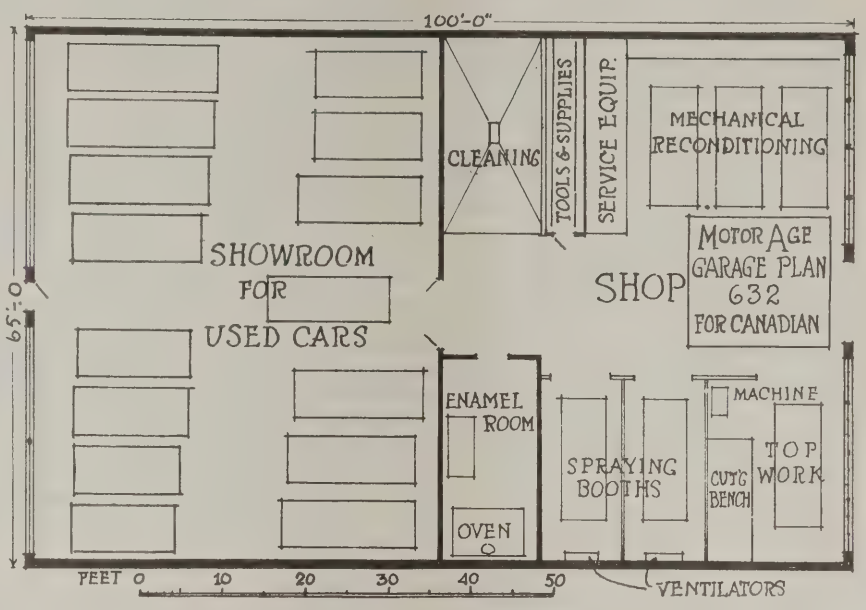
The READERS' CLEARING HOUSE

A Complete Small Used Car Plant

Q—As we are anticipating the building of a used car merchandising mart, in the center of our city, we would appreciate it very much if you had any plans or specifications which you might forward to us that would be valuable in the construction of this building. The size of the building will be 100 by 65. It is our wish to have the showroom covering the front part of the building, approximately 50 by 65 in size. In the balance of the building we wish to install a reconditioning department, a Duco refinishing department and a retopping department. Any suggestions which you might give us in reference to this will certainly be appreciated. —Canadian.

You have given us no data regarding the surroundings of your proposed building and we are assuming that it is an inside lot with an entrance on the alley.

The showroom may be arranged as we have indicated and the two rows of cars across the width of the building or if more show and less cars are desired the two rows may be across the end of the room, leaving an ample space in the center. The width and depth of the room in the rear, to be used for the reconditioning shop, led us to the arrangement we have shown. The mechanical work is done on one side and the finishing and upholstering on the other. We have shown a small enameling room with an oven, but no doubt you will have this work done outside as is usually the case.



Reconditioning in the back and selling in the front

If this is done the space could be used for another spraying room or the cleaning rack could be moved to this side leaving more room for mechanical operations.

The spraying booths are such as were described in MOTOR AGE recently, being just large enough for a car and the operator and having a ventilating duct at one end to exhaust the air which comes in through the open doorway at the other end and carrying with it all the fumes of the material which is objectionable.

The cleaning apparatus, of course, will include not only washing equipment, but painting removing and cleansing equipment which is absolutely necessary in this line of work.

Skylights should be provided in this room whether there is side light or not, as good work depends largely upon ample light.

Checked Everything and Engine Still Overheats

Q—I wish to thank you for the valuable information you have given me in the past and I am now coming to you for help again. We are having trouble with a type 61 Cadillac. This car suddenly developed a very bad case of over heating. It would boil after being driven a distance of five miles or less. We examined fan, radiator, pumps, hose connection, spark, ignition timing adjustment, also cleaned carbon and ground valves, but to no avail. The only way we could relieve this was to advance ignition timing until there is a very bad spark knock but now the car has very little power and acts as though brakes were dragging, but the wheels turn free. We also used two cylinder head gaskets but this did not help the heating any. If any of the readers have experienced this trouble, would be very glad to hear from them.—Motor Sales Co., 505 W. Main Street, Charlottesville, Va.

We believe the trouble is either in the pump or thermostat. You may have examined the rotation of the impellors and found that they were rotating. However, in some cases the pin which holds the impellor to the shaft is sheared off, although the impellor is still a tight fit on the shaft. Under these circumstances there will be rotation at slow speeds, but there will be slippage at medium and high speeds when the pump should be circulating the water. For this reason we would suggest your trying to slip the impellor blade on the shaft, using a lever of some sort such as a hammer handle. If there is no question but what the pumps are operating, then you should check the thermostat in accordance with an article which appeared in the Clearing House section of MOTOR AGE under date of September 17, 1925.

OWNER MAY RECOVER STOLEN CAR

Q—If a car is stolen property and is brought in here either by the thief or by the city officials who have picked it up from the streets, can same be removed without paying for storage charges?—Wabash Harrison Garage, Chicago, Ill.

The owner may recover his stolen property wherever found. The garagekeeper can only have a lien through orders to store or repair by the owner or his agent. The thief is no agent, neither are the police agents. But you can proceed against those who claim to be agents personally.

Test Data on Ford Generator and Starter

Q—Supply test data on the Ford generator and motor.—Ide Garage, Outlook, Wash.

The generator field draws 2.4 amperes at 6 volts, while the generator when operating as a motor should draw from 4 to 5 amperes. This latter figure may vary slightly due to the brush tension. If the ammeter reading is steady when checking the motoring current it is a good indication. If the armature turns with a jerky motion and the ammeter hand fluctuates violently, it usually indicates armature trouble.

The starting motor should crank the engine at 150 r. p. m. drawing 160 amperes at 5 volts. The data of the starting motor is as follows:

Torque	R. P. M.	Volts	Amperes
1 lb. ft.	2500	5.5	125
5 lb. ft.	1050	4.4	330
9 lb. ft.	425	3.6	465
13 lb. ft.	Lock	3.0	580

The above information is taken from Reed's Service Manual.

Clearing Up Electrical

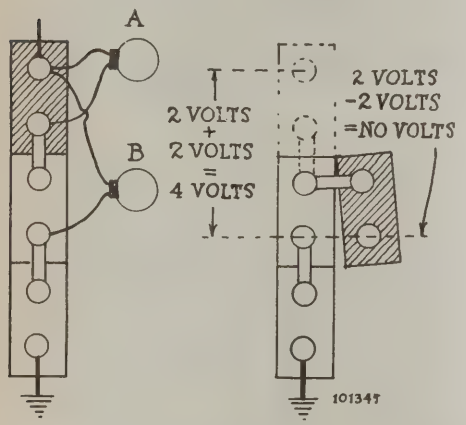
The READERS CLEARING HOUSE

EDITED BY A. H. PACKER

When One Cell Gives More Light Than Two

Q. We recently had a peculiar experience with a storage battery which had one cell shorted. We do not have a voltmeter in our shop, so we took the car to an electrical station and had it tested. The meter showed two volts on each cell when there was no current flowing and when the starter was operated the voltage would drop down slightly on two of the cells. On the third cell however, which has the cable on it going to the starting switch the voltage dropped down to 1 volt. The man then tested the cell again and the reading dropped down to zero and then the needle of the voltmeter went back against the stop pin.

After the car was brought back to our shop we tried a test light on each cell to see which cell was bad and what was the matter with it. We are showing a sketch showing the tests made. With the lamp connected to A, that is, across the cell which seemed to be defective, we found



Shorted cell in a battery acts as a drag on the other cells

that it would light up nearly as well as across either of the other cells. In stepping on the starter button, however, the lamp at A would first get very dim and then brighten up again. In fact, watching it carefully, we could see that the lamp would go out and then brighten up every time the starting pedal was operated. With the lamp connected across two cells, that is, the shorted one and the center cell it would light up brightly at first, but when the starter button was operated the lamp at B would go completely out and stay out as long as the starter button was held down. Could you tell why this happened and why two cells, even if one is shorted would give less current to the lamp than the one shorted cell? Chicago Mechanic.

When a cell is shorted, it changes from a battery to a resistance and the other two cells then work together in sending current through the shorted cell, just as they would in sending current through the rest of the wiring. We are showing an illustration which contains two sketches, the one at the left being the sketch you sent us and the one at the right being for the purpose of explaining the results you obtained. The 6 volts obtainable from a battery are obtained by adding up two volts at each cell and if we imagine the cells are stacked one on top of another, the more cells we have the higher the battery becomes and the more voltage we get.

In the sketch at the right we will assume, however, that the top cell is defective and has toppled over so that it is hanging down and the terminal which should be at the top of the battery is down about two-thirds of the way. The voltage of the middle and upper cell should act as indicated at the left of the right hand sketch. When the cell becomes shorted, however, it changes from a battery to a resistance and we know that in sending current through a resistance we lose instead of gaining voltage. Accordingly the effect of the center and upper cell, when the upper one is shorted is to subtract 2 volts from 2 volts and leave no voltage, which accounted for the lamp at B not lighting up, while the starter current was flowing.

Cadmium and Millivolt Readings

Q. Is the Cadmium test reliable with a Constant Potential outfit. If not, explain why. J. L. Sottiaux, Chenoa Battery Service, Chenoa, Ill.

A. The Cadmium test is considered to be reliable when the Cadmium stick is kept in water when not in use and when readings are taken while the battery is being either charged or discharged. When a battery is charged with a Constant Potential system the current at first is comparatively heavy but when the charge nears completion the current flow will be about the same as the finish rate with a Constant current system. For this reason we feel that the Cadmium test would be just as reliable with one system as the other. If in doubt as to the amount of current flowing at the end of a charge run when a Cadmium reading is wanted a lead with ammeter could be used as one of the connections from the battery to the generator bus bar.

Q. Can I use the voltmeter used for Cadmium test as a millivoltmeter? Explain millivolt test.

A. No. The volt scale of the Cadmium meter is usually 3 volts. The volt scale of the millivoltmeter is usually 100 millivolts or .1 volts. From this you can see that the scale of one is 30 times that of the other.

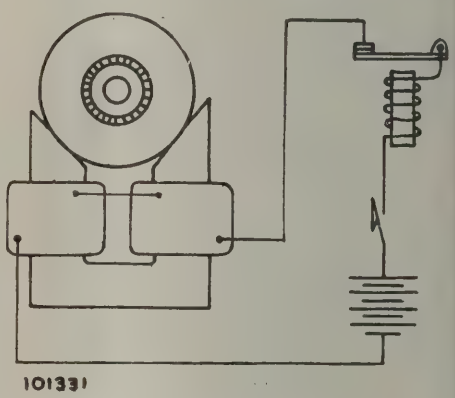
Millivolt readings are not required to a great extent in the electrical shop, although occasionally a test might be helpful in locating a high resistance connection when the loss of voltage is not over .1 volt. In testing armatures this also may be used by sending current through the armature winding and measuring the millivolt drop from bar to bar.

Growler Difficult to Use With D. C.

Q. Would like to have a wiring diagram for a growler for testing starter and generator armatures. I have a 32-volt Delco lighting plant to supply the current. R. H. Baker, The Avilla Garage, Avilla, Mo.

A growler is designed to operate on alternating current, usually 110 volt, 60 cycle current. The reason for this is that the action of the growler depends on change of current and consequently change of magnetism, which will generate current in the armature being tested. We are showing a circuit which in some cases has been used successfully. It is not guaranteed, however, and depends on having a suitable vibrator to interrupt the direct current from the battery.

Thirty - two volts would probably



Vibrator and battery used to operate a growler

be too much to use. You could start with two cells or three and use any voltage necessary, depending upon the strength of the growler indications and on the sparking or lack of sparking obtained at the vibrator contracts. Several readers of Motor Age have from time to time reported successful results by using a Delco ignition relay, one of the old devices used in 1911 and 1912 on Hudson and Cadillac cars. These are sometimes available at auto wrecking concerns.

If you do not have a great deal of generator work it might be well to check each job carefully to make sure that brush holders are not grounded and that the field circuit is correct and then test each generator as a motor. A normal generator will rotate evenly and draw a steady current while one which has a defective armature will vibrate badly when motoring and will draw an uneven current as indicated on the ammeter. Under such circumstances the ammeter needle will fluctuate violently.

Trouble With Bill Fixit

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

ants to Replace Switch on a Haynes

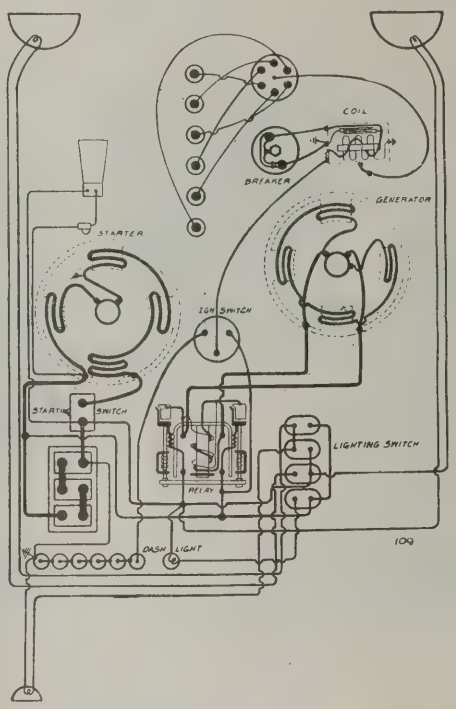
.—Please send by return mail informa- regarding changing the lighting sys- on a model 34 Haynes touring car. wish to replace the lighting switch ammeter which are combined in one t, with two or more separate units hout changing the entire starting and ting system. If possible send wiring gram and information regarding re- cements. Howland Garage, Brandon,

Ve are showing a wiring diagram on model 34 Haynes car, but it does include an ammeter. Perhaps the car refer to is some other model, for we e investigated and cannot find that the del 34 used an ammeter. If you had replace one of the special switches d to give series parallel connection to head lights, you might find it easier re-wire the car for a grounded system such a system is comparatively simple. can hardly give you detailed infor- tion as to the connection of units en we do not know what units you going to use. If the ammeter is being laced any ammeter used on an auto- bile will be satisfactory and you would nect it in exactly the same way even t is a separate device instead of being lt as a unit with the switch. When come to replacing the switch the job not so simple and we believe the best ctice would be to use a new switch of same type, if one is available. You ld probably secure one from the kers of the equipment, Leece-Neville npany, Inc., Cleveland, Ohio.

DEFECTIVE AS A MOTOR BUT GENERATES

)—We have been confronted with two ctrical problems in the Delco and Wag- generator respectively. We replaced armature in a vertical type Wagner erator which came from a Studebaker and rigged it up on a Moon using a ap to hold it. This generator when ning as a motor draws a current of amperes and when driven generates 10 peres maximum. Explain the unusual tures to us.—Wilson Brothers, Union- n, Ala.

One possibility is that the armature is tially shorted or grounded which uld show on a growler test or in the e of a ground would show up by test- on 110 volts. Another possibility is t the 18 amperes to which you refer the current taken when the armature not allowed to rotate as would be case if the generator is on the car. other possibility is that there is a chanical bind in the bearings or that armature rubs on the pole pieces. u can check this with the generator of the car by sending current through field winding only and having all shes lifted. Then turn the armature hand to see if the current makes the nature turn with great difficulty. A ght increase in the difficulty with which the armature can be turned is natural. Another possibility is that the main brushes are not on neutral. Run the machine as a motor with the third brush lifted. There should be practically no tendency for the armature to rotate in either direction, although a slight tendency to turn in the normal direction is permissable.



Wiring of Model 34 Haynes

Charges at 4 Volts—How Come?

Q—The Delco generator is from an Essex car and has a rewound armature in it. It generates current at only 4 volts. The amerage, however, is 15 to 20.

The voltage of the generator is always the same as the battery with the exception of a few tenths of a volt difference due to the resistance of the wiring. For example, if the battery voltage is 6.5 the generator voltage might be 6.8. As you get only four volts at the generator we believe that there is one cell shorted in the battery, for it would be impossible for a generator at 4 volts to send current into a battery at 6 volts.

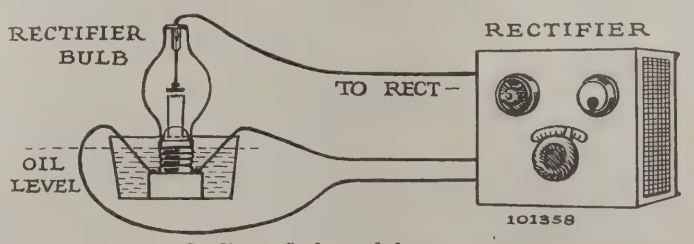
Brushes Last Only 100 Miles

Q—We have a 1918 Buick six that causes considerable trouble by burning off the carbon brushes on the generator. This generator will charge for a short while after new brushes are installed but after the car has made between 50 and 100 miles the generator will stop charging. Then if we look at the brushes we find they are burnt off except for that portion which the lock plate holds. We have never had the generator charging over 15 amperes.—Buick of Wisconsin.

If an armature is rewound and improperly connected it will cause excessive sparking at the brushes which will quickly burn them away. On the other hand if the brushes are improperly located even a correctly wound armature will cause trouble in this way. We believe that on the Buick, however, it is not possible to get the brushes appreciably out of the right position. Another condition which will give trouble, is using brushes made of the wrong material. Engineers at the factory spend a great deal of time experimenting with the various brush materials and finding one suitable for a machine which is being developed. For this reason it is essential to use the proper brush for any particular generator. Another condition that will cause this trouble is an open circuit in the armature, but this should also be noticed by a reduced output, by burning of one or two commutator bars and by flashing at the brushes when the machine is running.

OIL COOLING SAVES THE BULB

As a reader of your MOTOR AGE I have seen a number of hints for the repairman and now will give you one of mine. A 10 battery Tungar rectifier that I have, burnt out so many bulbs for me that I decided to do something. The bulbs would get hot in the socket and the center of the bulb would melt. I put my socket in a can and put oil in the can up to the level of the bulb as shown in the enclosed sketch. I had connections from the socket to the rectifier so that the wiring was just the same. For the last six months I have had no trouble and the oil keeps the bulbs cool and keeps the connection from getting hot and corroding.—Joe Povich Garage, Zeigler, Ill.



Cooling off the red hot currents

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

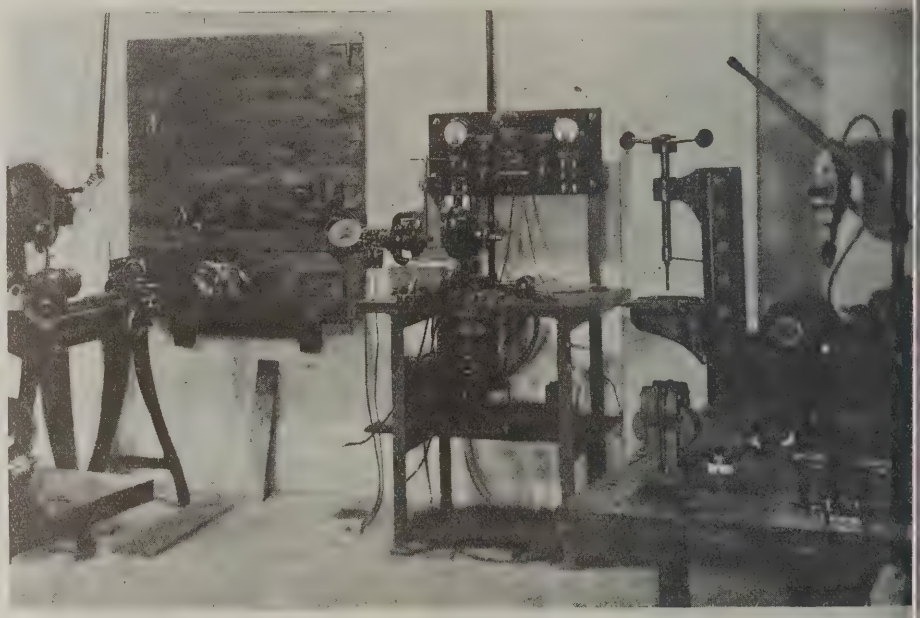
Some Do's and Don'ts to Observe With Flat Rate

Electrical Flat Rate Chart

A comprehensive schedule of suggested flat rate charges for automotive electrical service operations will be published in the Nov. 5, 1925, issue of MOTOR AGE. This chart has been compiled by A. H. Packer, associate editor of MOTOR AGE and specialist in automotive electricity.

Since a large proportion of the service work required on the average automobile has to do with the electrical system, this chart will be of interest to practically every automotive shop. Owing to its comprehensive character, covering all the leading makes of passenger cars, it is suggested that MOTOR AGE subscribers probably will want to preserve the issue containing it.

This advance notice of publication is given so that those who are interested will not overlook this important feature.—Editor.



THINGS THAT HELP FLAT RATE

Since so many maintenance and repair operations are confined to the electrical equipment of the motor car, it is a decided advantage to have on hand equipment for testing and repairing the electrical units. A broken rear axle shaft suggests an obvious repair, but a broken wire inside a generator armature cannot be found very readily without equipment

A CARPENTER was asked why it was he could apparently do more work in a day than his fellow workmen. He answered "I measure twice and saw once."

The automotive mechanic does not have to do very much measuring in the same sense as does the carpenter, but nevertheless he has to use his head and think twice before he does the work.

In line with this thought are several things which seem to suggest themselves and which if carefully observed help the mechanic to do a better job in less tim They are:

Use new cotter pins whenever you ha occasion to remove old ones.

Don't use too much energy in tryi to remove parts or units. Proper to and methods will prevent straining breaking parts.

Don't use shellac on gaskets or ho connections. You don't need it if t gaskets or hoses are in good shape a the surfaces are clean.

Use rags instead of waste. Cheesecl is as good as anything because it is f from lint.

Don't hammer off clutches, gears bearings. Use pullers for such work.

Use the right wrench for the job. Do use a big wrench on a small nut. Op end wrenches and socket wrenches of the right length usually to get correct amount of force for tighteni a nut. Additional force strains the and bolt.

Put clean oil on parts like pisto valve rockers, shackle bolts, etc., wh assembling them.

Use tools correctly. See that y screwdrivers have the right kind of e so they will not slip out of the slot the screw head.

Don't "choke" a hammer. Grasp near the end of the handle. You th have better control over the blows.

Study a job before tearing it do It will facilitate quick reassembly.

MOTOR AGE'S FLAT RATE FORUM

No. 36

FLAT RATES FOR CHRYSLER CLUTCH OPERATIONS

Continued From Oct. 15 Issue

Manufacturer's Official Designation		Time
5712	Remove and install clutch release bearing including removal and installation of clutch and transmission assembly	4½ hrs.
5713	Remove and install clutch release shaft including removal and installation of floor boards and cover plate	2 hrs.
5714	Remove and install clutch release shaft lever	¾ hr.
5715	Tighten lever on clutch release shaft	½ hr.
5716	Remove and install release yoke or link on rod from shifter shaft lever	½ hr.
5717	Remove and install pedal shaft lever	½ hr.
5718	Remove and install pedal shaft	¾ hr.
5719	Remove and install clutch pedal including removal and installation of floor boards	1 hr.
5720	Adjust clutch pedal stop screw and release yoke to give proper clearance between release bearing and throwout yoke and between clutch pedal and toe board	¾ hr.
5721	Remove and install pedal return spring	¼ hr.
5722	Grease clutch throwout bearing	½ hr.

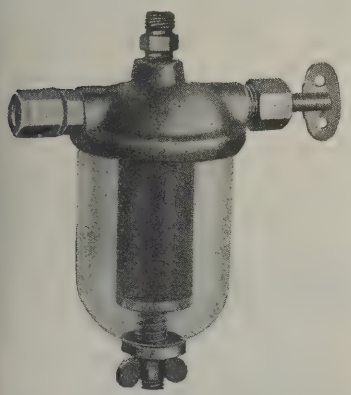
THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Rayfield Filter

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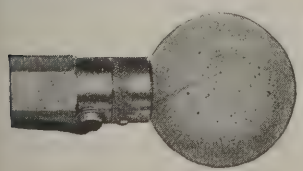
FFECTIVE gasoline filtering is claimed for the Rayfield Filter which being produced by the Beneke Manufacturing Company, 21st and Rockwell reets, Chicago. An unusual quantity fine brass wire gauze is employed in is device which will not corrode and hich is very durable. The filter is easy install and clean. It has a large glass owl for accumulations of dirt and ater. In cleaning it is only necessary remove the nut at the bottom which



olds the bowl to the filter head. This ermits all necessary accessibility. The ayfield Filter is packed in an attractive vo-color box and with every order of the company includes a display hanger three colors with easel back and the ecessary fittings to suspend a filter from . This is for counter or window dislay. The filter lists at $2; Pacific Coast, 2.50.

Illuminated Gear Shift Ball

KINGSLEY-MILLER Company, 600 W. Jackson Boulevard, Chicago, is on ie market with an onyx gear shift ball hich departs from the conventional in ie fact that it is illuminated. The ball ermits use of different colored bulbs anging in size from six to 16 volts. It crews on like the ordinary composition all, the cord being slip-knotted near the p and bottom and hooked up with the mmeter by leading the wire under the oor board. The light turns on or off ith a switch immediately under the ball nd the ball when illuminated gives a easant light in the driving compartment the car. The list price is $5.

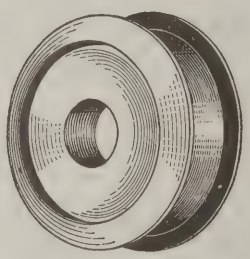


Illuminated Gear Shift Ball

Why Not Let Her Have the Job?

A large accessory merchant who has attractive window displays makes the confession that he has always left this job for the attention of a young lady who assists in the bookkeeping or one of the other two girls in his office. The strange thing is the job has not always been handled by the same girl and yet the windows have been consistently attractive.

The proprietor admits his own shortcoming on window trimming but has a notion that any young woman who has a knack for designing her own clothes and thinking in terms of art can beat the average man all to death on decorating a window. So he gives such a girl a chance to use her talents on the window display, and gets good results. This is a thought which some other dealers might be able to harness. As a rule women have much better taste than men. We don't dare deny it.



Bear Crankshaft Pulley

Bear Crank Shaft Pulley for Fords

THE Bear Manufacturing Company, Rock Island, Ill., is marketing a Flanged Crankshaft Pulley with a special oil retainer, for Fords. The flanges keep on the belt while the oil retainer catches oil and keeps the belt dry. The device is made of reinforced gray iron and is priced, complete, at $1.25.

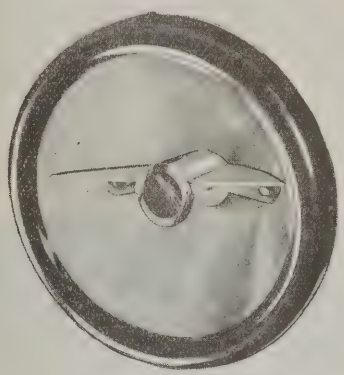
Parking Lamp

A NOVEL parking lamp with dash switch is being produced by Joseph Pollak Tool and Stamping Co., 81 Freeport Street, Boston. The lamp is provided with two leads instead of terminals and the bulb is removed by pulling on the cable. This company is also manufacturing a push and pull switch, made of brass throughout and is adapted for radio as well as automobile use. Price, without separate switch, $1.00.

Kantglare Deflectors

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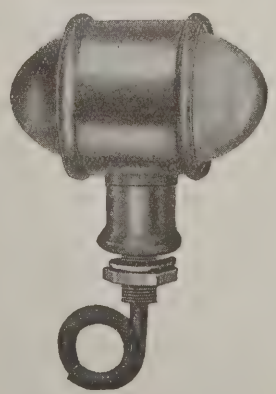
KANTGLARE Deflectors for Headlights, manufactured by the Fairchild Deflector Corp., Clinton, Iowa, are said to divert the rays of the headlight in such a manner as to eliminate danger of blinding or distracting drivers of approaching cars or similarly affecting pedestrians. At the same time it is said the Kantglare Deflectors make for a far-reaching, low-level driving light of high efficiency. The



device does not dim, its purpose being to deflect. The use of special lenses is not necessary. Made to fit any headlight each Kantglare Deflector consists of a single-plane double wing with a central barrel to fit over the bulb and a narrow reflector band with two small vacuum cups to hold the device in correct position. A distinctive blue bull's eye forms the front of the barrel. Installation can be accomplished by anyone without tools and the deflectors sell for $3 a pair.

Increase Shock Absorber Price

THE list price on the Houdaille Shock Absorber for Fords has been changed from the former figure of $25 a set, completely installed, to $30, according to an announcement by the manufacturers, the Houde Engineering Corporation, 177-237 Winchester Avenue, Buffalo, New York. The shock absorber is known as Model "F."



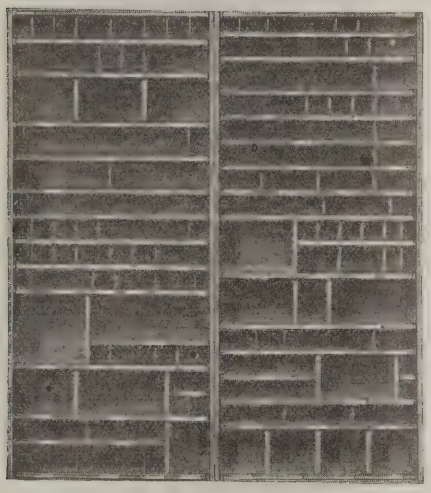
Pollak's Parking Lamp

GETTING MORE OUT of the SHOP

Storage System for Parts of Improved Ford Cars

When the improved Ford made its appearance recently, Lyon Units were available for the parts dealer.

The two-section system illustrated provides a total of 115 bins or storage spaces. The section on the left provides parts storage for front and rear axle, wheels, frame, gas tank, motor, magneto and flywheel, transmission, and steering gear parts. The right section takes care of the springs, radiator thermosyphon, fan and hood, carbureter, fenders, running boards and shields, coils, switches, ammeter, starter drive, horn and headlamps. Each bin is labelled with the part number for which it was designed. Capacity of the bins is based on the recommended amount of stock that should be carried, and makes possible a



Two section Lyon unit made for parts of the new Ford model

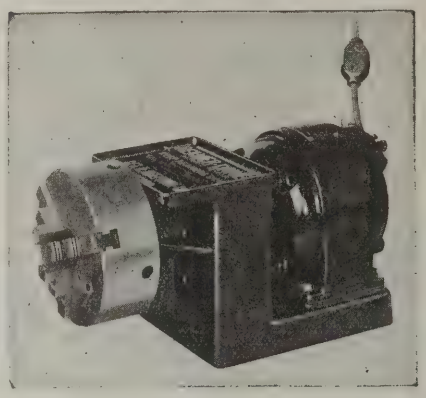
perpetual inventory. A glance into the bin tells when and how much to reorder.

These storage units are 36 in. wide, 12 in. deep, and 84 in. high. They are finished in durable olive green enamel, baked on. They are made by the Lyon Metallic Mfg. Co., Aurora, Ill.

Power Operated Reamer Drive for Bench Work

Designed to grip firmly and to electrically operate reamers when reaming such parts as bushings, spring shackles, connecting rods, pistons and the like, is the new power machine manufactured by the Geo. H. Blettner Co., Chicago, Ill. This machine is powerful enough to remove .020 in. stock with each pass of the reamer from bronze bushings up to 1½ in. and babbitt up to 2½ in. in diameter. The spindle is provided with a geared scroll chuck which accommodates reamer shanks up to 1¼ in. in diameter.

The adaptability of this electrical device to bench work is the outstanding



Power operated reamer drive for bench work

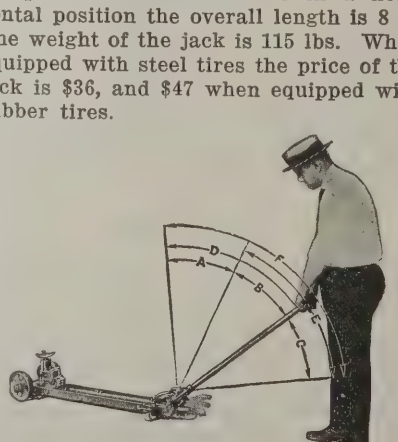
feature. It is easily and quickly mounted on the bench and occupies a space of only 7 by 15 in.

This machine is operated by means of a Westinghouse ¼ h.p. motor mounted on a base provided for it. A regular running speed of 38 rpm. is accomplished by means of a balanced gear reduction running in oil. All gears are totally enclosed in suitable casing to protect the operator at all times.

This machine weighs only 80 pounds prepared for shipment. It is finished in black enamel to give it a pleasing outward appearance.

Manley High Speed Jack

The Manley Manufacturing Co. of York, Pa., has recently added the "Manley Hi-Speed Jack to its line of garage and shop equipment. This is a geared jack mounted on broad faced wheels with roller bearings. It is so constructed that it can easily raise cars having small road clearance and also allows the wheel of the car to pass over the frame of the jack. There are six positions for the operating handle, this permits the free use of the jack in cramped places and on cars having overhanging bodies and bumpers. With the handle in a horizontal position the overall length is 8 ft. The weight of the jack is 115 lbs. When equipped with steel tires the price of the jack is $36, and $47 when equipped with rubber tires.



Manley high speed jack showing the range of the operating lever

A New Portable Crane for Light Tru

The International Motor Truck Co pany, New York, has designed a porta crane for mounting on Mack Trucks 1½, 2 and 2½ tons capacity. While signed primarily for the purpose of loading 1000 gallon fuel oil tanks fr gondola cars, the crane is also adap for other uses and according to manufacturers, will lift up to 2500

The equipment consists of a m braced and anchored to the cha frame; a special drum-winch and booms. Power is applied to the wi from a power take-off through a o speed forward and reverse gear an chain drive to the winch-worm sproc



Portable crane for mounting on M Trucks of 1½, 2 and 3 tons capacity. I said that it will lift up to 2,500 lbs.

The controls, consisting of a motor clu and gear shift are on the left side of mast, directly behind the cab. Attac to the back side of the cab is an auxili gas control which permits the opera to regulate the speed of the engine wi out leaving his position at the con levers. While the crane is being op ated rigidity of the chassis is obtai by two jack screws which support mast from the ground. These scre are attached to the cross-members means of a swivel arrangement, so t when not in use, the free ends may fastened to brackets on the sides of frame.

The International Motor Compa states that the entire assembly may mounted on any standard Mack tr with but little alteration of the body.

EDITORIAL

How Some Dealers Lose Sales

A DISTRIBUTOR'S service manager complained the other day about how hard it is to get some dealers to install equipment and give adequate service on the cars they sell. He said that practically all the dealers for that make of car in his metroplitan area sent some of their owners to the distributor's service station and some sent nearly all.

"But I guess we ought to be satisfied," he said. "In many cases these owners become so well satisfied with our service that they never go back to the dealer they bought the car from and when they get ready to buy a new car they come to us."

Under existing conditions the best market for any widely distributed car should be among present owners of that make. These owners are constantly coming into the replacement market and if the dealer who sold them before is not able to sell them again he is losing about the widest market that is open to him. Failure to sell them again is too often due to having failed to give satisfactory service.

A large Chicago dealer takes pride in his service and goes to almost any length to satisfy his customers sold something more than 500 new cars in a recent month and almost 200 of these sales were to former owners of the same make. A known group of prospects representing approximately 40 per cent of a dealer's new car buyers certainly is worth cultivating. And it is possible, by modern methods, to make a profit while cultivating this field. It is worth thinking about and doing something about.

There is a county in Illinois which, according to its assessor, has more automobiles than it has watches. One reason for this is that the taxpayer can't also hide his car in his vest pocket.

Safety Sense Needed

A NUMBER of constructive thoughts came out of the recent National Safety Congress at Cleveland. One was that in order to reduce the number of motor vehicle accidents it will be necessary to build up in people an instinct for safety. It was said that dogs, chickens, pigs and other animals that wander into roads and streets are not nearly so likely to be hit by automobiles as they were in the early days of motor transportation. They have developed a safety instinct and are more alert to dangers of the highway.

The great majority of persons appear to have well developed safety instincts, but still there are far too many men, women and children killed and injured on the highways. The number of fatalities in 1924 was nearly 20,000. A large number of these were children and elderly persons. It seems that the safety instinct of the active adult population should be extended to take in a definite responsibility for keeping young children and feeble old people away from points of danger. That would be real safety sense.

"Work," an expert told a group of automobile salesmen, is the big word in successful selling. After that comes another big word. You spell it just like the first one.

A Promising Autumn

WHEN you see big posters on the side of the barn along the rural highway announcing a state or community fair—you know that the automobile show season is on. These displays are always the first of the long succession which begins in September and continues well into the following year. Reports from automotive displays at fairs this year are very cheerful and optimistic. The farm dollar is rolling toward the automotive market. More of this farm money will be spent later in the year after the corn is husked, after the cotton crop is turned into money and after wheat, now being held, is marketed. Technically the Fall season begins with the first of September but actually we are just now entering upon the Fall—and it is promising.

Don't be afraid to stand behind the car on your floor. When one of last week's buyers is coming through the door—even the gyp will do that.

Sell Him His Winter Needs

MAIL campaigners should be busy now lining up automobile owners on their winter needs. "Are you prepared for the winter?" Automotively speaking, that generalizes the question which should be asked. Then the specific suggestions,—winter overhaul (to render driving in this especially hazardous season more safe), heaters, chains, illuminating devices for bad nights, etc. Give the owner a message on the importance of "preparedness." This campaign can be pushed until time to take up one for the promotion of Christmas buying.

Knocking a competitor's make does not sell the prospect on yours so often as it makes him think he'd better go back to the horse and buggy.

Automobile Stocks Kept at Low Level

Although Production Points Down, No Slump Expected

Year to Date Shows Wisdom in Keeping Output in Line With Sales

PHILADELPHIA, Oct. 21.—The tendency in automotive production and sales is now definitely downward, but there is no indication of an abrupt slump. In a few instances the factories are still behind in meeting orders, a condition that is being rapidly overcome. On the other hand, there is virtually no overstocking of new cars anywhere, either at the factories or in the hands of dealers and distributors, and this is the strongest point in the whole automotive situation.

The year to date has definitely established the wisdom of keeping production closely in line with sales; the earnings of the manufacturers have been high, labor has been regularly employed, and retailers have not had to take losses to reduce accumulations of cars. Some already large factories are being expanded, however, and the temptation to overproduce perhaps will be stronger this winter than ever before. It remains to be seen whether the cumulative weight of experience will be sufficient to overcome the desire to maintain production and distribution at a uniformly high level.

The used car situation is unfavorable. Stocks normally increase about this time, but the seasonal trend has been accentuated by the price cuts on closed cars and the exceptionally liberal time sales terms on which new vehicles can be obtained. A rigorous policy on trade-ins, coupled with careful reconditioning of the used cars, are the measures being taken by the better merchants among the dealers to keep their stocks moving and avoid losses. But even the soundest policies cannot be depended upon in the present situation to entirely discount the reaction that the price cuts on the new closed cars has caused.

Foreign sales of American cars are booming, and there is now no doubt that the earlier optimistic predictions of the automobile men as to the volume that the export trade would attain will be fulfilled. The total for cars and trucks this year will be about 550,000 vehicles. Next year, judged by the programs under way, it will be about 40 per cent greater, and in 1927 will go over the 1,000,000 mark.

WANAMAKER ENTERS AVIATION

NEW YORK, Oct. 17.—Rodman Wanamaker announces that an airplane freight and passenger service from New York to Miami, Fla., is to be operated jointly by the John Wanamaker store and the Stout Metal Airplane Co. Ford engineers are now seeking suitable landing places along the proposed route. Air shipment of freight is expected to prove popular because of the railroad embargo on all Florida bound merchandise except food and other necessities.

County Votes Own Road Bonds

SAN FRANCISCO, Oct. 17.—Marin County, one of the smaller and less populated divisions of California, has just voted by heavy majority, a bond issue of $1,250,000 for the construction and improvement of its own roads, exclusive of state or federal roads within its boundaries. This sum will build and pave 96 miles of highway, 18 feet wide and seven inches thick. This is believed to be the heaviest bond issue for highway purposes ever voted by a county of the size and population of Marin.

Tire Prices Climb Again As Result of Big Demand

AKRON, O., Oct. 17.—Another general increase in automobile tire prices was put into effect Oct. 16 by the Goodyear Tire & Rubber Co. Price of casings, with the exception of certain small size types, was raised 15 per cent, and inner tubes and solid truck tires, 20 per cent. The smaller size tires are 5 to 10 per cent higher.

Other major manufacturers, including Firestone, Goodrich, Fisk, United States and Miller, met the Goodyear advance.

Although it was generally realized in the industry that a tire price increase was inevitable before the first of the year, most observers believed it would not occur until Nov. 1 or later. Demand for tires is generally less at this time of year than in any other period, and manufacturers were trying to avoid such action, fearing it would disturb the market.

Sales of tires have held up better than was expected, however, with a consequent larger consumption of rubber. The demands of manufacturers have prevented the dwindling supply of crude rubber from being replenished, and the shortage has grown more apparent.

NEW AUBURN DEALERS

AUBURN, Ind., Oct. 17.—New dealers who have recently been added to the Auburn organization are listed below:

Breeck Sales Co., Anderson, Ind., Gerwin Garage, Fremont, O.; Charles W. Myers, Peru, Ind; Middletown Auburn Co., Middletown, Conn.; Duckworth Garage, Shelton, Conn.; Ed. Reinking, Lakewood, O.; Ridenour Auto Sales, Richmond, Ind.; L. O. Geisler, Gloversville, N. Y.; F. H. Kenney, Worcester, Mass.; Kellogg & Widdifield, Columbia City, Ind.; Auburn Newark Motor Co., Newark, N. J.

Fall Used Car Show Proves Great Success in Chicago

Dealers Receive Higher Prices for Their Products Than in Spring Exhibits

CHICAGO, Oct. 19.—The experiment of holding a used car show in the fall instead of the spring was entirely successful, according to officials of the Chicago Automobile Trade Association at the close of the nine-day exhibit which ended here last night.

More than 50,000 persons attended the display, preliminary estimates show, and about 225 cars were sold off the floor, bringing an aggregate sum of approximately $225,000, or an average of between $900 and $1000 per car.

In the spring shows, the average price was about $800. Holding the show in the fall gave the exhibiting dealers the advantage of clearing their floors of the higher-priced models before the winter season dulls the used car market.

In reality, the show succeeded beyond the expectations of the exhibitors. They had reached the conclusion that it would be better to take a slightly less figure for their used cars than to carry them over to the spring. Instead of being forced to take lower prices, the cars brought more money than they had in the spring shows, thus giving the dealer more money for his product, and obviating the storage and depreciation losses which would have been necessary, had he held them over until spring.

Nearly every car which was unable to make the green tag of approval by the association committee, and which was then placed on the auction block, was sold. Prices for these cars were low, but the exhibitors again were saved the cost of holding them through the dull season.

OIL JACK PICKS SWEET

CHICAGO, Oct. 17.—The Oil Jack Co., Inc., New York City, announces the appointment of Fred D. Sweet as manager of the middle western territory with headquarters in the Wrigley Building, Chicago. Mr. Sweet formerly was connected with the U. S. Rubber Company, Chicago, in charge of automotive equipment sales and also was sales supervisor for the Biflex Products Corp. He has had broad experience in merchandising automotive equipment and a wide acquaintance in distributive channels for such products.

FORD SHIPS TO OREGON

PORTLAND, Ore., Oct. 17.—On her first trip up the Columbia River to this city the Onandaga, Henry Ford's ship, was loaded with "knocked down" Fords. This is the first water shipment to this city of Ford cars.

'ennsylvania A. A. Elects Hoeveler Its New President

'hree-day Convention Is Featured by Addresses of Motor Authorities

Pittsburgh, Oct. 17.—In spite of the ounter attraction of the World's Series indup which transformed Pittsburgh nto a temporary madhouse, 300 dele- ates to the fifth annual convention of ne Pennsylvania Automotive Association eld in the Smoky City Oct. 12-14 list- ned to a three-days program replete ith constructive addresses and launched progressive program for another big ear in the organization's history.

George A. Hoeveler, Stutz-Chandler- leveland distributor in Pittsburgh, was amed president for the ensuing year ithout opposition, and Philadelphia was hosen as the convention city for 1926.

High spots in the three day meeting ere the addresses by F. E. Moskovics, resident of the Stutz Motor Car Co. of merica, Inc., C. C. Hanch, general man- ger of the National Association of Fi- ance Companies, Arthur Mogge, mer- handising director of the Automotive Equipment Association, and the sales ongress staged by the National Automo- ile Dealers' Association.

Mr. Moskovics, who spoke both at the anquet held Tuesday evening and at the ast morning's session, inspired the deal- rs with his predictions of great things hat are ahead for the industry and for hose dealers who can vision the future nd build their organizations to fit into he expanding needs of individual trans- portation.

Other officers elected at the convention were:

Vice presidents, George McFarland, Harrisburg, George Gray, Wilkes Barre, John Leppert, Johnstown, E. T. Satchell, Allentown; secretary, Charles Schwab, Allentown; treasurer, Roy Shreiner, Harrisburg; directors, Floyd Bortree, Scranton, Roy McIntyre, Butler, E. R. Williams, Clearfield, Jo. G. Roberts, Phil- adelphia, W. U. Massina, Williamsport, and D. W. Ranck, Lancaster.

The Pennsylvania association is now he strongest state association in the industry, with 794 paid in advance mem- bers. It has showed a steady, healthy growth each year, and its treasury is in excellent shape.

The membership is made up of 545 mo- tor car dealers, 75 motor car distributors, 56 accessory dealers, 26 garage and serv- ice station owners, 14 associate mem- bers, 13 battery shops, 6 jobbers and 2 motor marts.

Several cities in the state have 100 per cent motor car dealer memberships.

NEW MARTIN-PARRY PLANT

JACKSON, Miss., Oct. 17.—Location of the southern plant of the Martin-Parry Corporation in Jackson was announced recently by J. A. Callahan, general man- ager, and Henry Kawn, manager of the local plant. Construction is to start at once, and the officials expect to have the plant in operation by the middle of the winter. The Martin-Parry corporation is one of the largest builders of auto truck bodies in the United States. The initial plant of the corporation will cover 150,000 square feet and employ 400 or more workmen.

Keep Your Shop Doors Open

MILWAUKEE, Oct. 17.—Milwaukee's first victim of carbon monoxide poisoning this season was Martin Johnson, 25, member of the firm of Johnson Tire & Radiator Co., South Bay and Allis streets. Johnson was found in his garage, lying beside his automobile, the motor of which was running. The door of the garage was closed.

Chevrolet Sponsors Bus Body for 1-Ton Chassis

Detroit, Oct. 17.—Production of a bus on the regular one-ton Chevrolet truck chassis is being sponsored by the Chevrolet Motor Car Company and the Detroit retail store of the company. The bus sells for around $1,200.

According to A. H. Goodman, manager of the Detroit retail store of the Company, the bus which will seat 28 persons, uses bodies manufactured either by the Martin-Parry Corporation or by Wayne. It is planned to sell the buses to schools in rural districts and also bus lines serving as feeders to electric railways.

The annual production is estimated to be around 20,000 with the daily output being evenly divided. Thirty by five tires are used throughout with other specifications being the same as the regular Chevrolet one-ton truck.

UNIFORM TRAFFIC PLANNED

GRAND RAPIDS, Mich., Oct. 17.—Adoption of a uniform traffic ordinance for the entire state of Michigan will take place here October 22 when representatives from various communities throughout the state will gather for that purpose. Col. A. T. Barber, director of the National Conference of Street and Highway Safety, also known as the Hoover Conference, will be among those present. The recommendations made by the Hoover Conference last winter at Washington, D. C., were largely used as a basis upon which to formulate the new ordinance.

SPARTON PARTY NOV. 7

JACKSON, Mich., Oct. 17.—The Fifth Annual Sparton Party given by The Sparks-Withington Co. will be held here November 7. On that day guests of The Sparks-Withington Co. will be taken for a brief trip through the Sparton factory and immediately afterward they will be taken in special buses to Lansing to attend a football game between Michigan State College and Toledo

Ford Reaches Production Of 8,135 Cars Per Day

Two Records Broken by Company in Attaining Such Output in 60 Days

DETROIT, Oct. 17.—The Ford Motor Company reached a domestic daily production of 8,135 passenger cars and trucks Friday, October 16, and established two new records for the automotive industry. One was that the number of cars turned out was the largest in its history and second that no other company has been able to turn out new models and establish new output records for the entire industry inside of two months.

Before the end of the month, the company hopes to establish a daily output of 8,500 passenger cars and trucks. This does not include the output of the foreign plants and Australia. The foreign plants are turning out the improved models at the rate of 350 a day. By the end of the present month, it is possible that Ford branches throughout the world will be turning out more than 9,000 cars each day.

During the past few weeks, the company has been shipping through its branches to dealers upwards of 7,000 cars and trucks a day, this number increasing daily until the record production was reached last Friday. Production for this month, it was said by executives of the company will be approximately 200,000 and may help to establish a new high record for the industry.

While figures regarding the exact number of orders were not available, it is known that the high daily output was made necessary because of the tremendous number of orders that have flooded the company offices since the improved models were announced.

KEATON TOURS COAST

SAN FRANCISCO, Oct. 17.—R. H. Keaton, president of the Keaton Tire and Rubber Company, which recently established its factory in San Francisco, is making a tour of the Pacific Northwest, in company with C. C. Jack, manager of the Seattle and Portland branches, who recently was promoted as a reward for his work as manager of the Portland branch.

SERVICE SCHOOL HELD

PORTLAND, Ore., Oct. 17.—About 75 fleet service mechanics and Dodge service station men have just completed a two-day course on repair and service work at a school held at the plant of Braley & Graham, local dealers. Robert Word, representing the Dodge factory, and Tim Baldwin, of Graham brothers, went into the details of this work on Dodge cars and Graham brothers' trucks. C. A. Lennon, district representative of the factory, and H. M. Russell, field representative, were here for the school.

McFarlan Produces Eight Series in Eleven Models

Prices and Body Types Same as SV Line Except for Addition of Town Car

CONNERSVILLE, Ind., Oct. 17.—McFarlan Motors Corp. is now producing a stright eight model which is offered in eleven body models ranging in price from $2,650 to $4,600. The chassis has a 131 in. wheelbase and the engine is a Lycoming H with a bore of 3-3-16 in. and a stroke of 4 1-2 in. The body types making up the new line are identical in prices and equipment with those sold on the single valve, six-cylinder McFarlan chassis except that a town car at $4,600 has been added.

The fuel system on the new eight includes a vacuum tank which feeds from the 18 gal. capacity main tank to a 1 1-2 in. Schebler carbureter with vertical outlet. The starting, lighting and ignition units are of Delco make and the storage battery has a rating of 120 amp. hr.

The clutch is a Borg & Back and together with the Warner transmission, is assembled with the engine in a unit power plant. Universals are of the metallic type made by the Universal Machine Co. and the axles are Timkens. The rear axle is a semi-floating unit with a final reduction of 5.1 to 1 and, as in the six-cylinder models, its torque is taken by an arm. Chassis lubrication also is similar to that used on the sixes, all important bearings being lubricated by oil-cups with wick feed. Springs are semi-elliptic, those in the rear being 58½ in long. The stearing gear is a Ross.

The braking system consists of four-wheel, hydraulic service brakes with the emergency on the transmission, and is identical with that used on the single valve model. Balloon tires, 32x6.20 in., mounted on natural finish artillery wheels are standard. All body models have front bumpers, snubbers, automatic windshield wipers, sun-visors, cowl ventilators, rear vision mirrors, heat indicators, rear traffic signal, clock and ignition and transmission locks.

Following is a list of models furnished on the eight-cylinder chassis:

2-pass. roadster	$2,650
4-pass. roadster	2,900
5-pass. touring	2,650
7-pass. touring	2,750
5-pass. sedan	3,180
4-pass. coupe	3,180
5-pass. coach brougham	3,180
7-pass sedan	3,280
5-pass. suburban sedan	3,380
7-pass. suburban sedan	3,480
Town car	4,600

Several changes also have been made in the two six-cylinder chassis. The SV models now have Delco electrical equipment and a larger battery which is interchangeable with that used on the new eight. The rear axle reduction on this chassis has been reduced from 4.90 to 1 to 4.27 to 1 and its exhaust pipe diameter has been increased to 2¼ in. The capacity of the fuel tank has been decreased to 18 gal. and is interchangeable with the tank on the eight. On the TV chassis, a Borg & Beck clutch has replaced the former multiple disk unit, De-Jon electrical equipment has been adopted and the battery capacity has been increased.

Wills Ste. Claire Names Moorman Vice President

MARYSVILLE, Mich., Oct. 17.—At a meeting of the board of directors of Wills Sainte Claire, Inc., A. H. Moorman was elected to the office of the vice-president in charge, according to an announcement by C. Harold Wills, president of the company.

Mr. Moorman has been with Wills Sainte Claire, Inc., since 1923 in the capacity of treasurer and controller and prior to this he was associated with the Security Trust Company of Detroit.

In a statement made by Mr. Moorman, the company is in a very strong financial position with a large cash reserve and unfilled orders on hand in such quantities as to insure an unusually large production during the fall and winter months.

ELEVATED AIDS PARKING

PHILADELPHIA, Oct. 17.—An unusual expedient to relieve city traffic congestion has been taken by the Philadelphia Rapid Transit Co. in establishing parking areas at convenient points on its lines. Parking tickets are issued at 25 cents, which includes round trip fare on the lines of the company, reducing the parking charge to 10 cents. The two areas are at points convenient to motorists from outlying communities, who will be enabled to leave their cars all day and continue their trips to the central part of the city by elevated train. In the downtown section of Philadelphia congestion is so bad that parking is virtually impossible and the movement of motor vehicles and street cars are seriously impeded.

Auburn Plans Note Issue to Allow 4-Cylinder Line

Stockholders to Meet for Decision on Increase of Capitalization Nov. 14

AUBURN, Ind., Oct. 17.—At a meeting of directors of Auburn Automobile Company it was decided to call a meeting of the stockholders for Nov. 14, to vote on proposal to authorize increase of capital stock of the company from 60,000 to 120,000 shares.

It was also decided that the selling organization was not broad enough and could be materially strengthened by the addition of a four-cylinder car to the company's present line of sixes and eights and in order to provide additional working capital for this program it was decided to ask the stockholders to ratify the directors' action in the issuance and sale of a short term note issue.

Net earnings for the third quarter of 1925 after deduction for taxes and depreciation were $305,949.94, equal to $5.10 per share on the 60,000 shares outstanding.

For the nine months of this year earnings have amounted to $10.92 per share. September 30, the total current assets amounted to $1,993,639 against total current liabilities of $533,718, leaving a working capital of $1,459,921.

DENVER PLANS SHOW

DENVER, Colo., Oct. 17.—Secretary Tom Braden, of the Denver Automobile Dealers' Association has announced the appointment of Myron L. Smith, president of the Sherman Auto Company of this city, as chairman of the committee to have charge of the annual automobile show. February 2 to 6 inclusive have been chosen as the dates, and the show will be held as usual in the Municipal Auditorium.

25 Years Ago In the Automobile Industry
As Recorded In MOTOR AGE

(From MOTOR AGE of Oct. 25, 1900)

Tagged in Philadelphia

Every self-propelled vehicle in Philadelphia is now tagged, the carrying of the number being compulsory in the park. The majority of the vehicles, however, are decorated with their numbers at all times, the tag being comparatively small, and interfering little, if at all, with their appearance.

Progress in Buenos Aires

Mail advices from Buenos Aires state that the use of electric and oil power motor cars in the Argentine capital is developing rapidly. Not only heavy delivery wagons, but also luxurious carriages driven by oil and electricity are frequently to be met with on the streets of that city.

The Industry in Italy

The motor car industry in Italy is still in its infancy. The concerns of importance have started works in Milan viz.: Prinetti Stucchi, having a very large plant in connection with their carriage and bicycle works, and C. Bianchi. There is also one automobile establishment in Rome, but it is of recent creation and has not reached any importance. A certain number of automobiles of foreign make have been introduced into Italy and have met with public favor, which should be encouraging for the future development of that industry in Italy.

Automobile Makers Planning to Operate Their Own Ships

May Buy Vessels From Shipping Board to Cut European Transport Costs

WASHINGTON, Oct. 17.—Negotiations looking to the purchase of a fleet of fifteen or twenty Government ships for use in exporting automobiles from Detroit to European and other foreign ports have been initiated here by representatives of four important Detroit automobile concerns, it is admitted at the shipping board. Hudson, Dodge, Chrysler and Hupp are understood to be the interests behind the plan.

While the shipping board describes the deal as only "in the making," it is learned the automotive men involved have already gone so far as to consult the Department of Commerce as to trade routes and foreign markets. It is further understood that the advice of J. Walter Drake, assistant secretary of commerce and a Detroit automobile man has been sought.

Consummation of the plans would involve upward of $1,000,000 in outlay for government tonnage. The vessels under consderation are the 4,200-dead-weight-ton, lake type, oil-burning steamers. The shipping board price for this type of vessel when sold for operation is about $50,000 each.

The tentative plan of the automobile companies is to put into service a fleet of steamers to carry automobiles and accessories direct from Detroit to foreign ports. The route of the ships would be through the Great Lakes to Montreal and then to European ports, southward to South America, or through the Panama Canal to the Far East.

NEW PARTS FACTORY

CHICAGO, Oct. 17.—The Imperial Molded Products Corp. has been formed in Chicago with a factory at 2925 W. Harrison Street, controlled and financed by the Imperial Brass Manufacturing Co. The new company will begin immediately the production of molded Bakelite parts by high pressure steam. Among the products which will be turned out will be parts for the automotive, electrical, building, musical instrument, radio, plumbing, phonograph and many other industries. Officers are Paul Tietz, president; James T. Greenlee, secretary; and Frank McNellis, treasurer.

ATLANTA HOLDS SHOW

ATLANTA, Oct. 17.—The annual fall automobile show in Atlanta was held the ten days of the Southeastern Fair, Oct. 8 to 17 inclusive, with nearly all the members of the Atlanta Automobile Association taking part, making the show the largest held here in recent years, equally as large as the regular spring show held annually during the five years prior to 1925. There was no spring show in Atlanta this year. The show was held in the Automobile Building on the Southeastern Fair grounds, and attracted thousands of visitors, the various new models shown attracting the primary interest.

HEATER PRODUCTION UNHURT

MONROE, Mich., Oct. 17.—Production in the heater division of the Monroe Auto Equipment Manufacturing Company, part of whose plant was completely gutted by fire early last Saturday, has not been affected, C. S. McIntyre, president of the company, said today. The fire destroyed the pump plant of the company, making it necessary for the company to re-build. Plans have been made by President McIntyre which call for a larger plant and one which will be able to exceed the output of the plant burned down.

HYDRAULIC BRAKE MOVES

DETROIT, Oct. 17.—The Hydraulic Brake Co., announces the removal of its general offices and experimental division in Detroit, from 5833 Russell street, at Medbury, to 2843 Grand boulevard, East, at Oakland.

DEALERS GREET PHILLIPS

SAN FRANCISCO, Oct. 17.—Direct dealers in the Dodge car in this section of the Pacific Coast, to the number of 25, were hosts at a luncheon to Ned B. Phillips, newly appointed Dodge Brothers district representative for the San Francisco territory. Phillips returns to California after an absence of about two years, directly from the Detroit office. He formerly was connected with the district office in San Francisco.

Clymer Forms New Company to Make Patent Air Gage

Inventor of Windshield Spotlight to Put Latest Product on National Market

DENVER, Colo., Oct. 17.—Floyd Clymer, well known Denver inventor and driver, is the head of the newly organized Clymer Motors Products Company, 1526 Lincoln street, where it manufactures and distributes the recently patented Clymer Automatic Air Gage.

This is a device to be attached between the tire valve and the air hose, in such a manner that the air must pass through it before entering the tire. The user adjusts a thumb screw indicator to the amount of pressure desired in the tire, pushes the gage onto the valve stem, and applies the hose. When the proper pressure is attained, the gage automatically shuts off the flow of air, and a whistle blows to notify the user. There can be no danger of over-inflation for the hose might be left attached for hours without additional air getting into the tire, and the whistle would continue to sound till the hose was disconnected. This gage eliminates the numerouss readings required by other types.

Clymer is the inventor of the Clymer Windshield Spotlight, which scored an immediate success upon its appearance some five years ago. The new company has started on intensive sales campaign, and is already shipping to eastern points, and rapidly arranging for national distribution.

Grey Goose Traveler Latest in Wills Sainte Claire Line



Side view of the Grey Goose Traveler added to the Wills Sainte Claire line

MARYSVILLE, Mich., Oct. 17.—Wills Sainte Claire, Inc., has added cabriolet roadster and Grey Goose Traveler models, listing at $3,785 and $3,300 respectively to its eight-cylinder, de luxe line. In addition, list prices on standard roadster and the Grey Goose Traveler models of the six-cylinder line have been increased $315 to $2,800 and the eight-cylinder de luxe roadster has been increased from $3,185 to $3,300.

The three models affected by the price increases now are furnished with front and rear bumpers, and spare tire in addition to the equipment formerly carried by them.

Cabriolet roadster and Grey Goose Traveler models have been eliminated from the standard eight-cylinder line.

Besides the equipment supplied on the cabriolet roadster and Grey Goose Traveler when these models were included in the eight-cylinder standard line, the former now has sun visor and door lock and the latter front and rear bumpers and sun visor.

Industry Given But 1 Hour to Make Tax Repeal Plea

House Committee to Hear Representatives of Many National Bodies Oct. 24

WASHINGTON, Oct. 17.—The brief space of one hour will be allotted representatives of the National Automobile Chamber of Commerce and the American Automobile Association on the afternoon of Saturday, October 24, to convince the House Ways and Means Committee that war excise tax on automobiles, accessories and parts should be repealed. Each of the two organizations will be given half an hour.

While it is admitted this is a ridiculously short period to present arguments involving an assessment on the industry of approximately $141,000,000, members of the House committee point out that so many interests are to be heard it is necessary to severely limit the time each is to consume.

It is expected that all of the automotive leaders representing every branch of the industry who met here several weeks ago in anticipation of the tax hearings will be present on October 24 and ready to testify. While H. H. Rice and Pyke Johnson, chairman and secretary respectively of the taxation committee of the N. A. C. C. are in South America, assurances are given that the other members of the taxation committee will be in attendance.

Following are the names of those expected to represent the automotive industry's abbreviated session before the committee:

George M. Graham, director, N. A. C. C.; Ernest N. Smith, general manager, the American Automobile Association; S. M. Jett, Rubber Asssociation of America, Inc.; Walter B. Guy, National Automobile Dealers' Association; C. E. Quinn, Automobile Body Builders' Association; M. L. Heminway, Motor and Accessory Manufacturers' Association; W. W. Cloud, National Association of Taxicab Owners; B. W. Ruark, Automotive Equipment Association and Automotive Manufacturers' Association; David S. Ludlum, C. C. Hanch and F. J. Haynes. The last three named are members of the taxation committee of the National Automobile Chamber of Commerce.

MORRIS ENTERS CANADA

TORONTO, Oct. 17.—The Morris Crowley and Morris Oxford English motor cars recently displayed at the Canadian National Exhibition are now on the Canadian market. Sales offices have been opened at 1262 Yonge Street, Toronto, under the direction of J. W. Pickavant, sole Canadian distributor.

PYROXYLIN GAIN LARGE

WASHINGTON, Oct. 17.—A gain of 125.9 per cent in the production of pyroxylin varnishes or lacquers was registered in the first six months of 1925 as compared with the last half of 1924, the Department of Commerce announces in publishing the results of its semi-annual survey of the paint and varnish industry. Other comparisons for the same periods show a gain of 3.1 per cent for paste paints; 31.5 per cent for ready-mixed and semi-paste paints, and 13.6 per cent for varnishes, japans and lacquers, other than pyroxylin. The increase noted for pyroxylin products was apparently the result of the greater use of these finishes in the automotive industry. The statistics are based upon returns from 502 establishments, of which 67 produce pyroxylin varnishes or lacquers.

BIFLEX HOLDS SESSION

WAUKEGAN, Ill., Oct. 17.—The fifth annual sales convention of the Biflex Corp., manufacturers of Biflex Spring Bumpers, was held recently at the general offices of the company here. Additional members of the sales force, who have been added during the last year, made the convention the largest ever held by the company. F. B. Caswell, vice-president and director of sales for the Champion Spark Plug Co., was the principal speaker at the banquet which closed the convention.

W. D. Patterson Resigns In Corporation Reorganization

OAKLAND, Cal., Oct. 17.—W. D. Patterson, originator and organizer of Patterson Parts, Inc., has resigned. The Fresno branch has been closed and the Portland branch sold in a complete reorganization of the corporation, in the course of which Mr. Patterson lost control.

J. B. McKay, sales manager, also is out of the corporation, and William Tenant, former comptroller and leader of the stockholder opposition to Patterson, is directing the operation of the company.

Three reasons are assigned for the reorganization of Patterson Parts which had branches in every large city on the Pacific Coast. First, that sales volume of about $525,000 a year was too limited for the number of branches; second, that the overhead was too great for the gross margin; and third, that there was no reserve capital, the concern having expended on the net earnings.

Mr. Patterson established the corporation in Oakland about 15 years ago and is now in the east endeavoring to connect with lines to represent on the Pacific Coast.

CARPENTER GOES TO EUROPE

NEW YORK, Oct. 17.—R. E. Carpenter, vice-president of the Spicer Manufacturing Corporation of South Plainfield, N. J., has sailed for a six weeks' business trip to England and the Continent. Mr. Carpenter will be present at the Olympic Auto Show in London and will later spend several weeks in travel on matters pertaining to the corporation's foreign sales.

MOVES CANADIAN OFFICE

MONTREAL, Oct. 17.—The sales department of the Black & Decker Manufacturing Co., Ltd., now located at Montreal, will shortly be moved to Toronto. The factory will remain at Montreal. The Canadian manager of the company, A. J. Hopkins, has tendered his resignation and leaves for the South.

G. M. Sales to Consumers Gain 35,047 Over 1924

Total Dealer Volume Is 83,612 Cars for September—Trucks Set Record

DETROIT, Oct. 17.—The sale of General Motors cars by dealers to users in September totaled 83,612 passenger cars and trucks, a gain of 35,047 over September, 1924. The number sold in September, 1924, was 48,565.

The sales of cars and trucks by the various manufacturing divisions of the corporation to dealers throughout the country for September totaled 88,379, which is the largest sale in any month in the history of the corporation.

The sales by dealers to the ultimate consumer is the second largest since April, May being the other month to exceed it.

	Dealers Sales to Users 1924	Divisions Sales to Dealers 1925
January	25,593	30,642
February	39,579	49,146
March	70,594	75,527
April	97,242	85,583
May	87,488	77,223
June	75,864	71,088
July	65,872	57,358
August	78,638	76,462
September	*83,612	*88,379

**These preliminary figures include passenger car and truck sales in the United States, Canada and overseas by the Chevrolet, Oldsmobile, Oakland, Buick and Cadillac manufacturing divisions of the General Motors.*

Bert Dingley Is Selected Service Manager of Stutz

INDIANAPOLIS, Oct. 17.—Fredrick E. Moskovics, president of the Stutz Motor Car Company of America, has announced the appointment of Bert Dingley as service manager for the Stutz organization. Mr. Dingley was internationally known as a racing driver from 1904 to 1914, when he held championships in Europe and America, and he was one of the leading drivers in the old days of the Gordon-Bennett and Vanderbilt races. In commenting on the appointment Mr. Moskovics said:

"It was considerably over twenty years ago when Bert Dingley started giving service on automobiles and his entrance into the ranks of racing drivers came only after he knew intimately every part of a car from taking care of it. His success in racing was largely due to this intimate knowledge of a car's construction and operation.

"He has sold automobiles and has a practical knowledge of dealers' problems, but above all, he is an authority on motoring service.

"Mr. Dingley's experience in building racing cars from the days of the old Pope-Toledo, Chalmers, Simplex and Thomas-Detroit, was supplemented by production experience during the war in the Bureau of Aircraft during the production of the famous Liberty engines. He has had charge of inspection work on body and chassis building, painting and testing in some of the leading automobile plants in the country."

Rating Committee of Motor Truck Industries Will Meet

Study Will Be Made of Reports From Members in Standardization Plans

BUFFALO, N. Y., Oct. 17.—J. R. Spraker, general manager of the Atterbury Motor Car Company and chairman of the rating committee of Motor Truck Industries, Inc., states that he will call a meeting of the rating committee for one day during the last week of October, probably to be held in Detroit, to study the reports made by the various members on the blue-print questionnaire which Mr. Spraker recently sent to members of the committee.

This questionnaire contains blank for filling in size data on 22 different points involving the standardization in each one of the four classes of trucks under study of the seat, frame, steering gear, dash openings, tires, front spring and rear spring.

It is expected that this meeting will serve to produce out of the mass of suggestions and recommendations, material for a practical codification of standards which can be submitted at the Washington meeting of the organization during the week of November 8.

NEW HUPP DEALERS

DETROIT, Oct. 17.—New dealers appointed by the Hupp Motor Car Corp. include:

Portage Garage, Portage la Prairie, Manitoba; Motors Limited, Brandon, Manitoba; W. W. Robertson, Jr., North Tonawanda, N. Y.; Jerwin Motor Co., Lima, O.; R. L. Kohn, Leipsic, O.; A. I. Mathews, Ortonville, Minn.; Minot Motor Co., Minot, N. D.; Williams Bros., Riverside, Cal.; Streeter Motor Co., Great Falls, Mont.; Beauchamp M. Garage, Penstang, Ont.; Geo. H. Ferguson, Collingwood, Ont.; C. L. Robins, Niagara Falls, Ont.; Motor Sales & Service Co., East Ely, Nev.; Bayers Auto Sales, Inc., Long Island City, N. Y.; E. L. Carpenter, Tekonsha, Mich.; C. E. Minnick, Rexford, Kan.; Bingham Motor Co., Troy, O.; E. R. Jackson & Co., Osceola, Ark.; Carroll Motor Sales, Pt. Huron, Mich.; Morrison Motor Sales, Wyandotte, Mich.; A. M. Powell, New London, Conn.; Raulerson & Boon, Okeechobee City, Fla.; Shenandoah Motor Co., Winchester, Va.; Carroll Sanders, Gillett, Ark.; Phil Smith, Cumberland, Md.; Alva E. Hatch Auto Agency, Chico & Oroville, Cal.; T. H. Tupman, Pasadena, Cal.; Carbondale Welding Co., Carbondale, Pa.; Horn & Boyd, Bicknell, Ind.; S. W. Jones, Priest River, Idaho; A. A. Monnett, Walla Walla, Wash.; Miesner's Garage, Cape Girardeau, Mo.; E. H. Robinson Auto Sales, Chicago; Crawford-North Motor Sales, Chicago; H. F. Butterfield & Son, Ottawa, Ill.; O. F. Bielke, New Auburn, Minn.; Robert F. Wells, Inc., Stony Brook, N. Y.; Kruger Motor Car Co., Inc., Rosebank, S. I., N. Y.; Banks Motor Corp., Ardmore, Okla.; F. J. McHugh, Stamford, Conn.

SHOW DATES ANNOUNCED

LOUISVILLE, Oct. 10.—February 15-20 has been announced as the dates of the Louisville Automobile Show. The eighteenth annual exhibition will be staged under the auspices of the Louisville Automobile Dealers' Association.

Voisin "Equips" Cars With Paint Kit

PARIS, Oct. 3.—(By Mail).—To encourage clients to maintain their paint work in good condition, the Voisin Company of Paris furnishes a pot of pyroxylin paint and a small sprayer with every car sold. The sprayer is no bigger than a fountain pen and the pressure is obtained by blowing through a tube. This enables any damaged parts to be touched up almost instantly with perfect results. Voisin is the first French manufacturer to adopt pyroxylin painting for the whole of his output. Practically all his bodies are fabric leather construction, and the painting is thus limited to the hood, fenders and running gear, which usually are in black. In certain cases Voisin is using pyroxylin paint on fabric leathers. This is particularly advantageous in the case of repair work, for when a fabric panel is changed it need not be the same color as the original. The grain of the leather shows up perfectly under the paint.

French Racing Board Plans To Make Competition Safer

PARIS, Oct. 3.—(By Mail).—Alarmed by the long list of fatal accidents which have marked the past racing season, the Racing Board of the Automobile Club of France is studying ways and means to make competitions safer. Their suggestions will be brought before the International Racing Board, at its general meeting to be held in Paris on October 28, with a view to international adoption.

Among the proposed changes is that an elimination race or races shall be held for the French Grand Prix, and that the final shall be reduced to about 250 miles. No accident, however, has ever happened in Europe owing to the high number of competitors on the track or road.

The average number of starters in the leading events during the last five years is 15, on tracks or road circuits having an average length of 15 miles. Experience has shown that races of more than 500 miles unnecessarily fatigue the driver and weary the public.

COLUMBUS SALES GAIN

COLUMBUS, O., Oct. 17.—Sales of new automobiles in Franklin County in September totaled 1,131, which was an increase of 184 over September of 1924 when 947 new cars were sold. This is the gist of a report made by County Clerk Harold Gockenbach, who is charged with the duty of filing duplicate bills of sale on all motor car sales. New models, improvements and price cuts, many of them dating from August 1 are given as the causes for the increased sales.

Many Changes Recorded in Trade Personnel of Boston

Apperson Discontinues Branch in New England City—Studebaker Promotes Two

BOSTON, Oct. 17.—Changes continue to take place in the motor trade in this city the latest being the discontinuance of the Boston branch by the Apperson Motor Company, of Kokomo, Ind. Charles A. Perry, who has been manager, has started on a month's vacation.

Joseph S. Donovan, owner of the Donovan Motor Car Company, Studebaker distributor for Boston, has made Henry J. Kelley, his sales manager, vice-president of the company, and W. E. Dermody, general manager. Mr. Kelley has been with Mr. Donovan 12 years, entering the motor industry with this company and for the last six years has been sales manager. Mr. Dermody had been a branch manager for Goodyear Tire & Rubber Company at Boston and other places, and was later with the Boston Autocar Company, and recently had a Ford agency here. He takes the position left vacant by the death of Mr. Benson.

John J. Mahoney, formerly part owner of John & Arthur, has joined the Malton Specialty Company, 173 Massachusetts avenue, where he is managing its sales.

The Stewart Truck Corporation, of Buffalo, N. Y., has opened its own sales branch for the Boston territory at 195 Massachusetts avenue, Cambridge.

Arthur J. Dorley has joined the Utterback-Gleason Company, Kissel distributors, and also sub-dealers for the Hudson-Essex, as used car manager; he had been with the Willys-Overland forces until he assumed his new position.

NEW LOCOMOBILE DEALERS

BRIDGEPORT, Conn., Oct. 17.—The Locomobile Company of America, Inc., announces the appointment of the following companies as dealers to handle the new Junior Eight car, deliveries of which are now being made by the factory at the rate of 25 daily:

Leo G. Lob, New Orleans; Lewis S. Heinen, Milton, Pa.; Locomobile Company of America, Inc., and Locomobile Company of West Carolina, Charlotte, N. C.; Darden Motor Company, Richmond, Va.; Stearns Akron Company, Akron, Ohio; Orange Locomobile Company, East Orange, N. J.; MacDonald Auto Company, Salem, Ore.. O. T. McCoon and C. C. Dunbar, Yuma, Ariz.; Locomobile Company of Waltham, Waltham, Mass.; Kendall Auto Company, Pasadena, Cal.; Cornwall Motor Company, Elgin, Ill.; Locomobile Company of Trenton, Trenton, N. J.; Montclair Locomobile Company, Montclair, N. J.; C. A. Owens, Marion, Ohio; Arney Motor Company, Alliance, Ohio; Wisconsin Locomobile Sales, York, York, Pa.; Gilbert Katz, Long Branch, N. J.; California Motor Company, California, Pa.; Latrobe Locomobile Company, Latrobe, Pa.; Locomobile McKeesport Company, McKeesport, Pa.; Superior Garage Co., Perth Amboy, N. J.; Roberts Motors, Long Beach, Cal.; James Schlemmer, Canton, Ohio; Connecticut Locomobile Company, New Haven, Conn.; Jackson Diggs, Sacramento, Cal.; Jackson Diggs, Marysville, Cal.; Locomobile Company of Oakland, Oakland, Cal.

Safety Lessons in Schools Help Reduce Car Mishaps

Five Per Cent Less Fatalities This Year Expected by Committee

NEW YORK, Oct. 17.—That the number of fatal accidents throughout the United States this year may be less than last year and that a nation-wide 5 per cent reduction in child traffic fatalities is being accomplished by safety and traffic instruction in public schools, was declared by John C. Long, secretary of traffic planning and safety committee, in making public results of this committee's survey among 1,800 city and rural schools.

The total August fatalities as reported by city health departments was 390 or five-tenths of 1 per cent under August, 1924, and five-tenths of 1 per cent under July, 1925, but the total for the first eight months of this year is 6 per cent larger than for the same period last year.

The survey shows that 62 per cent of city schools reporting and 38 per cent of country schools are giving traffic and safety instructions, mostly in connection with courses in civics. The survey results are highly encouraging, according to George M. Graham, chairman of the committee, who says that whenever every school includes regularly in its curriculum teaching that helps the child to adjust itself to this new age, still further reduction of child fatalities will be realized.

The recent survey also shows that 50 per cent of the city schools and 48 per cent of country schools give safety and traffic instruction as a regular part of their curriculum.

FRANCIS GOES TO BOSTON

CINCINNATI, Oct. 17.—W. A. Francis, manager of the Ford Motor Company branch at Cincinnati for the last three years, has received orders to proceed to Boston to assume charge of the Ford plant in that city. He is to be succeeded here by W. D. McTaggart, who has held an executive position with Ford at the Philadelphia branch. Mr. Francis came to Cincinnati from New York and was formerly with Ford at the Detroit factory.

Delage Wins Europe's Last 122-inch Event of Season

PARIS, Sept 29.—(By Mail).—Albert Divo, driving a supercharged twelve-cylinder 122-inch Delage, won the San Sebastian Grand Prix 439.6 mile road-race, Sunday, at an average speed of 76.6 miles an hour. Robert Benoist finished second, also on a Delage, 10 min. 42 sec. behind the winner, and Rene Thomas, the captain of the Delage team was third, 11 min. 25 sec. in the rear of the leader.

This race, which is the last 122-inch event to be held in Europe, united 13 starters, comprising four Delages, six non-supercharged Bugattis, a Sunbeam, an Eldridge, and a Soriano. The King of Spain made a preliminary lap of the 11-mile course and gave the start of the race. The Delage cars lead throughout and appeared to be the fastest on the course, although Constantini, on a straight eight Bugatti, made the record lap in 7 min. 57 sec., compared with 8 min. 6 sec., the fastest lap by Divo. Constantini had to withdraw when he lost a rear wheel off his car.

In trying to pass Count Masetti's Sunbeam on a bend, Torchy, one of the Delage drivers, ran off the road, and was killed instantly. This driver was a new member of the Delage team, selected from the firm's test department.

NEW CLEVELAND DEALERS

CLEVELAND, O., Oct. 17.—New dealers added by the Cleveland Automobile Co. include:

Quality Service Garage, Bay City, Mich.; Pekerik's Garage, Lorain, O.; The L and W Motor Sales, Elyria, O.; Henry Berlitz, Hazleton, Pa.; Phinney Motor Company, Fond du Lac, Wis.; Goodfellow Garage, St. Louis, Mo.; Scranton Chandler-Cleveland Co., Scranton, Pa.; Motor Sales Co., S. Boston, Mass.; Spaceks Motor Sales, Cicero, Ill.; Atlas Sales and Garage, W. Philadelphia, Pa.; Keeling Auto Sales Co., Toledo, O.; H and L Motor Sales Co., Shenandoah, Pa.

Indiana Car Titles Show Gain of 75,334 in Year

INDIANAPOLIS, Oct. 17.—Registration of Indiana motor vehicles for the fiscal year ending September 30 shows that the state made a gain of 75,334 motor vehicles and that now there are 711,065 motor vehicles bearing Indiana license tags as against 635,731 for a year ago. The average gain for all sorts of vehicles was about 12 per cent, while trucks gained 14 per cent and buses jumped from 394, registered as in operation in the year ending September 30, 1924, to 3,281 now shown as registered up to the first of October.

This last comparison is not accurate as during part of 1924 there was no hard and fixed separation of buses from trucks and the 1924 bus figures were therefore in part estimates by the state. Trucks made by far the biggest gain from 81,882 in 1924 to 91,247 this year.

Passenger cars jumped from 551,123 a year ago to 615,731 for the current year. Motor vehicle license fees, including the certificate of title fees totalled $4,885,000.25, a gain of $533,373,62 in state revenue from this source with no increase in the general license fee rates.

PORTER JOINS FIRESTONE

QUINCY, Ill., Oct. 17.—J. Irvin Porter, for several years manager of the Jenks Motor Sales Company here, distributor of the Paige and Jewett lines, has resigned to become assistant general manager of the Firestone Tire Company of the St. Louis district. Mr. Porter was formerly a distributor of cars at Monmouth, Ill. His successor with the Jenks company is Enos Hoover, formerly with the Bowman Motor Company, and also the Quincy-Cadillac Company.

Nash Net Income for Three Months Totals $3,840,268

Amount Is More Than Double That for Period Year Ago. Dividend Declared

KENOSHA, Wis., Oct. 17.—At a meeting of the directors of the Nash Motors Company, President C. W. Nash reported that for the three months ending August 31, 1925, after deducting expenses of manufacturing (including depreciation) selling and administrative, and providing for local taxes, and state and federal income taxes, the net income amounted to $3,840,268.25, as compared with $1,205,766.09 for the same period a year ago.

A quarterly dividend on preferred stock of $1.75 was declared payable November 1 to stockholders of record October 20.

The value of sales for the above three months showed an increase of 124.7 per cent over the same period a year ago.

Commenting on the condition of the company and the business outlook, President Nash said:

"Our company has experienced a greatly oversold condition since July 1924. In order to place ourselves in a position whereby we might more nearly give our dealers the goods they require when they require them, we have built additions to our plant and have purchased a large quantity of new machinery so that output may be increased to conform with demand."

NEW DURANT ZONE

NEW YORK, Oct. 17.—Colin Campbell, vice-president, Durant Motors, Inc., announces the establishment of a new zone office for the sale of Star and Durant cars at 1312 Starks building, Louisville, Ky., in charge of C. J. Beeching, sales manager. N. B. Reisinger has been appointed sales manager of the Cincinnati zone, replacing B. A. Rupprecht, recently made regional sales manager of the southeast region.

MULCH TOURS WEST

FLINT, Oct. 17.—R. H. Mulch, vice-president and general manager of the Flint Motor Company, has left for a trip to the Pacific Coast. He will visit Los Angeles, Oakland, Seattle and Denver for the purpose of studying business conditions, and after his return from the West, will cover the eastern territory in the same fashion.

UTAH TITLES INCREASE

SALT LAKE CITY, Oct. 17.—Approximately 10,000 more motor vehicles were in Utah at the end of the first nine months of the present year than on the same date last year. The number of cars in the state on September 30 were 86,002 as compared with 76,066 on Sept 30 last year. The fees received during the first nine months of the year amounted to $536,197.93 compared with $478,734.67 for the same period last year.

French Engineer Advises One Model Built in Quantity

Believes European Makers Spend Too Much Time and Money on Varied Lines

PARIS, Oct. 3.—(By Mail).—An immediate sale of 500 cars per day is possible to any French automobile manufacturer who will concentrate on a single model designed and produced on economical lines, declares Engineer Salomon, chief engineering of the Citröen Company from its inauguration to within a few weeks ago.

"Immediately after the Armistice the French industry appeared to have realized the necessity of quantity production on economical lines and plans were laid with a view to working up to 500 cars per day from a single factory. These plans have not materialized and at the present time there is not a single automobile manufacturer concentrating on one model.

"The most popular type of car in France at the present time is a four-passenger with a four-cylinder engine having a European rating of 8 to 10 h.p. The biggest producers of this type are Citröen, Renault, and Peugeot; these three, together with various small makers are building about 350 cars of this type per day, while Ford, who is handicapped by an American type car not entirely suited to French conditions, is alone averaging 100 cars per day.

"If, instead of three big firms and a dozen small factories, there was one well-organized establishment concentrating on the 8-10 h.p. European type of car, cost could be cut to such an extent that production would immediately jump to 400 or 500 cars per day."

According to M. Salomon, who has made a close study of the possibilities of automobile expansion in France, there is an immediate market for 800,000 cars.

HANDY PLANTS MOVE

DETROIT, Oct. 17.—The Handy Governor Corp. and its subsidiary, the Handy Cleaner Corp., increased manufacturing facilities and have moved their main plant at 3925 West Fort Street, adding 12,000 feet of space to their present factory at 3021 Wabash avenue. The addition is necessary to care for increasing business in governor equipment, principally on Fordson tractors and increased production on Handy air cleaners, which have been adopted as standard by several of the important car manufacturers.

FORBES TO CLEVELAND

SALT LAKE CITY, Oct. 17.—H. S. Forbes, manager of the Salt Lake City, Utah, branch of the Kelly-Springfield has been appointed manager of the company's Cleveland, Ohio, branch. He is succeeded by W. P. Morton who has been a salesman for the company in southern California with headquarters in Los Angeles.

Department Store Sells Airplanes

NEW YORK, Oct. 17.—Airplanes as part of a department store stock have been introduced by the John Wanamaker store here. In 1909 the Wanamaker store sold planes, a replica of the plane in which Bleriot first crossed the English channel. The store now is exhibiting in its new airplane department on the ground floor, the J. W. I., first Ford of the air, manufactured by the Stout Metal Airplane Co. and just flown to Mitchell Field, L. I., by Leroy Manning. This is the first of a consignment of ten Ford planes to the Wanamaker store, to which was also delivered the first Ford automobile in the New York district. The planes retail for $25,000.

CHEVROLET PLAN EXPLAINED

ST. LOUIS, Oct. 17.—W. A. Blees of Detroit, Chevrolet official in charge of the company's relations with the General Motors Acceptance Corporation, General Motors financial agency, was in St. Louis to attend a meeting of St. Louis Chevrolet dealers and explain the new time payment plan for purchasing automobiles recently announced by General Motors Acceptance Corporation. All of the metropolitan Chevrolet dealers in the district attended the meeting which was held at the St. Louis Chevrolet plant.

MOVE AND SLICK UP

NEW ORLEANS, La., Oct. 17.—The fall season that opened October 1 in New Orleans saw many changes of address of automotive places and many improvements in buildings. The summer has been embraced by many distributors and jobbers as a time to "slick up" generally.

In the list below the new address is given as effective Oct. 1: Maloney Motor Car Co., distributors of Hudsons and Essex, 721 St. Charles Street, Goodrich Rubber Co., 208-210 South Peters Street, Adams Motor Co., distributors of Cleveland and Chandler, 620 Howard Avenue, United Motor Car Co., distributor of Peerless and Hupmobile, Go-Ro Building, Carrolton Avenue, United States Rubber Co., 201 South Front Street, Motor Sales & Service, Inc., Chrysler distributors, 1742 St. Charles Avenue.

TOLEDO EMPLOYMENT UP

TOLEDO, Oct. 17.—Employment in Toledo automotive plants is still increasing, showing a gain of 325 workers in 51 plants last week, to bring the total up to 27,361 as compared with 16,529 at this time last year. Payrolls are now approaching the maximum point reached in April and May.

Coast Business Volume Is Cause of Staff Expansion

Many Promotions and Additions to Forces Are Announced in San Francisco

OAKLAND, Cal., Oct. 17.—Steadily improving sales throughout July, August and September compelled manufacturers, distributors and dealers in Oakland to make a number of promotions and to increase materially their sales forces beginning early in October.

Heading the list of changes was the appointment of Del Harder as factory manager of the Durant Motor Company of California, succeeding George R. Scott, recently made assistant general manager in charge of production at the Flint Motor Company plant, Flint, Mich.

Another promotion announced at the same time is that of Miles Fox to be superintendent of the Oakland plant of the Durant organization. In the same announcement from Norman De Vaux, active head of the Durant organization here, came the statement that James P. Cory has been appointed as another Star dealer for Oakland. He will operate as the Cory-Star Company. Cory has been an executive of the Star branch in San Francisco.

C. E. Root, vice-president of the Forman Motor Company, Peerless and Oldsmobile distributors in Oakland, has taken personal charge of the sales of the Peerless car.

The Locomobile Company of Oakland has been organized to handle sales of the Locomobile for the mainland side of San Francisco Bay, according to announcement by C. A. Boyer, manager of the Locomobile Company of California, Inc., of San Francisco. New models of the Locomobile are being shown by the Oakland company at its new showrooms, 2317-21 Broadway.

Frank Wishart, manager of the East Oakland branch, has been appointed sales manager of the main store, according to announcement by Harold D. Knudsen, Chrysler distributor for Oakland. At the same time, Frank Bell has been promoted to be manager of the East Oakland Branch at 4028 East 14th street.

Auto-Lite Concentrates All Production in Ohio Plants

TOLEDO, Oct. 17.—Concentration of all manufacturing departments of the Electric Auto-Lite Co., at Toledo and Fostoria, means the virtual abandonment of activities of the company at Poughkeepsie, N. Y.

Enlargement of the main plant at Toledo may be required to accommodate the new business brought here. At Fostoria the harness department has been moved to an up-town building owned by the company and formerly used as a warehouse for Allen cars.

DeJon products will be manufactured in the Toledo plant in the future.

Along Automobile Row

DENVER, Colo.—A new Hudson-Essex agency has been started at 676 Santa Fe Drive. The firm is Gordon-White, Inc.

DETROIT.—A new sales and service building on Gratiot and Leland streets is being built by the motor truck division of the Gotfredson Corporation to take care of Gotfredson owners in greater Detroit and Wayne county.

LITTLE ROCK, Ark.—The Jennings-Matt Motors, a new concern here, has taken over the agency for Chrysler automobiles, succeeding the Ray Robinson Motors.

BUFFALO, N. Y.—Kane Motors, Inc., has been appointed city dealer by the Buffalo Oakland Motor Co. Kane Motors was formerly a Ford dealer here.

COLUMBUS, O.—The Charles Zimmerman Sons Co., central Ohio distributors for Dodge Brothers, has taken over the High-Fifth Motor Co., and the Main Street Motor Co., as direct branches.

VANCOUVER, B. C.—Among British Columbia dealers recently appointed are Eve Brothers, Ltd., which will handle the Paige-Jewett line at Victoria, B. C., and Begg Motors Company, Ltd., distributors for Nash and Ajax cars in Victoria.

SALT LAKE CITY.—A. E. Tourssen, Utah distributor for the Oldsmobile, is opening a branch house at Provo.

MILWAUKEE.—The Bauer Cab Co., has been incorporated here with capital at $25,000, to carry on a taxicab business.

LOS ANGELES.—The Packer Motor Company, Inc., Studebaker dealer, recently entered its new $60,000 home built especially for its use.

DALLAS, Tex.—The employees of the Brigg-Brown Motor Company, Willys-Knight-Overland distributors and dealers, were guests of the heads of the company at a dinner in celebration of the conclusion of the first year of the company's business recently.

MOBERLY, Mo.—Louis Hunt, agent for the Chevrolet motor car in Moberly, recently remodeled the building at 510 West Reed street formerly occupied by the Towles Motor Co., and has moved his agency to the new location. The change was made in order to provide more room for the business.

PENDLETON, Ore.—Robert Simpson & Son are the new proprietors of the Chevrolet agency in Umatilla and part of Morrow county, with headquarters at Pendleton.

WHEATON, Ill.—The Wheaton Auto Sales, Inc., will open a Ford sales and service station in the Parker Building which it recently purchased.

PHILADELPHIA.—Budd Wheel Company, announces the appointment of the Joseph Woodwell Company as official service station in Pittsburgh.

ST. LOUIS.—Arthur G. Rahnberg has been appointed manager of the used car department of the Flint Motor Car Co., Chevrolet dealer.

ASHLAND, Wis.—George W. White, who had the Dodge motor car agency here for many years, has sold out to the Wallie Motor Car Co., which will continue the Dodge representation as well as its general garage and service station business. Mr. White recently took over the Hudson-Essex line and will continue that agency.

PORTLAND, Ore.—A new and improved used car department has been installed by Packard Sales & Service, Inc., here, under the direction of H. C. Berg, president. The additional used car sales facilities are divorced from the main sales.

MONROE CITY, Mo.—Messrs. Burnett and Yoeman of Clarence, Mo., have opened the Monroe City Chevrolet Co., operating a garage and Chevrolet agency.

SEATTLE.—The appointment of Rowland & Clark, well known used car merchandisers, as Westlake Avenue district dealers for Ajax cars has been announced by the distributors.

BLYTHEVILLE, Ark.—J. W. Shouse has obtained the Chevrolet automobile agency here.

LOS ANGELES.—Continuing its policy of establishing community sales and service stations, the Albertson Motor Car Company, Southern California Dodge distributor, recently opened a new establishment in the Beverly Hills district, with Chester R. Ploeser in charge.

MINNEAPOLIS.—B. L. Eckes Co., Inc., has opened a retail store at 41 Ninth street S., ground floor, featuring Bosch radio products, and handling also Bosch automotive products, with service station.

BARBERTON, O.—The Wheeler Reo Sales Co., has been chartered with an authorized capital of $20,000 to deal in autos, trucks, parts and accessories.

DES MOINES, Ia.—The C. E. Cochran Motor company has opened an authorized Ford dealers' station at 1737-39 East Grand avenue and will maintain sales and service plant.

BARRINGTON, Ill.—The Barrington Garage, owned by G. N. Schauble, has taken the Nash agency for this district. Mr. Schauble will continue his Oakland agency which he has held several years.

SAN FRANCISCO.—Close & Clark has been appointed Pacific coast representative for the U. S. Electrical Tool Company. The local firm now carries Piel cut-outs, Gilmer fan-belts, Smith and Hemingway tools, and the products of the King Manufacturing Company.

ST. LOUIS.—Ray Blades, outfielder of the St. Louis Cardinals has been made vice-president of the A. J. Brock Motor Sales Co., Hudson and Essex dealer at 4360 Manchester avenue. A. J. Brock is president of the company and James J. Barrett is general manager.

OAKLAND.—R. C. Williams has been appointed head of the service department of the Lawrence-Rand Motor Company, Lincoln dealers in Oakland.

LOS ANGELES—Fred C. Wood, formerly distributor of Oakland cars in Cincinnati, has been named general manager of Mutual Motors, Roamer distributors and Paige and Jewett dealers, here.

DETROIT.—Hugh J. Gaulty has been made retail store and sales manager for Willys-Overland, Inc., at the branch at 4400 Woodward Avenue. Charles Stead has been named as his assistant.

NASHVILLE, Tenn.—The Eisemann Corporation, of New York City, announces the recent appointment of the Thomas & Polk Co., 1209 Broadway, Nashville, as distributor for the Eisemann company in the Nashville and adjacent East Tennessee territory.

OAKLAND.—A. H. Bollong has been appointed head of the service department of the Forman Motor Company, Oldsmobile and Peerless dealers in Oakland. He formerly was with J. W. Leavitt & Co., of San Francisco.

BALTIMORE.—The Piedmont Motor Co., 891 Park avenue, Baltimore, has been incorporated with $25,000 capital stock to operate a public garage and repair shop and a filling station.

MILWAUKEE.—Hupmobile has been added to the line of Art Lusty of Milwaukee, who has handled Stearns cars for the past eight years and latest models of both cars are now on display at the remodeled show rooms, 156 Farwell avenue. Associated with Mr. Lusty are Erwin Tank, formerly of the Allis-Chalmers Manufacturing Co., Sam Walls and E. L. Hospins.

OAKLAND.—W. V. Kearns, manager of the Howard Automobile Company, Buick distributors, has been elected a director of the Motor Car Dealers of Oakland, the local association of retailers.

UTICA, N. Y.—Announcement has been made by the Robischon Motors Co., Utica, Chrysler distributors, of the appointment of the B. F. M. Motor Sales Co., as Herkimer dealers.

JACKSON, Miss.—The Hines Motor Co., Chrysler distributors in Jackson, Miss., has opened a branch in Vicksburg under the charge of Keith Williams, formerly a member of the Hines sales staff.

FAYETTEVILLE, Ark.—The Charles B. Casey Motor Co., is the style of a new automobile establishment recently opened in Fayetteville, for the sale of Chrysler cars.

BALTIMORE.—The Baltimore Ruggles Truck Co., 1429 Maryland avenue, Baltimore, has been incorporated with $15,000 capital to deal in Ruggles trucks.

WAYCROSS, Ga.—Ben Wilson, formerly manager of the Waycross Nash Motor Company, has opened a new sales establishment, to be known as the Wilson Motor Co. He will handle Chrysler cars.

SALEM, O.—The Steam Vehicle Distributors, Inc., has been chartered with an authorized capital of $25,000 to deal in MacDonald steam automobiles and trucks.

MINNEAPOLIS.—B. L. Eckes Co. has opened a store at 41 Ninth street S. to retail automobile radiators, in addition to Bosch radio equipment.

SALT LAKE CITY.—T. T. Harmon has opened a tire and vulcanizing shop at East Fourth South Street near the Chamber of Commerce Bldg. Cupples tires will be featured.

TOLEDO, O.—The State Automobile Accessory Co., has been chartered with an authorized capital of $10,000 to manufacture and deal in parts and accessories.

ROCHESTER, N. Y.—William W. MacConnell, formerly connected with L Motors, Lincoln agency here, has organized the MacConnell Motor Corporation to take over the Ford agency formerly conducted here by the Malcolm Motor Corporation.

DES MOINES, Ia.—E. G. Matthews, for many years identified with automobile activities in this city, has opened his own agency, as an authorized Ford dealer, operating under the name of the Matthews Motor Company.

LOS ANGELES.—O. S. Van Keuren has been appointed used car manager of the Willys-Overland Pacific Company, Los Angeles. He replaces R. E. Starkey who has been advanced to the post of sales manager.

BUFFALO, N. Y.—The Buffalo Oakland Motor Company has appointed Paragon Motor Service, Inc., 2960 Delaware avenue, dealer in the suburb of Kenmore.

SPOKANE, Wash.—William L. Duffy, for 12 years with Riegel Brothers, Dodge Brothers dealers at Spokane, has joined the Eldridge Buick Company as sales manager. Mr. Duffy will be succeeded at Riegel Brothers by Glen Riner, who has been with the concern five years.

SAN FRANCISCO.—Don Hupp, of San Francisco, has been appointed Pacific coast representative for the Perfection Gear Company, according to announcement by S. R. Wolff of that corporation.

WALTHAM, Mass.—An agency for the Chrysler line has been opened here by the Suburban Motors Company, that has taken over the business formerly operated by the Hartley Motor Company.

PROVIDENCE, R. I.—The Kelly-Springfield Tire Company has opened a branch here for the Rhode Island trade and has placed Howard E. Limric, for years identified with the Boston branch, in charge.

With the Associations

Big Sales Congress Planned

WASHINGTON, Oct. 17.—Between 500 and 1,000 automobile dealers are expected to convene here October 22, when the Virginia-Maryland-District of Columbia section of the National Sales Congress meets under the auspices and as guest of the Washington Automotive Trade Association. Primary purpose of the Congress is to discuss improvements in sales methods that will not only benefit the public, but advance the interests of the dealers as well.

Invitations to all dealers in passenger cars and trucks in the three states have been sent out, and returns indicate that probably 1,000 dealers will participate. The general session will be held from 1 to 5 o'clock in the afternoon. Preceding the afternoon session there will be a series of group meetings of dealers from outside communities.

Automobile merchandising methods will be discussed by speakers supplied by the National Automobile Dealers' Association. These talks will cover the three phases of management, market analysis, and handling of used cars. Particular stress is laid in the announcement of the meeting by the dealers' association on the advantages it will offer to the automobile buying public. This point is emphasized in a statement accompanying the announcement of the conference.

Would License Shops

ST. LOUIS, Oct. 17.—An ordinance to place a license tax on all automobile repair shops in the city is being planned by the Associated Automobile Service Companies of St. Louis. Such an ordinance, the association hopes, will limit the number of shops and insure better profits and better service.

Less than a dozen of the 500 repair shops in the city are making a fair prolt and are adequately equipped to give first class service, according to J. C. Thorpe manager of the association.

A license tax would eliminate so-called alley shops, benefit both the industry and the automobile owner and cause mechanics to retain employment until they had sufficient capital to go into business for themselves on a proper scale, Thorpe says.

Syracuse Elects Directors

SYRACUSE, N. Y., Oct. 17.—Syracuse Automobile Dealers' Association has just elected these directors: S. J. Silverman, Charles G. Hanna, C. W. Bull, B. W. Moyer, Fred J. O'Neil, H. W. Maclellan and W. B. Cherry. The directors will meet soon to elect officers for the year. During the last year Mr. Silverman was president, Mr. Hanna, vice-president, Mr. Bull secretary-treasurer and C. H. Hayes executive manager.

Oppose Gasoline Tax

NEW YORK, Oct. 17.—The Motor Truck Association, the New York State Automobile Association, the Brooklyn Vehicle Association and other organizations in the automotive industry are opposing the movement to impose a tax on gasoline in this state. The legislative committee in charge of such legislation recently held a meeting here, at which Theodore D. Pratt of the truck association said that this state had anticipated the development of the automobile by a $100,000,000 road construction bond issue. He held that revenue from license plates was more than adequate for repair and maintenance of state roads.

Fort Worth Plans Congress

FORT WORTH, Oct. 17.—The Fort Worth Automotive Trades Association will sponsor an automotive sales congress for all west Texas on November 11, it is announced. The sales congress will be held here and more than 650 dealers, salesmen, maintenance men and accountants are expected to attend. The local association has named Ellis H. Boyd, Clarence Kraft and Ewald Keller to complete the arrangements and send out the invitations. Every automotive man in west Texas will be invited to the congress.

Mortgage Notation Insufficient

RALEIGH, N. C., Oct. 17.—The supreme court of this state held that notation of a mortgage on an automobile sold on deferred payment plan is not sufficient notice of encumbrance. The effect of the decision is to require recording of the mortgage, in all cases, in the county in which the sale was made. Officials of the North Carolina Automotive Trade Association announced that an effort will be made at the next meeting of the general assembly to have the law amended to make notation of the mortgage sufficient notice of encumbrance.

Pilliod Leaves N. S. P. A. Board

DETROIT, Oct. 17.—C. J. Pilliod of the Celeveland Piston Pin & Bolt Co., has resigned as a manufacturing member of the board of directors of the National Standard Parts Association, and his place has been taken by W. M. Albaugh of the Thompson Products, Inc., it is announced by C. B. Fraser, secretary of the association.

Join War Tax Fight

PEORIA, Ill., Oct. 17.—The Illinois Automotive Trade Association is actively participating in the campaign to bring about abolishment of war excise taxes on automotive products. Form letters have been sent to all dealers in Illinois to be sent to their senators and congressmen urging cooperation.

Philadelphia Meetings Begin

PHILADELPHIA, Oct. 17.—The first Fall meeting of the Automotive Service Association was held in the rooms of the Philadelphia Automobile Trade Association with 56 service managers present and the attendance 78 per cent of total membership. Harry Tipper, sales manager, General Motors Export department, A. V. Comings, editor of the Automobile Trade Journal, and James Collins, head of the commercial survey department of the Chilton Class Journal Company, were the speakers.

Tipper broadly outlined the philosophy of the service endeavor and cited the mental attitude developed by the average owner through contact with the service organization. The buyer of automobile service suspects everything he doesn't understand and unless he can justify the bill rendered his attitude will be unfavorable towards that organization.

Collins, speaking on the subject of the "Business Side of Service," gave the maintenance volume picture with figures showing that the money value of new car output for this year would be considerably less than would be spent in the maintenance division of the industry. Service and maintenance are entering the era of profit and since there is no used car factor, greater earnings through maintenance sales will be made with less effort than in selling new vehicles.

"More money for Service Managers," was the theme of Comings' talk. It is difficult to realize a profit on service sales unless the service manager is of a caliber comparable with the best managers in the car sales department. To obtain this type of manager, dealers must raise the standard of remuneration.

Springfield Dealers Elect

SPRINGFIELD, Mass., Oct. 17.—At the annual meeting of the Springfield Automotive Dealers' Association these officers were elected: President, R. M. Sauers, Marmon and Hupmobile; vice-president, H. Raymond Auger; Dodge; treasurer, George E. Adams, Ford; secretary, Harry W. Stacy; directors, George C. Byrnes, Ford; A. G. Medlicott, Packard; A. N. Center, Jordan; H. Raymond Auger, A. V. Reopell, Chevrolet; George E. Adams.

Show Director Named

FORT WORTH, Oct. 17.—J. N. Whitehurst will be general chairman of the annual automobile show of the Fort Worth Automobile Trades Association, to be held in connection with the Fat Stock Show. He was named chairman of the exhibition by President A. G. Fisher. On the general committee with Mr. Whitehurst are Cecil Cooke, Charles Harris, President Fisher and S. F. Webb.

St. Louis Dealers Pleased With Fall Sales Volume

October and November Seen as Big Months by Authorities in Whole Industry

ST. LOUIS, Oct. 17.—Manufacturers, distributors and dealers in St. Louis are all very much pleased wtih the automobile business these days. Factories are working at capacity production, while distributors and dealers state that they are selling all the cars they can get and could sell more if they had them. It is expected by all members of the automotive industry that this condition will obtain through October and November at least. Also they expect the winter business this year to be as good or better than recent years.

It had been predicted all through the last part of last winter, the spring and the summer that if crop conditions were good in this vicinity the replacement business in rural districts would be good. The crops were good and sales of automobiles, trucks and tractors to the farming communities have been good.

It is believed that Ford cars will go quickly as soon as the Ford dealers are able to deliver. So certain are Ford dealers themselves of this that they are holding down on used car allowances to the minimum and are taking only those which they can reasonably expect to resell.

Higher priced cars also usually go better here during the fall than at any other time of the year. This is because people who buy high priced cars spend their summers away from St. Louis and buy on their return after vacations.

Cars in the middle price class have been going very well and it is expected by those handling them that they will continue to sell in volume.

Paris Automobile Dealers Enter "Slick-Up" Campaign

PARIS, Oct. 3.—(By Mail).—Paris automobile dealers are slicking up. There will be no automobile show in the French capital this year, for the trade delayed getting an option on the handsome Grand Palais and then sulked so long over the other available buildings that it became too late to make a united effort.

Having realized that an annual show helps to boost sales, individual dealers are now preparing their showrooms for a display and a general appeal to the buying public during the month of October. There will be no new models, for engineering departments have taken advantage of the absence of the Salon to hold back their new types.

Practically every showroom on the Avenue des Champs Elysees has been cleaned up inside and outside, special decorations are being added and a publicity campaign is being engineered which is expected to bring the buying public and attract dealers from the provinces.

Several French manufacturers are arranging to throw their works open to visitors during a fortnight in October, and in some cases they are offering to pay country dealers' expenses to Paris.

Coming Motor Events

Automobile Shows

Shreveport, La.—Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.

Chicago—Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

New York—Nov. 15-21
Twenty-first Annual Automobile Salon.

Chicago—Nov. 16-17
Annual convention, National Association of Finance Companies, Hotel Sherman. C. C. Hanch, secretary-manager, 76 W. Monroe St., Chicago.

Chicago—Nov. 16-18
Convention and exhibition of the National Standard Parts Association, Hotel Sherman, C. B. Fraser, secretary, 310 Hofman Bldg., Detroit.

Detroit—Nov. 16-21
National Motorbus Show in Grindley Hall, C. E. Stone, chief engineer People's Motor Coach Co., in charge of committee.

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Washington—Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

San Francisco—Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bdg., manager.

Denver—Feb. 2-6
Annual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Louisville, Ky.—Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Races

Baltimore—Oct. 24
Charlotte, N. C.—Nov. 11
Los Angeles, Cal.—Nov. 26

Conventions

Des Moines, Ia.—Nov. 12-13
Automotive Merchants' Association Convention.

St. Louis—Nov. 17-19
Annual Convention of National Tire Dealers' Association.

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Foreign Shows

London, England—Oct. 29-Nov.
Annual Truck Show.

Berlin, Germany—Nov. 26-Dec.
Annual Automobile Show in the Kaiserdamm.

OREGON SHOW HELD

SALEM, Ore., Oct. 17.—The annual fair at Salem attracted 175,000 from all parts of Western Oregon and a number of automobile dealers from both Salem and Portland who contributed to make the automobile exhibit a success expressed themselves as being well repaid with both a new and large list of prospects and a number of actual sales during the progress of the fair. From a mere section of one building a few years ago the automobile department has grown to an institution which occupies an entire building and several were forced to house their exhibits in tents nearby.

WOODS JOINS MACK

DECATUR, Ill., Oct. 17.—Charles G. Woods, who has been master mechanic for the Decatur street railway lines and associated with that traction service 22 years, has resigned to become affiliated with the Mack International Motor Truck Co., directing its sales in 41 northern Illinois counties. He will make his headquarters in Decatur and retain his interests in the Woods Fare Box Company, makers of street car, bus and other fare box devices, which is rapidly expanding in its field.

Hupp Building More Than 100 of New Sixes Daily

DETROIT, Oct. 17.—Upwards of 100 o the new Hupp six passenger cars are be ing turned out daily at the factory here Charles D. Hastings, president and gen eral manager of the Hupp Motor Ca Corporation has announced.

Including October 5, Mr. Hastings sai that more than 5,000 orders for the nev car had been received at the factory fron Hupp dealers throughout the country Deliveries are expected to be mad throughout the country within the im mediate future. Shipments to dealer have been going on for the past fev weeks.

"Output of both the Eight and Six," Mr Hastings said, "will be the largest in th history of the company. New machinery rearranging of the buildings and addi tional productive space will enable u to raise our production for 1926 to nev records."

MISSOURI GAS RECEIPTS

ST. LOUIS, Oct. 17.—The state tax o 2 cents per gallon on gasoline used fo motor vehicle fuel produced $3,026,871.3 for the Missouri state road fund in th first eight months of its operation. Th tax became effective on January 1 last It is estimated by the State Oil Inspec tion Department that approximatel $4,500,000 will be collected for the fun for the whole year.

Thirty-nine Makes Shown at Coast Closed Car Salon

Four-day Show Is Visited by About 27,000 Persons, Officials Estimate

LOS ANGELES, Oct. 17.—Thirty-nine distributors presented as many different makes of cars to a total attendance estimated at nearly 27,000 at the Second Annual Closed Car Salon which was held recently at the Biltmore Hotel. The show lasted four days and the attendance, the actual sales made at the show, and the stimulus to business immediately following more than satisfied all expectations, according to Burt Roberts, secretary of the Los Angeles Motor Car Dealers' Association, manager of the show.

This year's salon was held in an exceptionally dignified setting. There were no signs or placards, not even in the display booths in front of the cars, and no general circulation of literature was permitted. At night all salesmen in attendance in the various booths were required to wear formal evening dress. An elaborate musical and general entertainment program was provided during the afternoon and evening.

Lynn C. Buxton, Stearns-Knight distributor, as chairman, J. S. Woollacott, assistant general manager of Harold L. Arnold, Inc., Lincoln dealer, and H. E. Woodward, president of the Reo Motor Car Company of Southern California, with Secretary Roberts, comprised the show committee.

LIGHTING MEN TO MEET

CHICAGO, Oct. 17.—The general fall meeting of the Automotive Lighting Association will be held November 5, beginning at 10 A. M. at the Drake Hotel in Chicago.

Victor Rubber President Is Appointed Receiver

SPRINGFIELD, O., Oct. 17.—H. H. Durr, president of the Victor Rubber Co., has been appointed receiver of the company on application of Ernst & Ernst of Cleveland and other creditors, who state that they hold claims totaling $435,390.02. The action was brought against the Victor company and Trustees H. McGraw of Cleveland, H. J. Robbins of Cincinnati, and Harlen C. West, cashier of the First National Bank of this city.

Mr. Durr was authorized to conduct the mat and mechanical rubber departments of the company as going concerns, the Victor tire business having been sold by the trustees to an eastern concern in July.

He also was empowered to dispose of such parts of the business as he may see fit in the liquidation of the company, also to endeavor to dispose of the property as a going concern, if possible. The company, Mr. Durr says, is insolvent, that the claims cannot be paid and that the stockholders will receive nothing.

SQUEEKS and RATTLES

Homeward Bound

"Ah, we must be on the right road. There is the man we ran over this morning!"

—Le Rire (Paris).

Our idea of a hard job would be to sell buggy whips in Detroit.

—Cougar's Paw.

A great many traffic jams are due to encounters between a chap who points with pride and one who views with alarm.

—The Safety Valve.

One thing you can say about a flivver. It rattles before it strikes.

—Arkansas Gazette

Moe: So that was a hot baby you had in your car?

Joe: I'll say. She was just burnin' up.

Moe: Well, why didn't you put her out?

—Johns Hopins Black & Blue Jay.

Aviator: Hooray! I've discovered it at last!

Passenger: Discovered what?

Aviator: Perpetual motion. I can't stop this blamed thing.

—Harvard Lampoon.

Irrelevant Evidence

A married couple were knocked down by a motor. The car dashed away. The police arrived and found the couple bursting with indignation, especially the wife.

"Do you know the number of the car?" asked the policeman.

"Yes," replied the husband, "by a strange coincidence the first two numbers formed my age and the second two the age of my wife."

"John," said the wife, we will let the matter drop at once!"

—Dorfzarbier, Berlin.

That man who drove 550 miles in a day probably was looking for a place to park his car.

—Council Bluffs Nonpareil.

Woman in Auto—"Good heavens, son; we've just run over a poor man! Stop! Stop!"

Driver—"Keep still, mother; you'll make every one think this is the first time we were ever out in an auto."

—Le Rire (Paris).

"Bet I can make fifty tonight, in my Ford."

"I could have just as good a time with one."

Colin A. Campbell Takes Marmon Sales Promotion

INDIANAPOLIS, Oct. 15.—Announcement of the appointment of Colin Alfred Campbell of Indianapolis, as sales promotion manager of the Nordyke & Marmon Company, in charge of sales extension activities, has just been made by H. H. Brooks, general director of sales. Mr. Campbell has served for the last year as Marmon district manager in the Southwestern territory of the United States.

Mr. Campbell joined the Marmon organization in July, 1920, upon his graduation from Ohio State University. His first duties largely centered upon territorial analysis and he worked out the system of territorial analysis now used by the company. Later he was placed in a position of administrative responsibility in the factory sales department and, following the announcement of the new Marmon, he was appointed to the position of district sales manager in the South.

During his college career and prior to his connection with the Nordyke & Marmon Company, Mr. Campbell was connected, in engineering capacities with the United States Geological Survey, the Pennsylvania Railroad and the Buckeye Steel Castings Company. During the war, he served in the Air Service and was discharged with the grade of captain. He now is a major in the Air Service Reserve.

MacLEAN QUEBEC MANAGER

MONTREAL, Oct. 17.—The appointment of W. A. MacLean as manager of the Chevrolet Motor Co. of Canada, Ltd., for the province of Quebec is announced. Mr. MacLean joined the Chevrolet organization last spring. Previous to that he was manager of Montreal Motor Sales, Ltd., following an experience of some years as assistant district organizer of the Ford Motor Company of Canada, Ltd.

Kelly-Springfield Motor Truck Co. Ordered Sold

SPRINGFIELD, O., Oct. 17.—Order of sale was granted by Judge F. M. Krapp in the case of the Bankers' Trust Company of New York against the Kelly-Springfield Motor Truck Co., this week in common pleas court. Receiver Pearl A. Lewis was directed to offer the property for sale at 2 p. m., November 23, at the factory.

This step is incident to the sale and reorganization of the company upon a sound basis by eastern men. It is stated that the company has three prospective buyers.

The claims total $1,500,000 while the plant and equipment is appraised at $10,800,000. The Kelly company makes heavy duty motor trucks and is said by officials to have very good prospects.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
ANDERSON "41"			
2650	5-p	Touring	$1,195
2675	4-p	Sp. Touring	1,445
2925	2-p	Coupe	1,425
2875	5-p	Sedan	1,695
2925	5-p	Sp. Sedan	1,895
		"50"	
2975	7-p	Touring	1,595
3200	7-p	Sedan	1,945
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
.....	7-p	Sedan	1,995
		"8-88"	
.....	3-p	Sport Roadster	1,975
.....	6-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	7-p	Sedan	2,550
.....	.....	Wanderer	2,400
BUICK "Standard"			
.....	2-p	Roadster	$1,125
.....	5-p	Touring	1,150
.....	2-p	Coupe	1,195
.....	4-p	Coupe	1,275
.....	5-p	4d. Sedan	1,295
.....	5-p	2d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
.....	2-p	Roadster	1,250
.....	5-p	Touring	1,295
.....	5-p	Sedan	1,495
.....	5-p	2d. Sedan	1,395
		(128 in. W. B.)	
.....	3-p	Sp. Roadster	1,495
.....	5-p	Sp. Touring	1,525
.....	4-p	Country Club	1,765
.....	4-p	Coupe	1,795
.....	5-p	Brougham Sedan	1,925
.....	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
4075	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
4155	7-p	Sedan	3,295
4240	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built (132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	.....	Phaeton	3,250
.....	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE J. I. C.			
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2345	5-p	Touring	$895
2435	5-p	Touring DeLuxe	1,025
2470	3-p	Coupe	975
2600	5-p	Sedan	995
		"43"	
2750	5-p	Touring	1,095
2910	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2950	3-p	Coupe	1,175
3050	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
COLE "MASTER"			
3675	4-p	Volante Touring	$2,325
3795	7-p	West. Touring	2,325
3675	4-p	Aero-Vol. Tour.	2,475
4055	5-p	Brouette Sedan	3,225
4000	7-p	Royal Sedan	3,225
4100	7-p	Royal Limousine	3,325
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DORRIS		**"6-80"**	
4120	4-p	Pasadena Tour.	*
4115	7-p	Touring	*
4193	4-p	Coupe	*
4200	5-p	Sedan	*
4310	7-p	Sedan	*

*Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		**A-22**	
.....	2-p	Sp. Roadster	$900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$850
2370	5-p	Coach	795
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1369	2-p	Runabout	$260
		With Balloon Tires	305
1494	5-p	Touring	290
		With Balloon Tires	335
		With Starter and Dem. Rims	
1521	2-p	Runabout	345
		With Balloon Tires	370
1644	5-p	Touring	375
		With Balloon Tires	400
1749	2-p	Coupe	520
		With Balloon Tires	545
1882	5-p	Sedan, Tudor	580
		With Balloon Tires	605
1927	5-p	Sedan, Fordor	660
		With Balloon Tires	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER		**6A**	
.....	5-p	Brougham	$1,495
3070	5-p	Touring	1,395
.....	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	.....	DeLuxe Sedan	1,895
		8A	
.....	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3360	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		**D-1**	
3360	5-p	Sedan	$1,695
HUDSON		**"Super Six"**	
3425	7-p	Phaeton	$1,250
3450	5-p	Coach	1,195

SHIP. WT.	PASS.	BODY STYLE.	PRICE
HUDSON (Cont'd)			
3425	4-p	Brougham 4 d.	1,495
3675	7-p	Sedan	1,695
HUPMOBILE "A"			
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		**"23-25"**	
3060	4-p	DeLuxe Road.	$1,500
3000	5-p	DeLuxe Touring	1,320
2990	5-p	Coach 2d.	1,245
3160	5-p	DeL. Coach 2d.	1,400
3325	5-p	DeLuxe Sedan	1,680
JORDAN		**"J"**	
.....	4-p	Playboy Road.	$1,695
.....	5-p	Sedan	1,845
		Series "A"	
3330	2-p	Playboy Road.	$2,275
3340	5-p	Touring	2,275
3450	3-p	Friendly "9"	2,575
3625	5-p	Brougham	2,575
3520	4-p	Victoria	2,475
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		**"55"**	
3130	2-p	Speedster	$1,795
.....	2-p	Sp'dster DeLuxe	2,085
.....	4-p	Speedster	1,895
.....	4-p	Sp'dster DeLuxe	2,185
3530	2-p	Enc. Speedster	2,085
.....	4-p	Enc. Speedster	2,185
.....	4-p	Enc. Spdstr. DeL.	2,685
.....	2-p	Enc. Spdstr. DeL.	2,585
3190	4-p	Tourster	1,795
.....	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
.....	7-p	Touring	1,685
.....	7-p	Touring De L.	1,885
3430	4-p	Coupe	2,085
.....	4-p	Coupe De Luxe	2,485
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,485
.....	5-p	Brougham 2 d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Berline Sed. DeL.	3,185
3530	5-p	Victoria	2,185
.....	5-p	Victoria DeLuxe	2,485
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster DeL.	2,585
.....	2-p	Enc. Speedster	2,485
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Enc. Speedster	2,585
.....	4-p	Enc. Sp'd'r DeL.	3,085
.....	4-p	Tourster DeL.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Duxe	2,885
.....	5-p	Brougham Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,095
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,885
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4380	2-p	Roadster	$4,000
4595	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
.....	.....	Sport Touring	4,500
4655	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

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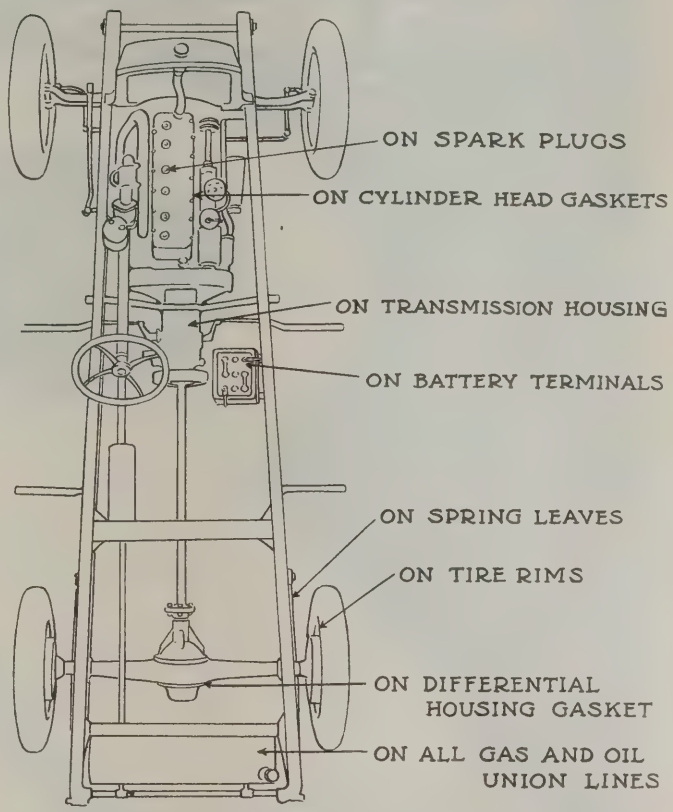
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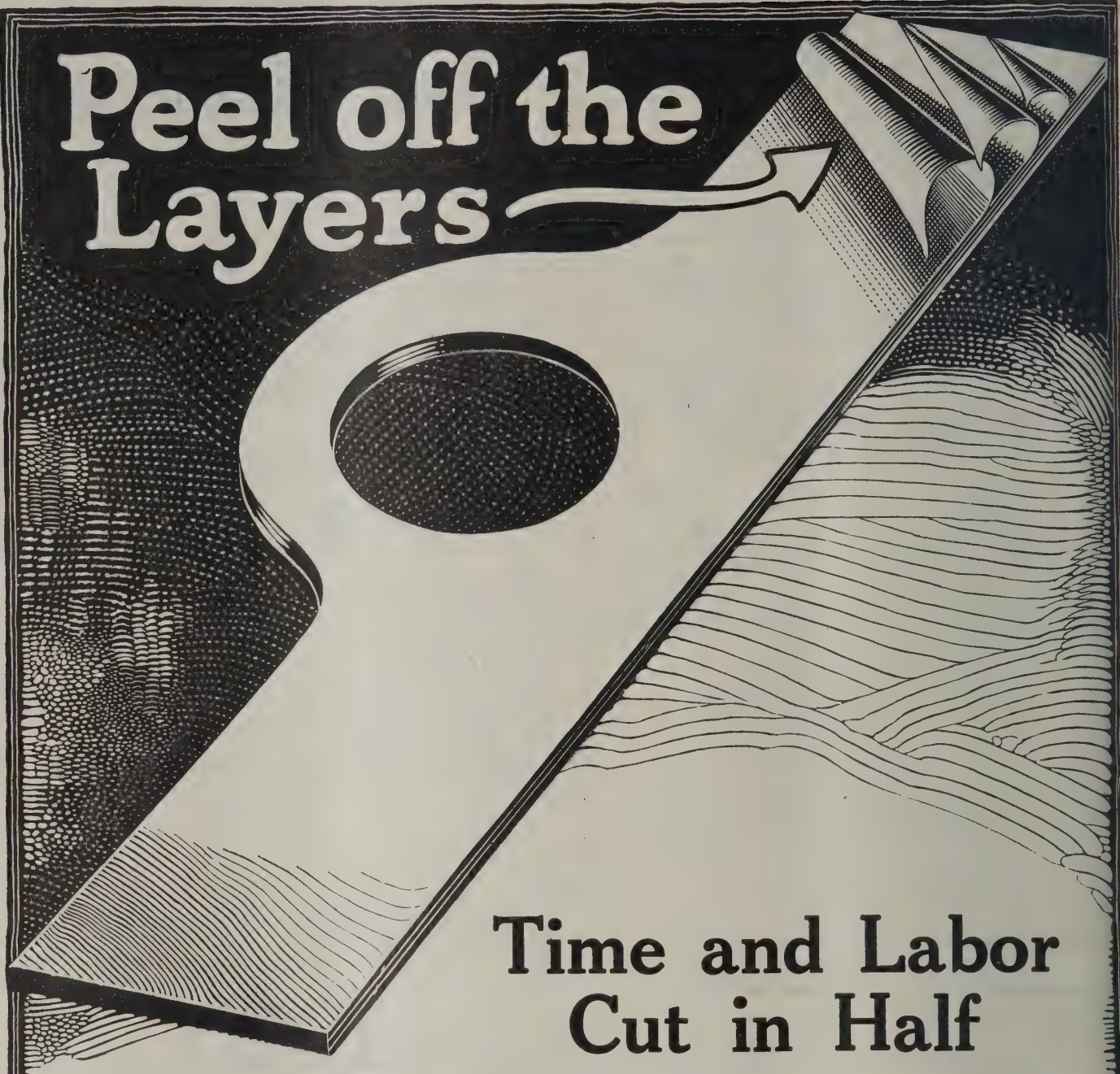
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MOTOR AGE

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Summary and Index of Important Events in

This Week's Automotive News

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General Motors officials scoff at reports that Durant is attempting to regain control. Page 32.

Details of convention of National Tire Dealers' Association in St. Louis, November 17-19, are tentatively arranged. Page 35.

Automobile manufacturers pledge immediate cut in delivered price if war excise taxes are repealed. Page 35.

General Motors offers Vauxhall Motors, Ltd., British automobile manufacturers, new capital for controlling vote. Page 36.

Chevrolet engineer tells Cleveland section of S. A. E. that small, light car will be demanded in America in the future. Page 36.

Dealers are advised by manufacturers to prepare for keener used car market than ever before. Page 33.

Stockholders of Miller Rubber Co. approve reorganization plan. Page 33.

Fifteen companies sign for space at National Motorbus Show in Detroit Nov. 18-21. Page 34.

Reeves of N. A. C. C. predicts new high mark in 1925 automobile production. Page 34.

Overseas Club, Boosters No. 9, will entertain automobile accessory wholesalers from many foreign countries at banquet during A. E. A. show in Chicago. Page 42.

Fiat places new seven horse-power model on the French market, listing at $766 for chassis including luxury tax. Page 39.

Southwestern automobile show in Dallas, Tex., is voted great success by thousands who attended. Page 39.

Rubber stocks larger October 1 this year than on same date last year, says announcement accompanying fifth rise in tire prices. Page 37.

Automoblie registrations in Michigan gain 3,215 in September over same month a year ago. Page 37.

Plans of merger between Fageol and American Car & Foundry Co., ready to be placed before stockholders for ratification. Page 38.

Willys-Overland sponsors national sales contest, entered by 20,000 in field organization, for $50,000 in prizes. Page 38.

Program for Service Convention of N. A. C. C. and S. A. E. to be held in Chicago Nov. 9-10 is announced. Page 43.

Overland six orders are reported by factory to be ahead of production schedule. Page 43.

In Next Week's Issue—The Automotive Equipment Show

Has Ford Lost His Big "Sales Punch" in the Low-Priced Field?

Conditions Are Changing. Price Will Be a Much Less Powerful Sales Weapon in the Future Than It Has Been Thus Far. Design and Service Chief Factors in New Era

By NORMAN G. SHIDLE

COMPETITIVE conditions in the low priced car field are in a process of rapid change. New situations have not developed overnight, to be sure, but economic trends which have been going on since the beginning of the industry just now are beginning to have striking effects in this particular part of the automobile field. Some of these changes in competitive conditions already have begun; others are to be expected in the future. They have been caused by a multitude of factors chief among which are:

1. The limit as regards price reduction is getting near. Lower price levels may be established in the future, but the influence of such cuts never will be as powerful in the future as it has been in the past because the magnitude of the cuts can't be as great.

2. The limit as regards acceleration of sales is getting near. Increased sales in this price class will continue, but the rate of increase in sales will be relatively slow as compared with past.

3. Increases in car life will affect materially the slope of the future sales curve.

4. Extensive advertising and often extravagant claims about comfort, convenience, power and endurance gradually have brought the public to expect and demand these qualities to a high degree. The cars are being expected to live up to the advertising. Consequently design and engineering competition will be even keener in the future than in the past.

These considerations affect cars in every price class, of course, to a greater or a lesser extent, but their influence on the group of vehicles selling for less than $600 is particularly strong; in that field often are fought today the merchandising battles which the higher priced cars are to have tomorrow. So it is particularly interesting to speculate about what these changing conditions will mean to competition in this lowest price class.

In the first place, it will mean competition for all concerned on more even terms than ever before. With the sharp edge of the weapon of price considerably dulled, any individual producr can expand his present market materially only by outstripping his rivals in quality, service, and comfort.

Despite the general lowering of passenger car prices in the last year or so, examination of price trends in the under $600 field shows a relatively small downward movement in that group. While Ford made a $10 reduction on his Tudor sedan and a $25 cut on his Fordor on December 2, 1924, the price of the Ford touring car came down only $5to $290 at that time after having remained at $295 for more than a year previously. Since that time Chevrolet has changed its product and increased its price about $15. Overland after raising its phaeton price from $495 to $530 in September, 1924, dropped back again to $495 in January of this year.

The level of coach prices, of course, has been lowered to a greater extent than that of phaetons in the last year or so, but it is generally true that price changes in this low priced group no longer are great enough to be of major merchandising importance.

Particularly is this true because most cars today are bought on the installment plan and on quite liberal terms. When a man has to pay down only 25 to 33 1/3 per cent of the purchase price and can pay off the balance in 12 to 18 months, a difference of $10 or $20 isn't going to be of great practical importance to him one way or the other.

Thus it appears that in the future price alone will not be the potent merchandising factor within the low-priced group that it has been in years gone by. The manufacturer who finds sales lagging no longer will be able to whip demand to its feet again with a sweeping price reduction. Once price was a potent weapon in this group. Every body realized that sometime a limit would be reached past which price reductions couldn't go, but until that limit was approached the strength of the weapon was undiminished.

Improved production methods, increased quantity production and decreased overhead costs, standardization and numerous other activities helped push farther away the point at which price no longer could be the Excaliber of automotive merchandising in the low priced field. But steadily that point drew nearer, nevertheless.

Probably it has not yet been reached. No one will be able to say exactly when we are abreast of it. But every sign indicates that we are reasonably close to it today. Close enough to make reliance on price alone for future success a fairly hazardous procedure.

So it appears that the marketing battle in this price class will be fought chiefly with other weapons during the next quarter of a century. That victory could be possible with price as the chief weapon between 1900 and 1925 is no sign that new arms will not be necessary to replace the old if success is to be won between 1925 and 1950.

Importance of Service and Maintenance

Design and Service—these will be the big guns of the next decade. It has become common to say that the automobile industry passed through the period of engineering domination to that of production domination and that it is going into the period of service domination. Probably that conception is only partly correct. Along with the importance of service, it should be recognized that the industry has nearly completed its cycle; that, with the result of production domination before us, engineering again is coming into the ascendancy.

The American public today knows what to expect of an automobile. And they expect it.

As the importance of price continues to decrease, the importance of performance, appearance, operating economy, comfort, durability and all those other factors involved in the broad meaning of design will continue to increase.

To point out to automobile executives the importance

maintenance and service in a competitive era with the aracteristics of the one predicted would be fatuous. e song of service has been sung so consistently for the t few years that it would seem everybody must know e tune by this time. But they don't. And in the low iced field, effectiveness and distribution of service may ll determine the success or failure of particular organi-ions in the era just ahead. Failure may be produced any one of a number of factors, whether service is good not; but all the other factors together will not produce ccess without adequate service facilities and operations.

In view of these changing conditions, speculation about e position of Ford, thus far the largest producer by ny millions, is of particular interest.

One fact stands out clearly:

Ford in the last few years has begun to feel the wind of mpetition for the first time.

This is indicated by a number of the moves made by e Ford Motor Co. within comparatively recent times. In the last few years, Ford has, for the first time:

1. **Begun to spend millions of dollars a year in advertising.**
2. **Experimented with extremely liberal time sales plans.**
3. **Increased dealer discounts.**
4. **Changed the body lines of car.**
5. **Started to use colors in painting bodies.**

The economic forces which have brought about these ncessions to the necessities of competition will be fairly vious to most automotive executives.

Ford got hold of the idea of andardization and quantity oduction before anybody else ought about it. It was a od idea. He had faith in it d he put it into operation—*fore anybody else.*

He got away to a flying art and consequently was le to answer all competition r many years with a single argument—prices much wer than anybody else could possibly approach. He ed other means, of course, to achieve his end. Stand-dized, readily available service was provided for Ford vners in nearly every part of the country before service r other cars was anything like adequate. Parts were ade easy to get, dealers were closely supervised and structed by the factory and uniform methods over despread areas resulted. Other means also were used.

But Ford's one outstanding weapon against the threat competition up to about two years ago was price duction.

Obviously there is a point at which the returns from antity production and standardization begin to diminish and another point at which further returns cease.

As the market grows more and more saturated difficulty selling grows.

As quantity production gets into the higher scales the crease in overhead obtained from further production creases grows smaller.

But with a tremendous investment in plants, machinery d sources of supply, quantity of sales must be kept up all costs. But standardization and permanency of odel must continue, otherwise the benefits of quantity oduction fail to accrue.

These are fundamental economic laws which affect Ford st as they affect everybody else. Because of Ford's sion, however, their influence on his efforts was rela-vely slight for many years, while others were laboring der their burdens. But the trend is inevitable.

Thus came a time when even Ford found it necessary stimulate sales. Because of his very low price and consequently larger market, the point at which stimulation was necessary was a long time in being reached; but the progress toward it, although very slow, was steady. It has been accelerated recently by competition with used cars of the Chevrolet, Overland type. That Ford did reach it a year or two ago is indicated by the actions cited.

Progress of Other Manufacturers

And the trend continues, in Ford's case as in all other cases.

That manufacturers other than Ford have been making relatively faster progress in recent years is strikingly shown by the percentage of total production each year from 1918 to 1925.

From 1918 to 1921, Ford's proportion of total production climbed upwards every year, reaching a peak of nearly 60 per cent in the latter year. In 1921 business conditions were bad and car buyers all tended either to run their old cars for a year longer or to buy cars of a lower price class than those which they would have purchased in normal times. Consequently, Ford probably got a good bit of business which in normal years would have gone to makers of higher priced cars.

Since 1921, however, Ford's proportion of total passenger car output has declined steadily, indicating the growing of forces of competition all along the line which are beginning to affect materially even the lowest price vehicle.

An interesting speculation as to the future was given to us about three years ago by one of the keenest thinking automotive executives we have had the pleasure of meeting. A year ago, he amplified his theories and about a month ago he went further in his speculations. His ideas are worth thinking about. His argument, assuming the background already given, runs something like this:

Electrical Flat Rate Chart in Next Week's Motor Age

"Some time Ford will have to change his design. No material changes have been made in the Ford car for about 15 years. It is not conceivable, in the light of past and certain future engineering advance, that Ford would be able to sell his present Model T 25 years from now.

"A new Ford car, designed along up-to-date lines, incorporating the engineering knowledge of the last two decades, must be brought out sometime.

"But the entire Ford organization—production, engineering, sales, and service has been developed on the basis of standardization—lack of change.

"Before the Ford idea can be considered as more than an economic experiment, Ford must bring out this new car, produce it and sell it at the same price as that which he receives for his present model.

"If he sells the new car for a higher price, he comes into the same area of competition as any other maker whose price is higher; his potential market is just that much smaller and he would be affected by the same economic factors *in the same degree* as every other maker in that price group."

No other company in the low priced field has been built over since its inception on a single, permanent, clear-cut policy as has the Ford organization. It is for that reason that the relation between Ford and economic trends can be discussed with greater directness than otherwise possible.

Study of current trends, however, indicates clearly that competition among makers whose open models sell for less than $600 will be based less on purely price considerations than ever before and the design and service will be the activities most potent in producing success.

HOW TO ADJUST BRAKES

Some Things to Observe in Regard to the Front Internal Expanding Shoe Type on the Nash Advanced Six Model—Proper Pedal Travel Important Point to Watch Out For—Joints Must Be Free And Lubricated

By B. M. IKERT

(This is the third of a series of articles dealing with conventional rear wheel, mechanical four wheel and hydraulic four wheel brakes)

IN last week's issue of MOTOR AGE the method of adjusting the four-wheel brakes on the Buick was discussed. These brakes are of the external contracting type on the front wheels and while much that pertains to the method of adjusting these brakes applies to other models, it obviously does not apply to front wheel brakes of the internal expanding type.

Consequently in this article we have taken as an example of the internal expanding type front wheel brake, the Nash layout as it applies to the Series 161 Advanced Six.

The rear wheel brakes of this model are of the external contracting type and adjustment is made in precisely the same way as most brakes of this type. That is, the anchor adjusting screw is turned to the right or left to get a clearance of 1/32 in. between the lining and drum. Then the band guides are adjusted for the same clearance. Finally the lower and upper adjusting nuts on the adjusting rod are turned to get the right clearance.

In proceeding with brake adjustment on the Nash Advanced Six there are three things to do.

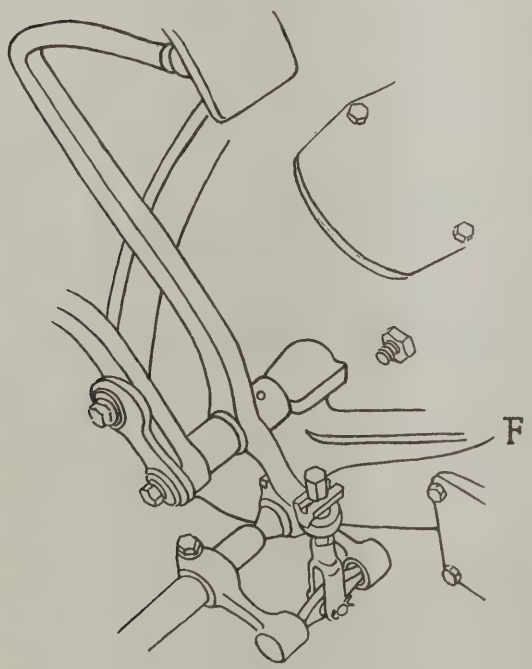
First of all adjustment is made at the pedal connection.

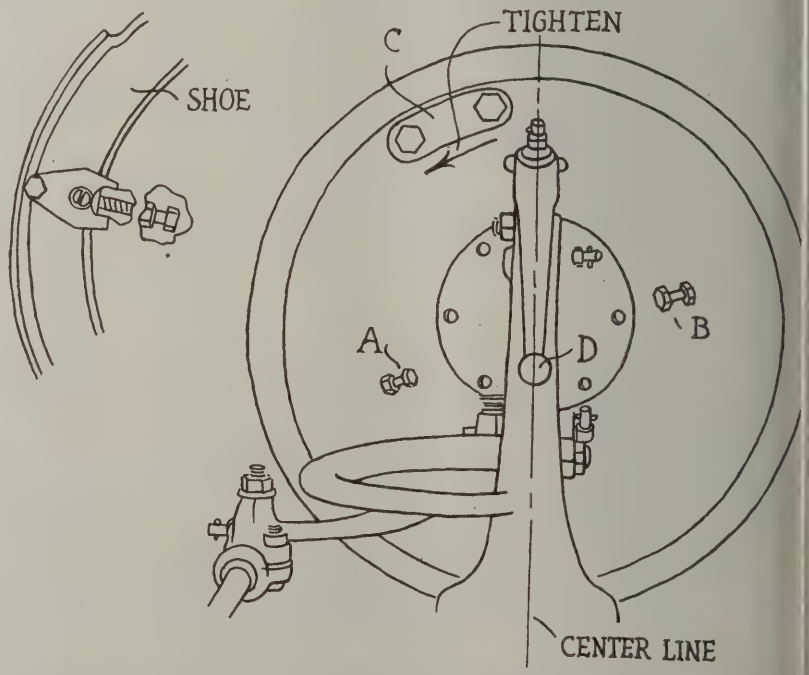
Second, the rear wheel brake bands are adjusted a mentioned in a preceding paragraph.

Third, the front brake shoes are given the righ adjustment.

It is well at this point to again mention the grea importance of having all the joints free so they wor properly. For that reason go all over the braking syste clean and lubricate the parts. Make sure the whee bearings have the correct adjustment and that the wheel are in line. If any yoke end clevis pins or the yoke themselves are worn replace them with new ones.

Jack up the front end of the car so that both wheel are off the ground. Then inspect the brake pedal. Th normal position of this pedal is against the end of th slot in the toe board. The action of the pedal is such tha a slight depression of it takes up the clearances betwee the shoes and drum in the front brakes and between th bands and drums of the rear brakes. Additional trave of the pedal gradually applies the brakes at first and a the pedal is further depressed the brakes are mor forcibly applied.





Left: Fig. 1—Pedal and equalizer layout on the Nash Advanced Six. Adjustment for the proper pedal position is made by turning the clip bolt F. The pedal should never be limited in its movement by striking the toe boards; right: Fig. 2—Exterior view of Nash front wheel brake showing the rear clearance adjusting screw A, front clearance adjusting screw B, and the anchor bracket C. The ball D on the end of the brake operating lever must be in line with center line of the axle when the brakes are applied. The details of the clearance adjusting screws are shown at the upper left, a portion of the metal being cut away to make the matter clearer

There should always be a reserve of braking ability n the pedal and under no circumstances should the pedal ad strike the toe board.

In order to adjust the foot pedal turn the adjusting lip bolt, F, Fig. 1, to the right until the pedal is correctly located.

If this adjustment has been correctly made proceed to ne front brakes.

Disconnect the front brake rod from the brake operating ever and loosen the clearance adjusting screws A and B, 'ig. 2. Revolve the wheel and turn the rear clearance djusting screw A until you hear the slight noise produced by the lining on the internal shoe rubbing against he drum. Then back off slightly on the screw until the oise ceases. The brake shoe is then free at this point nd the lock nut should be tightened.

Proceed in exactly the same manner with the front learance adjusting screw. This adjusts the secondary hoe. The brakes are adjusted now so far as clearance s concerned and this clearance varies only as the linings n the primary and secondary shoes become thinner from vear.

To further check the adjustment see that the ball D on the end of the brake operating lever is in the center line of the axle forging, as shown in Fig 2, when the brakes are applied.

If the ball does not coincide with this center line loosen the two cap screws in the anchor bracket C, and tap the bracket slightly in the direction of the arrow, which is toward the rear. About 1/16 in. is usually enough, but the bracket should be moved sufficiently until the conditions are as in Fig. 2. Then tighten the cap screws in the anchor bracket making sure that they are firmly set.

Then the ball joint on the end of the front brake rod should be adjusted to the ball end of the brake operating lever. Each front brake is adjusted in this manner.

When the front brakes are properly adjusted, the rear brakes are taken up in the manner already explained. If after the front and rear brakes are adjusted the pedal seems to have considerable movement before the brakes take hold, the brake rod adjustment should be taken up until the brakes begin to act with a pedal depression of 1 to 2 in. and are fully applied with all possible pressure without interference form the toe boards.

Flat Rates for Electrical Work

A flat rate chart covering electrical operations on automobiles will be published in the Nov. 5 issue of MOTOR AGE.

This chart has been compiled, after extensive research, by A. H. Packer, associate editor of MOTOR AGE and specialist in automotive electricity. Practically every repair and maintenance operation that the tradesman is called upon to perform in connection with the electrical system of an automobile is listed and priced in this comprehensive chart. All the leading makes of passenger cars are covered.

A large proportion of the service work required on the average automobile has to do with the electrical system. This chart makes it easy to determine prices to be charged for this work.

In Motor Age Out November 5, 1925

New Edition of Dyke's Encyclopedia

A new edition, the fourteenth, of Dyke's Automobile and Gasoline Engine Encyclopedia has just come from the press of Goodheart-Wilcox Co., Inc., of 2009 S. Michigan avenue, Chicago. This volume which is retailed at $6, has been brought uptodate through thousands of additions and revisions by its editor and compiler, A. L. Dyke of St. Louis, who is one of the veterans of the automotive industry.

The most noticeable additions are several colored charts. In the section of the book where troubles are treated, a sixteen-page form has been added with four large colored trouble-shooting charts, one being that of a complete ignition system.

Another colored chart shows a complete fuel-feed and carburetion system which starts with the air vent-hole in the main gasoline tank and shows how and why the gasoline is forced from the main gasoline tank to the vacuum tank which is at a higher level, thence to the carbureter, and then to the combustion chambers of the various cylinders.

The operation of the vacuum tank is clearly explained. Very few realize the importance of the small vent-hole in the gasoline filler cap on the main gasoline tank. This chart points out that air at atmospheric pressure enters here, and if it should be clogged, the entire fuel system would fail.

Another colored chart is that of the generator and its circuits, including the cut-out, and another on the starting-motor and its circuit, treated in the same manner as the ignition chart and the fuel-feed chart.

Some of the new major subjects added to this trouble-chart section of the book are Ignition, Fuel-Feed, Carburetion, Generator, Battery, Cut-out and Starting-Motor Troubles.

A very interesting, new, and revised wiring diagram of the internal parts of the Ford Electric system is also shown in colors, thus simplifying the different circuits so that one can easily trace any part of the electric system at a glance. There is also another new Ford wiring diagram in one color.

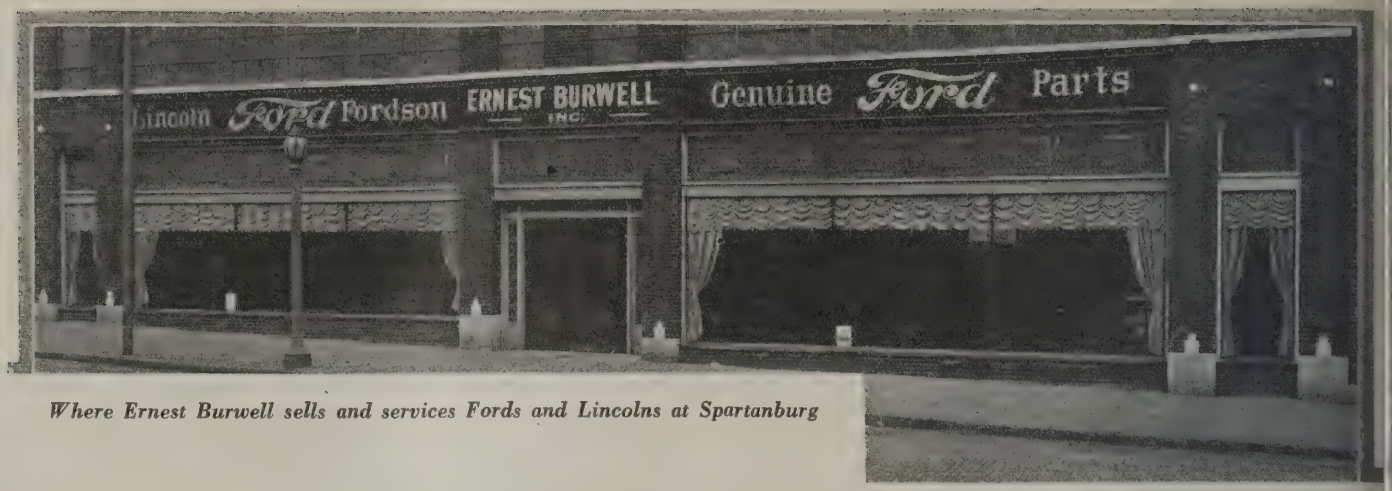
New Model Cletrac Tractor Announced

A new model, known as the Model K Cletrac, has been introduced by the Cleveland Tractor Co., Cleveland, O., listing at $1875 f. o. b.

The new machine will handle an 8-foot grader with full bite and easily pulls a three-bottom 14-inch plow. Its turning radius is its own length. Rocking motion has been eliminated by the use of seven closely assembled lower track wheels, which assembly also insures a maximum of track gripping the ground.

The new model has an instantaneous oiling system, by which a single push of the hand lever oils the track wheels without stopping the tractor.

Adjustment of the crawler tracks is quickly allowed by the use of a regulating screw. The transmission case contains all driving and reduction gears, leaving a single sprocket wheel outside to drive the trucks.



Where Ernest Burwell sells and services Fords and Lincolns at Spartanburg

Stopping Leaks That Drain Profits

Ford Dealer at Spartanburg Tells of the Simple Methods He Uses to Check Up Repairs, Prevent Losses and Keep Customers Satisfied

By ERNEST BURWELL
Ford Dealer at Spartanburg, S. C.

ARE you one of the many dealers who looks at the monthly balance sheet exclaiming, "I'll be d—d if we didn't lose money in the shop again last month"? Admit it like a man if you did, because you have plenty of company. This article does not propose to give you a magic wand to wave over the shop and make you a millionaire from shop profits, but from long experience we have found the more common leaks are the little ones which, leaking day by day, wear the shop's profits away.

Labor Leaks.—You will probably find by checking the daily activities of all of the men in the shop that you have two or three would-be mechanics who are "talking their way through," who show plenty of activity, use up plenty of time hunting for tools and "testing out cars" in the neighborhood of their "sweetie," but when it comes to making money for your shop they are not there with the goods.

A simple, accurate method for discovering the good men that you are possibly underpaying and will soon lose, and at the same time discovering the drones, is the chart pictured with this article, which is handled in the following manner. Everything done in the shop is put on a regular repair order form which is standard the country over, and the name of the mechanic who did the job is written on the repair order. If more than one, then all of the mechanics' names, and the shop foreman properly apportions the pro-rata of each man's work on that certain job, so that all the bookkeeper has to do is to credit each man's account with the amount of money taken in on him that day. At the top of the column you could post the mechanic's daily wage, which can be compared daily with the amount taken in on him.

How Much Should a Mechanic Take in?—A mechanic should double his pay; in other words, if he does not take in at least twice the amount of money paid him, there will be no profits for your investment, no dividends for your stockholders because the general overhead of doing business will surely get you if you fall below this figure and your expenses approach the average city or small town garage.

Daily Shop Report.—Many shops are struggling against the hopeless odds of a large mechanical organization designed to make a flourish and a show by giving instantaneous service to new car customers when there really is no sufficient volume of repair work coming in. This daily report made at the close of each day's work shows the number of jobs left over from the day before, the number of jobs taken in today, which added, give the total number of jobs to be completed, etc. If, for instance, there was only one job left over and there are only one or two jobs carried over to the day following, then obviously the entire amount of work brought to the shop was completed now, by referring to the bottom of the daily report where on is noted the amount of money taken in by each mechanic for that day's work, you will probably find that although every job in the shop was turned out, yet some of the men actually failed to take in enough to pay their wages that day. There is only one answer. You did not have enough repair work for the number of men you are

DAILY SHOP REPORT Date 8-15 1925

No. Jobs left over from yesterday	No. Jobs Received Yesterday	Total Jobs To Complete	No. Jobs Completed Today.	No. Jobs left over for tomorrow.	Free Jobs Today	Pay Jobs Today	No. New cars assembled Today.	Total Amount Pay Labor	Total Amount Free Labor
2	30	32	28	2	None	30	None	122.90	None

MECHANIC'S REPORT

NAME OF WORKMAN	JOBS	AMOUNT	NAME OF WORKMAN	JOBS	AMOUNT
Hubbell	6	14.50	Lee	1	1.50
Brewer	7	11.75	Cooper	1	16.50
Rice	3	4.00	Addy	1	1.50
Bannister	8	8.75	Bulick	10	12.50
Jennings	2	22.00	Duncan	9	23.40
B. White	1	5.00			
C. Shields	2	1.75			

Daily shop report which shows at a glance the number of jobs completed and on hand and the amount earned for the shop by each mechanic. If on the average the mechanic does not bring in at least twice his wages he is considered to be losing money for the shop. This may be due to the mechanic's incompetence or to the lack of sufficient work for the number of mechanics employed

nploying. You cannot afford to take snap judgment and scharge half of the force simply because you had one at day. That day's report would then suggest that you ke the surplus men and send them out to call on a desigated list of owners with cars more than a year old and licit a repair job from them. A good approach would to carry a few tools in the pocket, and offer to adjust e spark plugs, timer, or examine the man's car in the terest of "how's the old bus going" which can lead up the subject of an overhaul job or whatever else the car in need of. Possibly it will sell a set of tires, a set of nders, etc.

This idea will carry you over one or two "flat" days, it several of them means that you should either cut wn your force by discharging your force or laying off me of your men, or keep the right ones out as service lesmen as above outlined until your volume is sufficient keep the shop busy.

Service Salesman.—We maintain the constant services a live, good mechanic of long experience who can talk iplomatically. It is a hard combination to find, but the ght one will be the goose that lays your golden egg. rovide him with a list of all of your owners, which can e had from car registration lists, obtainable for any mmunity, and from your own files and service records. his service salesman should follow up every complete verhaul job to make any final adjustments necessary, nd solicit the owner's good will, recommendations and rospects in the names of his friends who would probably e interested to have the same good thing done for their ar. He should have a service approach, inquiring of the ar's welfare, and if the proper service card record is aintained, your service salesman will know exactly what ate it was that Mr. Jones was last in the job, what the odel of his car is, how old it is, etc., which information ill certainly impress Mr. Jones that you are on the job nd will win his confidence to the extent of his patronage.

The service salesman carries a pair of pliers and small ols with him for cleaning plugs, etc., for the pleasure f the owner, which one thing often brings a car for motor verhaul by reason of foul plugs, oil leaks, etc., caused rom worn pistons.

Fixing the Responsibility

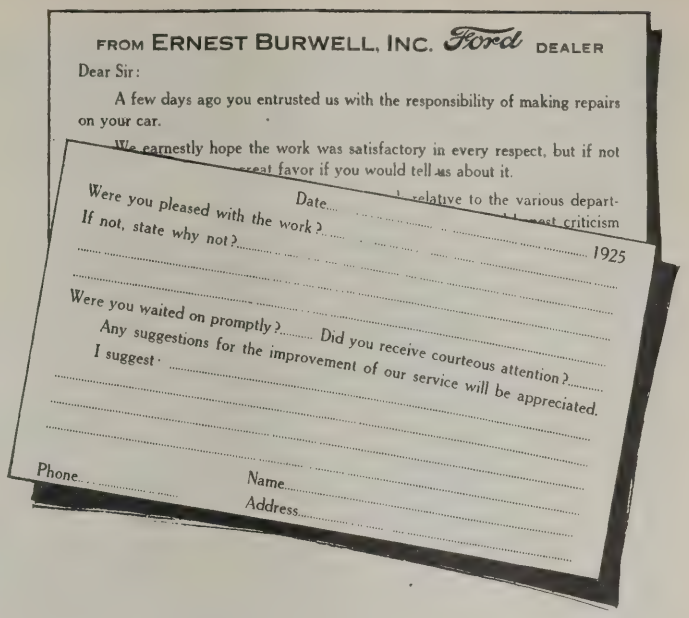
The service salesman turns in a daily call sheet with he name and address and telephone number of the perons he has called on and those who promised to bring he car down are noted. The garage foreman calls these eople on the phone reminding them that they are to ring the car in at a certain time and offering to send for , or advising that the shop is now ready to take care of by reason of our service salesman's appointment for im.

The above will not work wonders in two weeks, but onstantly followed, will begin to show real results in hirty days, and in sixty days the right man or men can eep your shop crowded.

Come-backs.—As before mentioned, the name of the echanic or mechanics doing any certain job is careully recorded on the repair order and in case of a comeack or complaint on the job, this mechanic is given the pportunity of doing the job over on his own time. The hop management loses the parts, if any be necessary rom a bad job, and the mechanic loses the labor in every nstance, which is a very good precaution against his careessness.

A return post card is sent out a few days after every epair job leaves the shop, suggesting the owner's comnents or criticisms.

Sub-Stock Room.—The average mechanic loses more han 10 per cent of his time in getting parts and supplies



Every customer must be satisfied. A return postal card goes to every owner who has had a repair job done and the printed form makes it easy for him to say whether or not he was satisfied with the work

from the stock room and if, indeed, you have no stock room organization you are losing parts and supplies that are never charged to the jobs, if you are not losing them. When a mechanic goes to the stock room for supplies, it generally means throwing his tools down, casually strolling down to the stock room on the floor below and jollying with friends or customers, smoking a couple of cigarettes, while the stock room man is finishing up with the previous customer or getting up the parts desired by the said mechanic. By the time the parts are carried back to the shop, the tools picked up and work begun again, you will find considerable time has elapsed. Now multiply this by the several trips per day every mechanic makes to the stock room.

To overcome this, we installed a sub-stock room in the shop, which carries bolts and nuts and small parts, in charge of a helper, at half the pay of a mechanic, who knows parts. When a repair job reaches the shop it goes to the combination sub-stock room and tool crib where the sub-stock keeper assembles the parts necessary to complete the said job, and keeps them in readiness for the mechanic. By the time the mechanic gets the job torn down the keeper is there handing him the parts in person and soliciting his further needs, which means that it is unnecessary for the mechanic to leave the job until it is finished. This is a big time-saver.

The sub-stock man also handles all the company's tools by the well known tool check system, and if a mechanic breaks a file for instance, or hack saw blade, he must bring up the broken pieces to get a new one. This prevents leaving tools on the running board of a car and losing them about the shop, for where there is no check on tools there is a steady loss of tools. I have personally gone to the garage entrance with a customer to accept delivery of a repair job, and found wrenches, pliers, files and the like, left on the running board and in the car, which except for the tool system would be a dead loss to the shop instead of to the mechanic whose carelessness was responsible.

In addition to carelessness and breakage, broken windshield glasses, door glasses, etc., are charged to the man whose carelessness was responsible. When a bottle of polish is handed out, no more can be obtained until the empty bottle is brought back, not necessarily to check the

man's honesty, but to prevent the bottle being left in somebody's car or in some out of the way place and wasted. A barrel of soap dispensed by the sub-stock man lasts more than twice as long as a barrel with the head knocked out that was open to all, in spite of the fact that we wash more cars. Nobody took it. It was simply wasted. There was no check on it.

Parts Leaks.—I know of shops where parts are drawn for certain jobs but are never used on the job. If you operate a large shop you do not ordinarily investigate a man's entire history, and it is poor business to trust to luck. The shop foreman should check up and see that parts gotten for a car are installed in it. Not a direct loss, perhaps, but the loss of a good customer later.

Account for Repair Orders.—All repair orders should be numbered numerically, and each order accounted for. None missing. I know of one instance where one of the mechanics was keeping up the car of a woman, and but for checking up and accounting for each repair order, it is a mighty easy matter to tear one up and throw it in the trash can, which in this case would have carried a complete set of balloon tire equipment with it.

Free Jobs.—New car service, free jobs or free service is properly credited to the man who performs the service and duly charged to the new car guarantee account. We do not "ride" the shop for anything. The same applies to work on company cars and demonstrators. Proper rent is charged the shop in a flat amount, based on the amount of floor space consumed and the relative value of such floor space considering its location.

Build Up New Cars.—We have also found that where a dealer sells a large number of new cars that a continuous unloading and setting up crew is much more economical and satisfactory than building up the new cars in the regular service station. We handle this in a separate warehouse with a crew of men that draw about half of a good mechanic's pay, but who from long practice are much more efficient and satisfactory in building up new cars than our best mechanics, and this is a money-making department. As a result of this system, we are delivering our customers the best built up jobs in this section and the difference in our build up job has been noticeable to the point that it has brought us new car sales.

It is the little things that count, and Mr. John R. Crawford, who manages our Service Department, and myself, have found that stopping these little leaks represent a dealer's best chance for a shop profit.

Reconditioning Engines an Engineering Job

"It is highly reprehensible, if it does not border on actual criminalty, for any man unschooled in the most elementary principles of mechanical engineering and possessed of no micrometer experience or equipment, to pull down and attempt to reassemble a machine built of parts finished to such exact sizes as those making up an automobile engine," says Robert C. McWane, of the National Motor Regrinders' and Rebuilders' Association, in a paper describing in detail the methods of engine reconditioning, published in full in the October number of the Journal of the Society of Automotive Engineers.

"Too little engineering attention has been given to the problem of reconditioning such engines when this becomes necessary. Cylinder wear is not the only condition with which we have to deal in an automobile engine that has given thousands of miles of service and, unless all the bad conditions have been corrected, it cannot properly be said that the engine has been reconditioned. Any operation that goes no farther than the resizing, or refinishing, of worn cylinders should not be recognized as engine refinishing.

"Regrinding of the cylinders should be done with the utmost care. The condition of each cylinder should be ascertained and the one showing the most wear should be ground first. This determines the size to which the other cylinders are to be ground, all of one block or set of blocks being ground to uniform size within limits of 5/10,000ths of an inch plus or minus, with not more than 1/1,000th of an inch taper. Pistons should be fitted with a clearance of 75/100,000ths to 1/1,000th of an inch per inch of diameter for cast iron. Piston rings should fit accurately in the grooves, and the best practice seems to call for a clearance of not less than 4/1,000ths of an inch per inch of diameter.

"Alignment is the secret of success and must be complete with all parts of the engine. Beginning at the cylinder base, we must have absolute squareness of the cylinder bores with this line and perfect parallelism of the crankshaft with the same line. Connecting-rod pins must be parallel with the main bearings. Connecting-rod pins must be straight and square and the piston-pins parallel with the crankshaft connecting-rod pins and also square with the sides of the pistons. If there is lack of alignment or of squareness at any of these points, trouble will soon develop and the life of the engine will be appreciably shortened.

"It is useless to attempt to compensate at one point for error at another. All of these points must be given the very closest attention if trouble is to be avoided."



Red Cross Helps in Accident Prevention

How are most accidental deaths caused?

The average pedestrian perhaps will promptly answer "Automobiles." If he does, he's wrong.

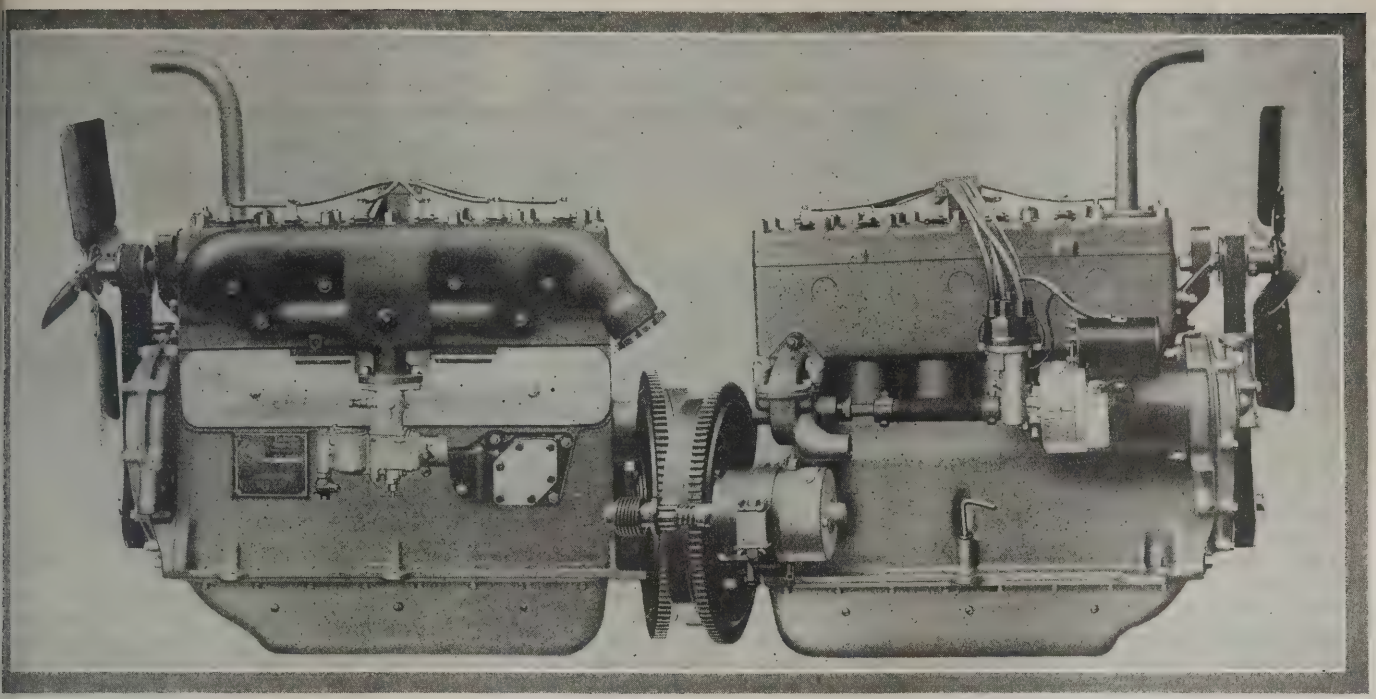
Official statistics disclose the surprising fact that falls, just plain accidental tumbles, most of them about the home, cause nearly as many deaths as automobiles. Nearly as many people lost their lives last year through accidental burns as were killed in railroad accidents.

However the automobile is not innocent. Secretary of Commerce Hoover is authority for the statement that traffic accidents alone are annually responsible for 23,000 deaths and 680,000 serious personal injuries, representing an annual economic loss of $600,000,000.

A modern battleship costs very roughly, $40,000,000. Thus the economic loss involved in these accidents would annually pay for 15 such ships; a force each year nearly equal to the present American battle fleet, which maneouvered in Hawaii this year.

The American Red Cross is doing its part. This organization during the year has trained 18,000 persons in First Aid to the Injured. In addition, to combat the accidental deaths from drowning, which annually reach into the thousands, the Red Cross this year trained 21,000 men, women, and youths in water rescue and resusciatation.

The most effective way one can begin to do his part to check this appalling loss, is to join the American Red Cross, and help broaden this already great work. The Ninth Annual Roll Call is for membership for 1926. The Roll Call begins Armistice Day, and lasts until Thanksgiving. Annual membership costs one dollar.



eft and right side of the engine used in the new Star Six. The engine together with the Star Six was described in the Oct. 22, 1925, issue of Motor Age

City Planning Only Solution to Traffic Problem

The only real solution to the problems f traffic congestion is city planning, declares Alvan Macauley, President of the Packard Motor Car Company after a survey of first-hand information from hundreds of cities in all sections of the ountry. The majority of over 230 cities f over 10,000 population which have een studied in detail have traffic probems which are steadily growing worse nder present methods of control. The omplete data and a comprehensive anlysis have been issued by Mr. Macauley n a brochure entitled "City Plannings nd Automobile Traffic Problems."

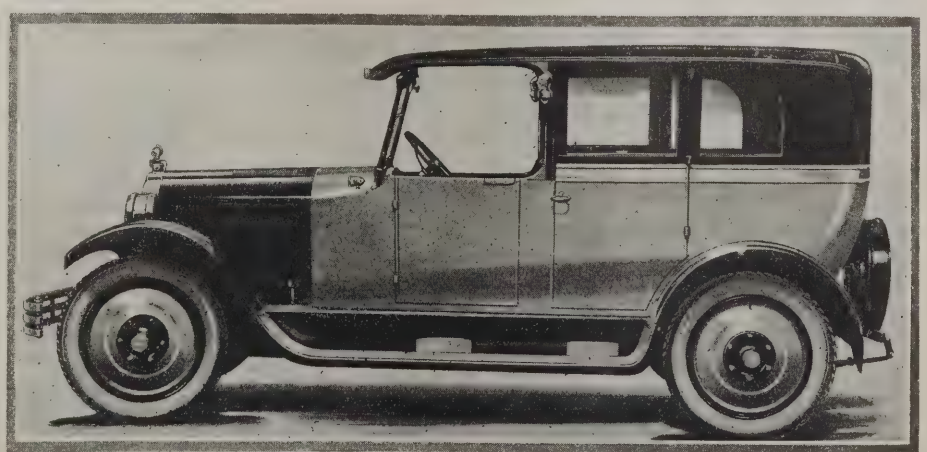
"The outstanding fact revealed," says Ir. Macauley, "is that the important raffic streets of a large proportion of the 33 cities studied are inadequate for ither the moving traffic or stationary ehicles which must use them. There s no logical relation between the width f important streets and traffic use of nem in the majority of the two hundredd cities and this situation is particularly true of the older and smaller cities. n less than quarter of the cities are the usiness streets wider than the main noroughfares; in three-eights the business streets are equal in width to the nain thoroughfares and in the remaining three-eights the business streets are arrower. In most of the cities the treets are utterly inadequate to provide arking space where it is most needed. lready a third of the cities have widend some of their streets in order to accommodate traffic, and in fully a half, raffic has become congested to such a egree that widening of streets involving normous expenditures is now urgent.

"What these conditions mean in accients, transportation, cost of living, inonvenience, extra policing and many other economic and social burdens, cannot be estimated. These burdens comprise a congestion tax, which is borne by every citizen and which increases rapidly each year until it is further augmented by the cost of street widening.

"While about half the cities report planning commissions, very few have taken these commissions and their plans with any degree of seriousness. While about a third of the cities have made some study of traffic conditions, very few have used traffic studies in planning street layout, and only about a fifth have any kind of plan for future street development.

"The smaller cities can still prevent the conditions which must otherwise be inevitable, by making full use of the experience gained by the larger cities. It is cheaper and easier to plan than replan, to build than to rebulid. The police officials and their advisors in many of the large cities have used commendable ingenuity and patience in untying traffic tangles and inventing schemes for preventing them. But the end of such measures is near—what is now needed is engineering ability and not police power. When the cities and their traffic commissions begin to find that the traffic problem cannot be solved by putting drivers in jail, they will turn their attention to the streets."

Improvements Made in Willys-Knight Taxicab



Willys-Knight taxicab which seats six passengers is completely equipped and with 32 by 4½ cord tires, lists at $2250. Among the improvements are included a lower and better braced body, curved windows at the rear which replace the former shutters and nickeled radiator bar cap which is monogrammed and illuminated

Cost of Spray and Hand Cleaning Compared

A COMPARISON of the cost of cleaning motor truck chassis by hand and by the spray method in the service station in prepartation for repairing is afforded by a survey made by an engineering firm at the White Comany service station in Philadelphia. The survey showed an average cost of $3.96 per chassis by the spray method as against $8.90 per chassis by the hand method, an average saving of $4.94 per chassis cleaned.

The survey was made for the International Chemical Co.

The equipment used for spray cleaning in this service station is comparatively inexpensive. It includes a small tank or boiler having a capacity of about 90 gallons in which steam is generated by means of a gas flame. The steam pressure, which operates the spray, varies from 60 to 85 pounds. New water is fed to the boiler by a steam injector.

The cleaning solution is mixed in a tank of about 22-gallon capacity. Five pounds of a standard commercial cleaning compound are used to 20 gallons of water. The cleaning solution is heated by discharging live steam from the boiler into it. A flexible hose is connected to the boiler and another one to the mixing tank, and both lead to a spray nozzle which the operator holds in his hand. The mixing tank is several feet above the level of the nozzle so that the solution flows to the nozzle by gravity, assisted by the suction caused by steam discharging from the nozzle. This method is said to clean the chassis so well that it can be painted if desired without further cleansing. After the dirt is all off a stream of cold water from a separate hose is played on the chassis for a short time. It is then ready to go to the repair department where its clean condition greatly facilitates the work of the mechanics.

In this survey the hand and spray methods of cleaning were compared in detail as to cost, as follows:

Spray System

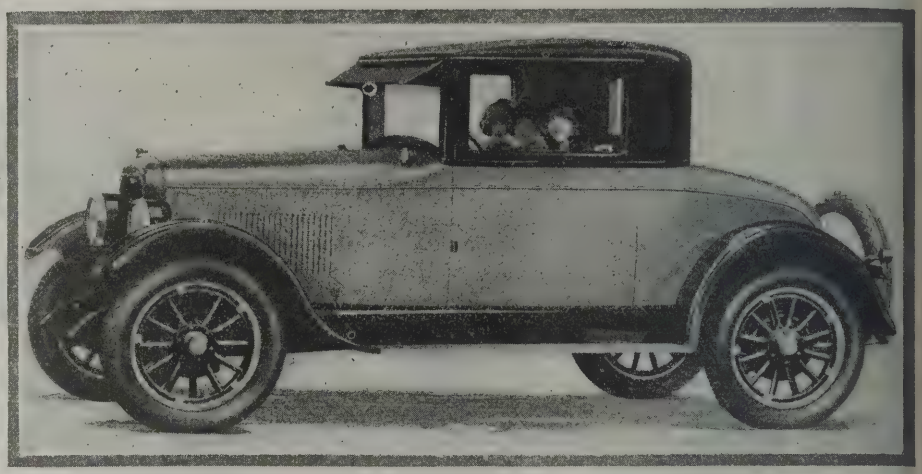
Fixed cost of spray system per truck (4 hours at 9 cents)	.36
5 pounds cleaning compound at 16 cents	.80
Gas for heating	.60
Labor (4 hours at 55 cents an hour)	2.20
Total	$3.96

Hand Method

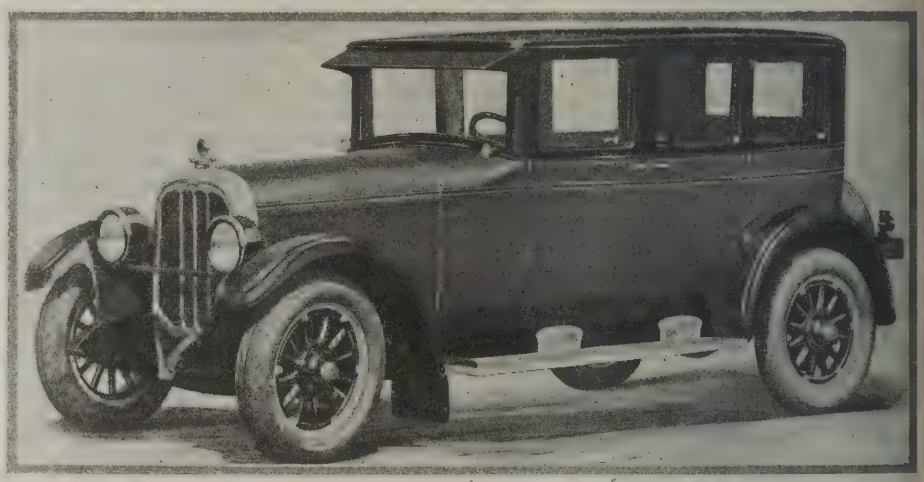
Cleaning materials (coal, oil and gasoline)	$0.35
Brooms, rags, etc	.30
Labor (2 men—7½ hours at 55 cents an hour)	8.25
Total	$8.90

In addition to the saving in actual cost of cleaning there was a saving of 3½ hours in the average time required to clean a chassis by the spray method as compared with the hand method.

New Body Models Added to Dealers' Lines



Cleveland Coupe a three-passenger model listing at $975 on the standard chassis and $1175 on the special six chassis. The bodies are completely in metal and finished Cleveland blue Duco. Upholstery is leather but gray corduroy is optional at no extra cost. Balloon tires are standard equipment but four wheel brakes are optional at slight extra cost



New Twentieth Century Chandler Sedan—a four-door five-passenger model listing at $1,490

25 Years Ago In the Automobile Industry

As Recorded In MOTOR AGE

(From MOTOR AGE of November 1, 1900)

The Automobile Show Season

On Saturday of the present week the first of a series of automobile shows will be opened at Madison Square Garden, in New York. After a brief interval will occur the second New York show at the Grand Central Palace, beginning November 17. Following this will come the exhibit at Washington, beginning Dec. 10.

An exhibition is being projected for Boston later on, and in the spring comes the big Chicago trade exhibition and the Pan-American exhibition at Buffalo, the managers of which are making diligent efforts to obtain a large representation from the automobile manufacturers.

Interest in Kaiser's Offer

Kaiser Wilhelm's offer of $10,000 in prizes for an automobile race or rather test next June from Paris to Berlin, 719 miles, is causing no little comment in trade circles. The fact that it will be more of a test than a race, the factors of speed, price, endurance and fuel consumption being considered, appeals to the consideration of American makers; for the contest will be open to the world and to the victor will probably go adoption of its vehicle by the German government for war purposes. The practicability of the automobile as proved in the recent German war maneuvers appealed strongly to Emperor William.

New Locomobile Agency

The Locomobile Co. of America is to open another salesroom and storage station in the heart of the fashionable district of West Forty-third street near Fifth avenue, New York City.

Tire Retailers to Urge Classification at St. Louis Convention

George J. Burger, President of National Association, Declares Better Definition of Dealer by Manufacturer Is Need of Industry

MORE progress toward an understanding of the term "tire dealer" and further impetus toward impressing upon tire manufacturers the necessity of using greater care in their selection and classification of tire dealers are expected to mark the convention of the National Tire Dealers' Association, to be held in St. Louis Nov. 17-19.

The whole subject of the relations between tire manufacturers and dealers has been discussed widely ever since the Association was organized. George J. Burger, president of the Association, admitting that the tire dealer's methods are not beyond criticism, but insisting that the dealer is willing that his methods should be corrected wherever necessary for the good of the industry as a whole, lays emphasis upon the fact that in other successful lines of business the specialist is the successful merchant.

"We believe," said Mr. Burger at the offices of the Association in New York City, "that eventually the tire manufacturer will realize the wisdom of cooperating heartily in the movement to classify tire dealers as specialized merchants. Our industry is one of the largest in the United States. The number of tire dealers lies somewhere between 100,000 and 150,000. Analysis of the Department of Commerce survey as of April 1, 1925, shows that 51 per cent of these dealers carry very few tires in stock. At that date they should carry larger stocks than they would ordinarily later in the season. What I am trying to drive at is that the manufacturer should be more particular in his selection and classification of tire dealers. We shall try to settle this point at the convention.

Solicitation of Commercial Accounts

"Another important topic will be the question of commercial accounts. For years the dealer has met with this form of competition. The manufacturer has advised the dealer that there was one class of business that the manufacturer felt was his own, namely, the solicitation of so-called national and commercial accounts. The reason given by manufacturers as to why they classify these accounts, as to prices, just as they classify tire dealers, is that these larger users of tires would not buy from the average dealer.

"We regard this as a weak reason. The same accounts, in buying other lines, in a great many cases must buy either through an agent, dealer or jobber. Why should there be an exception in the tire business?

"This year the majority of rubber manufacturers have sent out into the field special representatives to solicit such accounts. They say that if one manufacturer stops this practice, others will also stop it, but they are waiting for a leader to make the move first. Meanwhile the dealer loses business that rightfully belongs to him.

"In years gone by we have been more or less advised as to who these accounts were, but today, in view of the special



George J. Burger, president National Tire Dealers' Association

sales efforts by manufacturers, the average small retail commercial account owning one vehicle or more is put in e same class as the national and commercial accounts. This form of competition by the manufacturers receives serious consideration at our convention.

"In addition to this competition a new form has cropped up, a very important one which may or may not have a bearing on the future of tire dealer business. This will also be studied at the convention and I expect definite action concerning it will be taken.

"Dealers handling truck tires are fewer than those handling pneumatic tires. To a certain extent they have a fixed investment in their business in the way of equipment and national and commercial account solicitation by the manufacturers cuts into that business very seriously. A truck tire dealer, more or less, must give 24 hours service and must be in a position to give immediate service in order to maintain his account. The effort to settle some of the serious problems confronting truck tire dealers will be made at the convention.

"We may also adopt plans as to future qualifications of tire dealers desiring to join the Association. It is encouraging that so far this year many rubber manufacturers have shown much interest in the Association and some have encouraged their dealers to attend our convention.

"As to tire dealers' stocks, inventories on July 1 showed a considerable increase over the same period of 1924, but on Sept. 1 these high inventories had begun to show a gradual reduction.

"There is no question but that dealers have taken advantage of the various increases in tire prices and protected themselves accordingly."

Views on Rubber Exchange

Asked for his opinion as to the plans of F. R. Henderson and others to organize a rubber exchange in New York City, Mr. Burger said:

"As dealers we are interested in seeing that some settled plans are made by which we may know what prices of crude rubber will be for some set time in order that we may be in a position to carry adequate stock and take the gambling element out of this business. The fact that the majority of manufacturers protect their dealers 30 days from date of shipment means that the dealer must be very conservative as to his stock and sometimes this is a handicap, especially for those dealers who are many miles from the source of supply. In their cases the 30-day price protection means that a dealer must make every effort to turn over his stock within 30 or 40 days.

"But if there were some set price for a period of some months, it might have a beneficial effect in enabling dealers to carry adequate stocks in normal times. If a rubber exchange could obtain such results, I believe it would be a help to the whole industry. But if the exchange instead should further increase the gambling element in the situation as it exists now, I do not see how any good could come from it, at least for the industry as a whole."

Letters to the Editor

What Is a Cutout?

Chicago Ill.

To the Editor of MOTOR AGE:

Some folks have the wrong impression concerning a muffler cutout (engine tester and carbon outlet valve), so we ask, "Does Mr. Motorist pay from one to seven dollars, according to his pocketbook, just for an appliance to make noise while he is driving?" We hardly think so, especially in these days of quiet motors, when he prides himself so much on the silent running qualities of his car. Then, just what is a cutout, and why does he put it on?

First of all, the muffler cutout, or tuning-up valve, as it is sometimes called, was never intended by the manufacturers to be a noise maker, and in all of their advertising and merchandising, they have sought to educate the motoring public to the many advantages of an engine tester and carbon outlet valve and to discourage the improper use of their product.

To the motorist, a cutout is invaluable for many reasons. With such a valve on his car, he can tune up his engine at will; by regular test he can tell whether his fuel mixture is too rich or too lean, whether all of his spark plugs are firing properly and whether compression is right in all cylinders. It enables him to locate trouble before it has developed to a serious extent, and ofttimes saves the necessity of a complete overhauling. There is no other way to "listen in" or check up on the motor, except the troublesome, expensive one of removing the muffler.

Increases Motor Efficiency

The use of a good muffler cutout increases the efficiency of the motor. A thorough test made by disinterested parties at the Engineering Department of Ames College, Ames, Iowa, with three of the leading makes of cutouts proved this conclusively. For example, who ever saw a racing car with a muffler attachment, or an airplane so equipped? Nobody, because these require every ounce of power they can generate and the muffler, because it causes back pressure on the motor, cuts down its power or efficiency. A good muffler cutout, however, will relieve this situation, and while we do not advocate its continuous use on the road, there are times when opening the cutout will give just that extra power needed to top a hill on high, or to pull through a mud hole. In such cases, the necessity of such a device cannot be denied.

Again, instead of blowing it into the muffler, a good carbon outlet valve (cutout) affords an easy means of discharging accumulations of carbon, soot, burned grease, dirt, etc., which have been previously loosened by carbon remover. The observation of any muffler after it has been in use any length of time will show it thickly coated on the inside with soot and carbon, which, of course, is detrimental to the motor.

Every state got its share of the million or more cutouts sold last year in the United States and the recent tendency toward enactment of legislation in a few of them, prohibiting the installation or use of the cutout, not only works injury to the motorist, but involves an economic situation as well. It discriminates against certain legitimate lines of goods and such laws will injure every jobber and dealer in automotive equipment. They will not only lose the investment which they already have in this merchandise, but the profits that would ordinarily accrue from the sale and servicing of this line, as well.

Because of the number of cutouts sold each year, it is logical to conclude that motorists buy the cutout, not as a noise maker, but because of fuel value received. They install it because they know, from experience that it will pay for itself many times over in fewer and lower repair bills and in increased efficiency, which, of course, means more miles per gallon of gas.

We believe that state legislation is unnecessary, because nearly every municipality has suitable regulations for the use of the cutout. These laws, properly enforced, would soon do away with the few offenders, who, likewise, are flagrant violators of the speed ordinances, head light laws, etc. Might just as well do away with sun visors because some unthinking motorist turns his down too far, causing an accident due to restricted vision. By all means punish the offenders, but do not make it unlawful to have a cutout on the car, for the thousands and thousands of others who obey the existing laws and appreciate the proper use of this necessary appliance.

J. J. HARTIGAN.

Southern Illinois Prospers

Harrisburg, Ill.

To the Editor of MOTOR AGE:

Glad to inform you of the automotive improvement in Southern Illinois, especially in Harrisburg.

Recently the Rogers Auto Supply Company moved to their new location, 24 E. Jackson Street, with their $15,000 worth of parts and accessories. This is the most complete and largest accessory house south of Danville and St. Louis, in Southern Illinois.

The Harrisburg Motor Sales Corporation moved into their new modern two story building on East Poplar Street, on Route 13 in Harrisburg. This company handles the Hudson and Essex, and Willys-Overland, and maintains the most equipped shop and service station in this part of the state. The building is fireproof and modern in every way. It cost $35,000 to build it.

Tourists returning from Florida are complaining that they are charged exhorbitant prices for tires in Florida. In one case a reliable man says he paid $50 for a 31x4.25 Kelly-Springfield balloon tire.

Let's go to Florida to sell accessories and tires!

Automobile sales are progressing very nicely in Southern Illinois. Last half of August more automobiles sold than any month since April this year. Month of September was one of our best months this year. Prospects hvae been holding back waiting for changes in verified models, and price changes. The coal mines are starting to operate all over this part of state, on which our selling greatly depends.

Yours truly,

AUGUST ZVARA.

Favors War Tax Repeal

COMMITTEE ON WAYS AND MEANS
HOUSE OF REPRESENTATIVES

Washington, October 17, 1925.

Mr. Sam J. Shelton,

My Dear Mr. Shelton:

I am just in receipt of your letter of the 15th and copy of MOTOR AGE.

I favor repealing all the so called war sales taxes, which include automobiles, parts, etc. The question of their repeal will depend largely upon the amount of reduction in the income and estate taxes.

I am very glad to have had your views.

Very truly yours,

JNO. N. GARNER,
15th Dist. Texas.

Hoover Calls Radio Conference for Nov. 9 at Washington

Whole Field of the Industry Will Be Studied at Fourth National Meeting

WASHINGTON, Oct. 26.—Practically the whole field of radio problems will be delved into at the Fourth National Radio Conference, details of which were announced by Secretary Hoover. The conference is scheduled to begin at 10 a. m., Monday, Nov. 9, in the conference room of the U. S. Department of Commerce. Secretary Hoover will personally greet the delegates and outline the program to them.

The conference will include representatives of all radio activities, viz.: (1) Broadcasting stations; (2) Radio magazines; (3) Newspapers having radio departments; (4) manufacturers of complete radio receiving sets; (5) Organizations of broadcast listeners; (6) Amateur organizations; (7) Commercial and radio stations; (8) Radio trade associations; (9) Press associations, and (10) the government itself will be represented.

Six national groups of organizations have been invited to have representatives present, to-wit: Institute of radio engineers; American Institute of Electrical Engineers; American Steamship Owners Association; U. S. Shipping Board; Farm Organizations and the National Electric Light Association.

Master Control Thermiodyne

THIS instrument is the product of the Thermiodyne Radio Corporation, 1819 Broadway, New York. It is a six tube receiver having three stages of thermionic frequency, detector, and two stages of audio frequency amplification. The set was designed to operate on 201A type tubes and on either indoor or outdoor aerials. A compartment is provided in the cabinet for housing the "B" batteries. Price without accessories, Eastern and Central states, $150; Rocky Mountain and Pacific Coast states, $160.

Radio Advertisers' Book

THE 1925-1926 Radio Advertisers' Data Book, a volume of rates and other information for national advertisers, has just been issued by its publishers, Arthur Rosenberg Co., Inc., New York.

Several features which were not in the 1924 issue have been included in the current edition. The contents include advertising rates, circulation and other data regarding Radio Consumer and Trade publications, as well as of all the periodicals of the allied trades, including Automotive, Electrical, Hardware, Music, Talking Machine and Sporting Goods.

The Radio dealer and jobber sales situation, and the Radio manufacturer's merchandising and advertising problems are treated both editorially and graphically.

Several of the more thorough Radio trade surveys are summarized, and a complete picture of the industry's present development and estimated future growth is presented. The United States, Canada and the foreign markets are covered. In the newspaper section, over three hundred papers are listed, giving the circulation and Radio news features. the different states.

Traffic Officer Listens To World's Series Reports

Traffic Officer Tommy O'Connor was on duty at Fifteenth and Welton Sts., Denver, but that didn't keep him from being in touch with the World's Series games. Officer O'Connor is a fan for both radio and baseball, and a first rate traffic cop as well. He rigged up a portable set, with antennae under the foot rest, and battery box inside it on the pavement. Holding a receiver to one ear, he kept track of the games, and directed traffic with his free hand.

The papers cover the leading American jobbing centers.

A full-page map of the United States shows the relative "Radio strength" of the different states.

New Book on Radio

"ECONOMICS of the Radio Industry," is the title of a new book by Hiram L. Jome, Professor of Economics at Denison University. The aim of this book is to show how the radio industry is working out its individual problems with the business organization, marketing, financing and relation with the public. One of the sections of the book is devoted to the problems facing the organizations rendering radio service. It discusses the problems of efficiency in radio service connected with broadcasting, copyright, patents, public policy and control. An interesting feature is the appendix, which contains the views of prominent experts as to the place and future of radio, and also a list of important events since 1827, furnishing a chronological compendium of the outstanding happenings in radio since the first crude experiments. The book is published by A. W. Shaw Company, Chicago, at $5.00.

Radio Instruction Book

A NEW 48-page instruction book (volume 2, Part No. 7852) covering every important phase of installing and operating Atwater-Kent receiving sets and radio speakers is now ready for distribution. One of these instruction books is included in each receiving set or may be purchased for 50 cents. One section of the book shows recommended method of installing fuses between the batteries and battery cable going to the set.

300 Attend Convention

THE recent convention of Atwater Kent radio dealers, held at the Hotel Whitcomb in San Francisco, was attended by more than 300 radio men.

The meeting was conducted by Ernest Ingold, Inc., radio and automotive wholesalers of San Francisco. The Ingold Corp., wholesales Atwater Kent products in the Metropolitan area of San Francisco.

Erla Circloid Five

THE Electrical Research Laboratories, 2500 Cottage Grove Ave., Chicago, is the manufacturer of this five tube radio instrument which employs radio frequency amplification. A special feature of this set is the circloid or balloon inductances which are used. Three tuning dials are provided. The standard cabinet which is of mahogany, lists at $69.50. The instrument is also made with a De Luxe cabinet of two-toned French walnut, list price, $77.50.

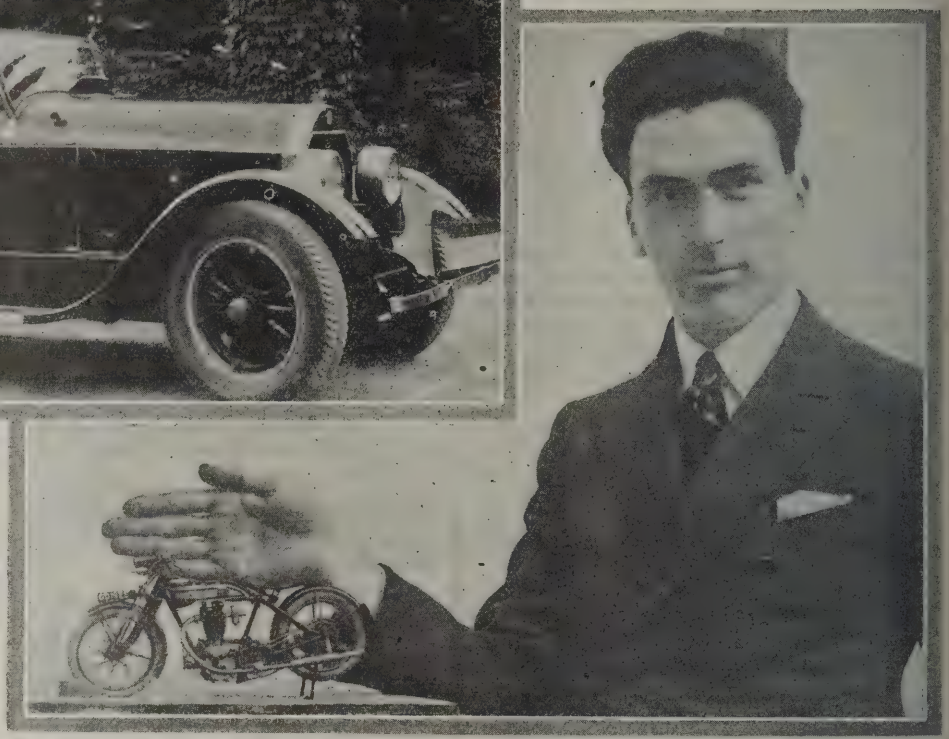
Heads Radio Association

A. J. RAETZ has been re-elected vice-president and general manager of the Radio Corporation of Wisconsin, an organization composed mainly of automotive electrical firms in Milwaukee, banded together for the purpose of jobbing and wholesaling radio equipment. Harry W. Bolens of Port Washington, Wis., was made president of the association and George I. Seltzer, secretary-treasurer. Mr. Raetz has been manager of the corporation since its organization about three years ago, and has announced the organization will continue on a strictly wholesale basis.

MOTOR AGE'S PICTURE PAGES



AN AUTOMOTIVE SETTING. Charles M. Schwab, well-known steel man, with Mrs. Schwab and their niece, who are sitting in a Stutz 6-95 roadster with custom-built body. Mr. Schwab is the principal stockholder and a member of the board of directors of the Stutz Motor Car Co. of America, Inc.

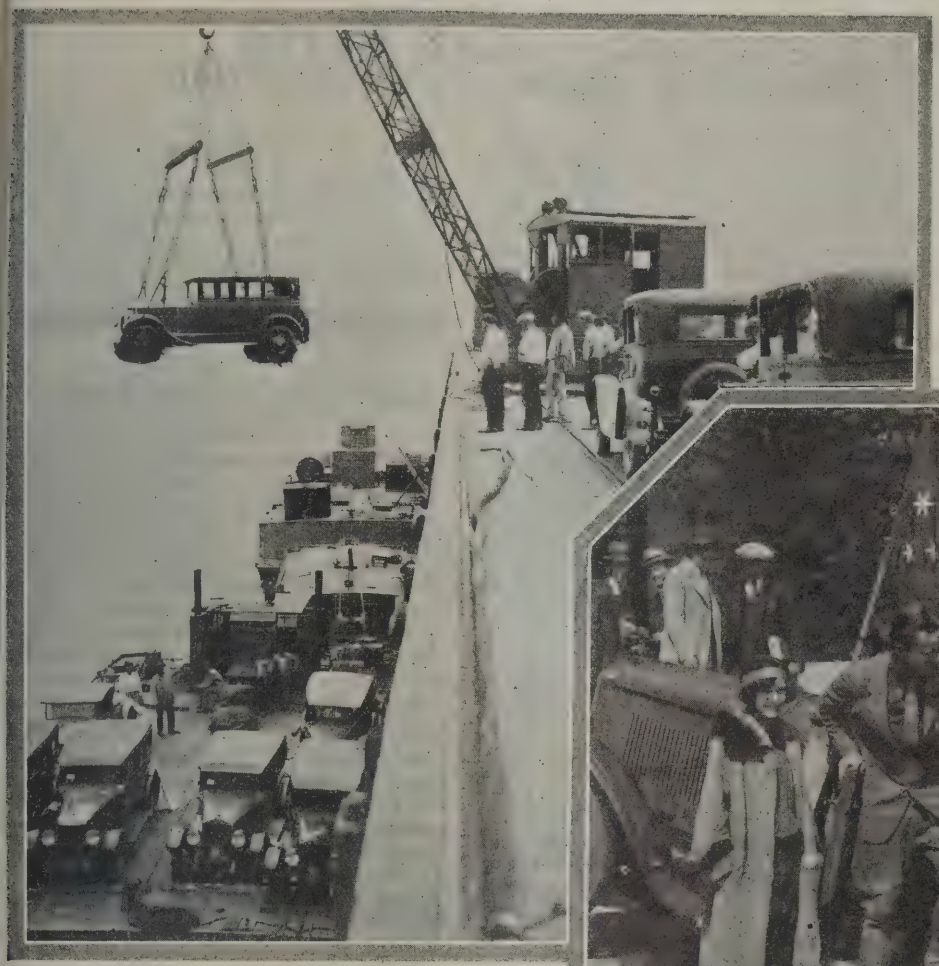


SMALLEST MOTORCYCLE IN WORLD. It was made by G. W. Dicker, entirely by hand, and all the working parts are moveable.



SERVICING SET TO MUSIC. On the second floor of this service station, opened at Coral Gables, Florida, motorists may dance, dine, or procure refreshments while waiting for their cars.

OF AUTOMOTIVE INTEREST



ON THE FATHER OF WATERS. At the left is shown a Moon car being lowered to barge at St. Louis for shipment to Minneapolis via the Mississippi.



IN WILD WEST FASHION. D. M. Tomlinson, who piloted a Velie from Philadelphia to San Francisco in behalf of the Sesquicentennial Exposition in 1926, drove the car up the courthouse steps and extended an invitation to all Californians to attend the big doings. Mrs. Tomlinson accompanied her husband on the long drive. Mr. Tomlinson reports that during the entire trip, a distance of 5,503 miles, only two minutes were spent on adjustments, which were on the timing. The Tomlinsons were en route 30 days.



HERALDING THE NEWCOMER. This unique method was adopted to introduce the Ajax car to the residents of San Diego and proved to be an effective means of advertising the advent of the new member of the automotive family.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▪ ELECTRICAL ▪ FLAT RATES
SHOP ▪ LEGAL ▪ PAINT & TRIM ▪ ACCOUNTING

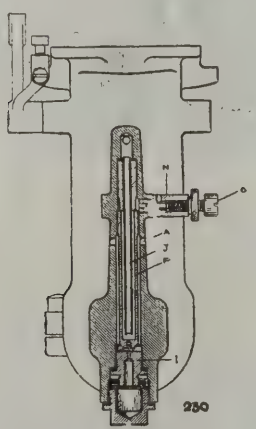
How the Idling Device Works

Q. Explain the action of idling jet on Zenith carbureter for 490 Chevrolet. This seems to be a plunger that works up and down into vacuum but I cannot quite comprehend its action.—Anaheim Reader.

The specifications of the idling device used on all models of Zenith carbureters with slight modification is as follows:

At low speed when the butterfly throttle valve (see Fig. 101049) is nearly closed, the main jet gives but little or no gasoline, but there is considerable suction on the edge of the butterfly and gasoline is drawn through the idling device. This device is shown at Fig. 230 and consists of the idling tube "J" within the secondary well "P" inserted in the first well, at the bottom of which the compensator "I" is located. "I" is opened to the atmosphere through hole "A". Gasoline from the compensator "I" flows through the calibrated hole in the bottom of the secondary well "P", which in turn is adjustably opened. The idling tube "J" leads to a hole located at the edge of the butterfly throttle valve where the suction is most strongly felt. This suction lifts the gasoline through the idling tube and in combination with the air passing the butterfly valve forms idling mixture.

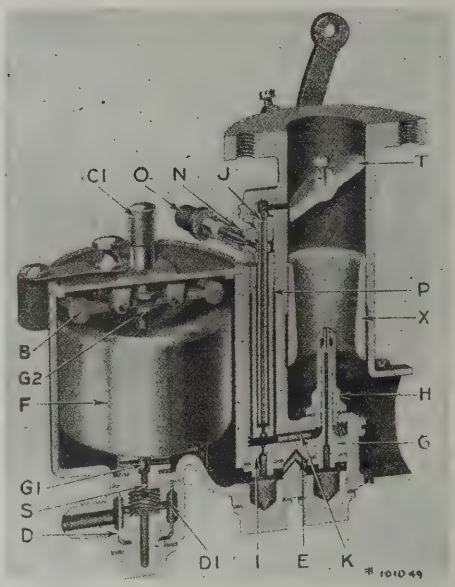
Q. In two piece rings it is my understanding that the inner or cone shaped ring should not bear against cylinder wall



Low speed air adjustment of Zenith carbureter on Chevrolet

but should bear against beveled surface of outer ring, this making the complete ring fill the ring groove in piston and should ring groove be faced out too wide so that inner ring bears against cylinder wall it would destroy its usefulness as a preventive of oil pumping. Am I right about this?

The correctness of your theory depends entirely on the construction of the ring. Where the ring is a two-piece construction, the amount of expansion secured in



Sectional view of Zenith Chevrolet carbureter

the ring groove will depend on the size of the ring as regards its diameter. Theoretically the inner ring element used as a wedge should not touch the cylinder wall but should exert its full effort against the beveled surface of the outer ring. The rings with which we are familliar, operating on the principle of filling the ring groove, are generally of the three piece type in which it is impossible for the inner ring to communicate or contact with the cylinder wall.

Q. Please give valve timing for 1916 and 1918 Oakland.

On the Oakland 6-cylinder cars, 1916 to 1919 inclusive, the exhaust valve closes 7½ degrees after upper dead center. 7½ degrees on the regular Oakland flywheel is the equivalent of $\frac{28}{32}$ of an inch measured on the rim or face of the flywheel. The inlet should open 7½ degrees after upper dead center or measured on the flywheel $2\frac{5}{32}$ in. past top dead center mark.

CAN THE ENGINE RUN FROM THE SPARK

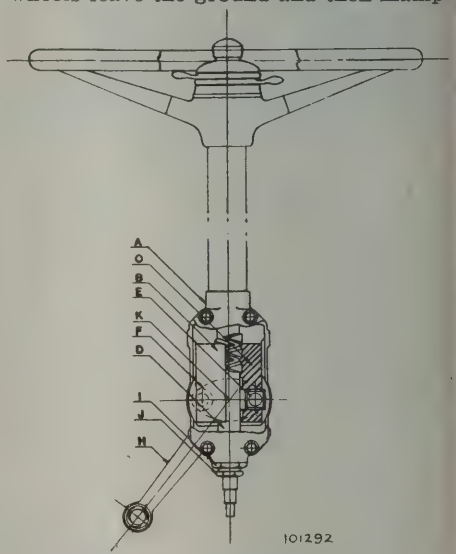
Q.—Why does oil burn in the combustion chamber at the time of explosion and why does it not burn from the cylinder walls at the same time?

The oil will burn whenever the temperature is above the flash point of the oil. Of course when the piston is in the up position and the spark occurs the cylinder walls are protected for the time being. As the combustion is not instantaneous there is, however, some flame in the cylinder as the piston goes down, so that the cylinder walls are exposed to this heat. It must be remembered, however, that the water jacket around the cylinders tends to keep them cool. On the other hand the piston working up and down is constantly working fresh oil up on the cylinder walls, so that even if a slight amount of carbon tends to form it will be rubbed off by the polishing action of the piston moving up and down.

Adjusting Lavine Gear on Courier

Q. Please give me the following information concerning 1923 Courier: How is the Lavine steering gear on this car lubricated and adjusted for wear? Give photograph if possible.—New Zealand.

To remove lost play from steering wheel loosen adjusting lock nut "I" by turning anti-clockwise, then turning adjusting screw "J" clockwise a small fraction of an inch. Then tighten adjusting screw nut "I" but be sure to hold adjusting screw "J" as you have previously set it. The adjusting screw should never be tightened up so much as to bind the gear. The adjustment is best made by jacking up the front of the car until the wheels leave the ground and then manip-



Sectional view of Courier steering gear

ulating the adjusting screw until excess play is taken up and the steering wheel is easy to turn.

See that all axle arms, king pins and drag link connections are properly lubricated and adjusted, for very often lost play develops in these connections as well as in the steering gear itself.

The steering gear is lubricated by removing the plug in the lower portion of the gear and forcing in 600-W. It is not necessary to entirely fill the housing, for it is better to have some room so that the lubricant can travel and float around in the housing.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

This Is Unusual—No Side Street Entrance

Q. We contemplate building a garage in the very near future and are enclosing a rough sketch of the floor plan. Any information you can give us will be appreciated. Our plot of ground is 115x150 and we want to build full length and only one story but only about 66 ft. wide and not over 70. This will allow us considerable yard space which is important. Would prefer to have shop in line with stockroom but would probably be too noisy for office and would put the entrance to storage too far back. If we do not have enough storage space we could purchase 50 ft. at back facing the side street.—Great West Implement Co. Ltd., Swift Current, Sask.

The only cause we have to fear this plan will be unsatisfactory is on account of the limited amount of storage space. There seems to be no way to better this condition, however, except at the expense of the shop or office.

You have not indicated exactly how large the shop should be but we have followed instructions on the office and showroom. The washrack is available for storage of three cars and they could be stored two deep or six altogether. The shop could be shortened and room made for four or six more. The best plan, however, would be to add the 50-foot strip at the back that you say you can get, then with two rows on one side of the aisle and one on the other you could store 21 additional cars; but that again would be adding to the cost of your building.

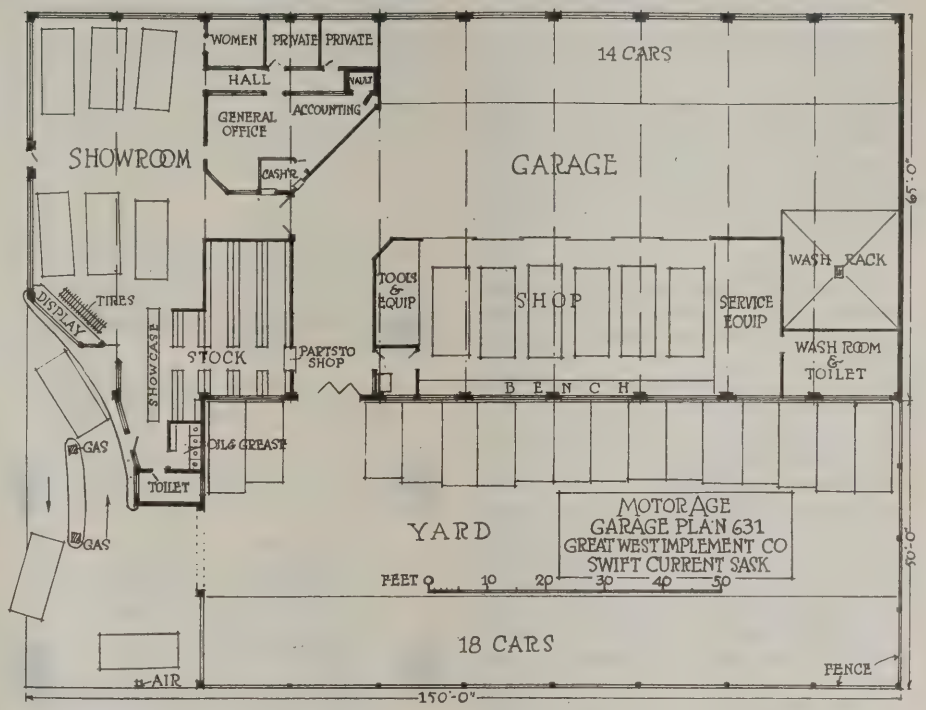
The office could be put upon a balcony between the second and third trusses and the garage extended out to where the front of the office now is shown but this would increase the storage only by four cars and would not be so good when there is more space available.

Some provision should be made for skylight to illuminate the interior of this building, the back part of the shop and the garage aisle would be rather dark otherwise. The washrack also needs more light than has been provided and a little light in both stock room and office would make work easier and the employees consequently more efficient.

We have provided one toilet for filling station customers, but the space could be made into two small ones if that seems preferable. A small stock room for oil and grease keeps this messy material out of sight, though handily located.

We presume you will use the yard for the assembly and storage of new and used farm implements but we have shown it in terms of car storage, merely for convenience, it seems a very good proportion for either purpose.

Your sketch shows a small elevator to basement but we would discourage the use of a basement for anything but live storage, heating plant or possibly used car display room, but the latter is excusable only where main floor space is not available. Parts should not be stored in a basement as they rust rapidly in the summer months when they are coated almost constantly with moisture condensed from the air.



The yard idea is a good one and is popular in the South and West. If this firm is obliged to expand and use the yard for building it may find the side street more suitable for car entrances.

LEGAL QUESTIONS ANSWERED

By WELLINGTON GUSTIN

of the Chicago Bar

SELLING UNCLAIMED CAR

Q. We are located about two blocks from the Summerdale Police Station. On June 6 of this year the police towed a Buick touring car into our garage and asked us to park this car here for a few days and to notify them immediately if anyone should call for same and not to let the car out without their consent. This car is still here.

We have the former address that the police gave us but there is no such place. They advise us to advertise same in the paper several times and then dispose of same. We would appreciate if you would advise us how we are to proceed in disposing of this car and what must be done with any money over and above our charges. This is a 1923 touring and is in pretty good shape and should be worth considerably more than our charges.—C. R. Schwarz, Summerdale Garage, Chicago, Ill.

You may trace the license number, etc., by writing the Secretary of State, Springfield, Ill.

As for disposal of the car in question, Chapter 141, Section 3, of the Illinois statute dealing with unclaimed property reads: "All persons . . . having a lien on personal property, by virtue of an Act entitled . . . may enforce said lien by a sale of the said property on giving to the owner thereof, if he and his residence be known to the person having such lien, ten (10) days notice in writing of the time and place of such sale, and if said owner or his place of residence be unknown to the person having such lien, then upon his filing his affidavit to that effect with the clerk of the county court in the county where said property is situated, notice of said sale may be given by publishing the same once a week for three (3) successive weeks in some newspaper of general circulation published in said county, and out of the proceeds of said sale all costs and charges for advertising and making the same and the amount of said lien shall be paid, and the surplus, if any, shall be paid to the owner of said property."

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

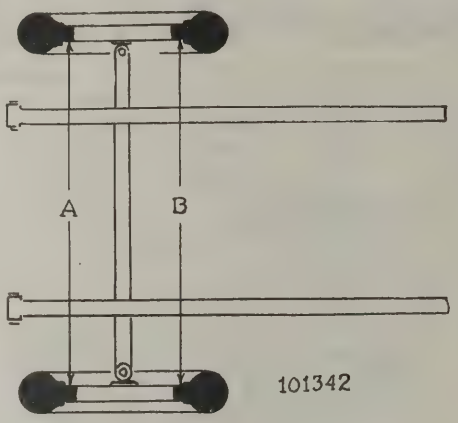
Three Dimensions to Check on Ford Front Axle

Q—I am having trouble regarding the alignment of the front wheels of Ford coupes. The balloon tire jobs are the worst. They wear one tire off as if it was skidding sideways all the time. We align wheels and do everything, but cannot stop it. Would like all the dope you have on it, also the measurements of everything to remedy this difficulty. The wheels also get to shimmying right away.—O. F. Marquid, Aledo, Ill.

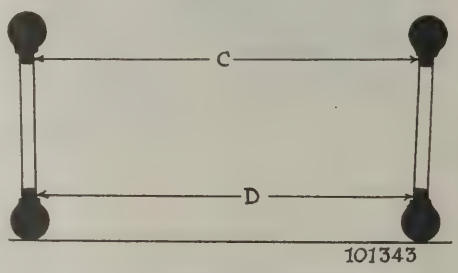
We are showing three illustrations which indicate the way measurements should be taken. In the first illustration where we are looking down on the top of the car the dimension A should be from ⅛ to ¼ in. less than the dimension B, these measurements being taken from the felloe of one wheel to the felloe of the other measured at a point the same height as the center of the wheel.

In the next illustration we are in front of the car and looking at the front wheels. In this case the dimension D should be 3 in. less than the dimension C. Here again we are measuring from the felloe, this time back far enough so as to be in line with the center of the wheel.

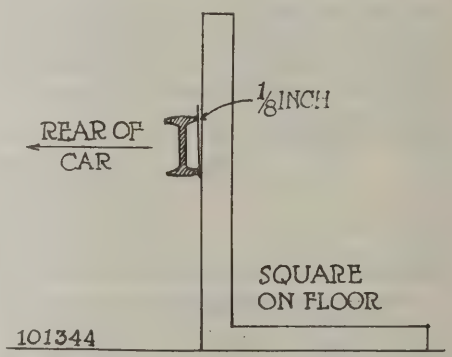
In the third illustration we have the car on a perfectly level surface and use a two foot square setting on the floor, to check the axle at the center. The upper portion of the axle should be back ⅛ in. as compared with the lower edge of the I beam.



Checking the toe-in of front wheels on a Ford



Measurements which determine the camber of the front wheels



The caster of the front wheels is gaged with a carpenter's square

CORRECTION ON GARDNER OIL PRESSURE

We notice in the October 8 issue of Motor Age on page 26, an answer which you gave on the proper oil pressure for a 1924 Gardner stating that the oil pressure at average speed is 2 to 7 pounds. This statement is incorrect. The proper oil pressure at idle is 2 to 10 pounds, depending upon whether the oil is hot or cold. Lycoming Mfg. Co., W. H. Beal, Sales Mgr., Williamsport, Pa.

We are very grateful for having this inaccuracy brought to our attention by the Lycoming company.

MAKING AN OAKLAND RACER

Q. We are building an Oakland 6-44 into a race car. So far we have shortened the wheelbase to 104 in., set the motor down 4 in. in the frame, installed Boyle valves and have three carbureters. We used 29 by 4½ wire wheels, 4½ to 1 gear ratio and have cut the flywheel to 40 lbs. Would like to have your suggestions on this car.—James D. Smith, Quick Service Auto Laundry, Clarksburg, W. Va.

In any race car high compression is essential. This means that a fuel compound of some sort must be used in order to prevent detonation which would occur with ordinary gasoline. In some cases benzol or a mixture of benzol and gasoline is used. Apparently the compression can be increased in this motor by planing from $\frac{1}{16}$ to ⅛ in. from the top of the cylinder block. You should study the construction carefully, however, to see what effect this will have and whether it will cause any interference with the spark plugs.

It would also be well to check the clearance between the valves and the top of the piston when the piston is in the up position. For racing it is desirable to have a camshaft on which the intake cams have a longer dwell than is customary. This means that the intake valve should stay open till approximately 80 degrees past bottom dead center. This is a matter of experiment, however, and we do not know that this has been worked out on Oakland cars. Names of concerns which specialize on racing equipment will be given by separate letter. Another desirable feature in a race car is to have the weight on all four wheels the same, also to have the weight above and below the axles the same, so that the car if turned on its side, would theoretically balance on the hub caps.

All Engines Overheat in This 1917 Car

Q. We have a 1917 Ford touring car that overheats. We have tried two new engines in this car, one from a 1920 Ford and the other from a 1918, but did not change the magneto and transmission. In the last one we also installed new pistons. An extra oil pipe on the outside did not improve the condition. We have used a device for recharging Ford magnets in the car and find it makes the magnets so strong that the lights burn out. We believe this also accounts for the overheating, as it makes too hot a spark.—Charles Skellenger, Western Trail Garage, Plevna, Kansas.

We would recommend your checking the ignition timing. Turn the engine over by hand until the piston has been to its top position and has barely started down. At this instant the coil which supplies spark to the No. 1 cylinder should start to buzz if you have the key turned to the battery position. This will give you enough spark advance so that if heating does occur it will not be due to a condition of this sort.

We do not know what kind of water you have in Kansas but if the radiator has not been replaced or a new one tried it is possible that this is the trouble and that the radiator pipes are coated with lime or some other deposit. The high voltage of the magneto should not cause the engine to overheat, for the heat of the spark is infinitesimal as compared to the heat liberated by the burning fuel. If the carbureter is set too lean, however, this will tend to cause overheating. Incorrect setting of the camshaft, or valves which stick will cause heating. If you have the magneto so strong that it continually burns out lights, it is possible that you can weaken it slightly by taking a piece of wire and flashing from the magneto post to the frame of the engine for an instant while the engine is running. This will allow the magneto to deliver a heavy short circuit current which should have some demagnetizing action on the magnets. If this does not work you can try the use of a 6-volt battery connected the wrong way as compared to the connection made when recharging the magnets. Another means of protecting the lights from burning out is to use the resistance units which are wound on a magnetic frame. These may be obtained from authorized Ford dealers and if one is not in use on the car in question it may account for the trouble in the lights.

Clearing Up Electrical Trouble

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Weak Coil Steals Engine Power

Q.—In your February 5th issue I noiced that Mr. Simon Banaszak of Beaver, Vis., writes regarding faulty performnce or poor acceleration above 38 m.p.h. have had two cases very similar and in oth it was due to a faulty ignition coil.)ne of these cars would not go over 32 n.p.h. and after replacing the coil it ?ould do better than 50.

Your experience should be helpful to IOTOR AGE readers, but we wish to)oint out that there is a test which will etermine whether the ignition is at fault t high speed or not. The test requires roll of heavy paper or a mailing tube uch as blue prints are mailed in. To nake the test remove one of the wires rom the spark plug and have someone old it about $\frac{5}{32}$ in. from the engine. Then un the engine and increase the speed by pening the throttle so as to imitate the ngine speed that would be obtained at 0 m. p. h.

While this is being done the paper tube s used with one end near the spark ?hich is jumping to the engine and with he other end of the tube held at your ar. The ear is much quicker than the ye and will detect a miss which will ccur at high speeds. Such a miss being ifficult to determine by looking at the park. If the spark is missing at high peed you cannot expect the engine to perate properly.

Q.—I would like to inquire if you have n file test data for generators and startng motors used on the most popular cars? Would like the motoring current for varius generators, also the current taking y a starting motor when running free, nd when cranking, also the lock torque n foot pounds. If you have this data vailable I am sure other MOTOR AGE eaders would also like to have it.—Clyde E. Foster, San Antonio, Texas.

We have this data available but it ?ould take a great deal of space to print t all at once. Wiring manuals on the narket usually include information of his sort and we will gladly furnish any articular information along this line ?hich may be required. There are a few eneral facts which help the shop elecrician to determine whether a machine s approximately normal or not. The mall simple third brush generator about ne size of a Ford will usually draw four r five amperes when in good condition nd when running as a motor. This curent is somewhat affected by brush pres-ure and in plain bearing machines the ghtness of the bearings will affect the urrent drawn from the batteries.

Current taken by the armature when here is no field current usually varies rom 15 to 20 amperes. Abnormal condiions when motoring are usually indiated in a jerking rotation, also in a erking action of the ammeter used in ne battery circuit from generator to batery. Starting motors running free will draw from 35 to 50 or 60 amperes, the current usually increasing with the size of the machine so that you can make a rough estimate after having some experience. It is also a good indication when a starting motor connected to a battery and running free will rapidly speed up to a high number of r. p. m., the current drawn rapidly dropping off to the figures above given.

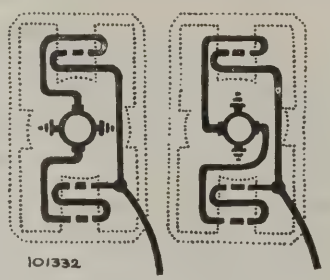
MEASURING AND COMPARING CONDENSERS

Q.—What is the microfarad capacity of a condenser used in a Ford coil? Joe Brown & Sons, 604 N. Elm street, Henderson, Ky.

About one-half microfarad.

Q.—How can I find the capacity of a condenser?

This is a difficult measurement to make electrically. One electrical equipment concern at one time had a device for measuring condensers and we will give you the name of this concern by separate letter. We believe that they still are able to furnish such a device. Ordinarily the capacity of a condenser does not change very much and if it is open circuited or shorted, it is easy to tell that trouble exists. If it is suspected that the capacity is low the best method, under ordinary circumstances is to have the ignition operating on a test bench and substitute one condenser for another, observing the action of the spark and also the flashing at the interrupter contacts. This does not apply to a Ford coil for it is not feasible to change condensers in this coil. It applies however, to other type battery ignition systems.



Changing connections at the brushes to reverse the rotation of a Westinghouse starter

Q.—How can I change the direction of a Westinghouse starting motor, style No. 240190, type B, frame No. 318—6 volts?

We are showing an illustration of the internal connections for the two methods of rotation. At the left you will see that the circuit after going through the field winding goes to the two insulated brushes, one being at the top and the other at the bottom of the commutator. At the right and left of the commutator are two brushes which are grounded. To change the rotation, it is necesary to have the insulated brushes at the side and the grounded brushes at the top and bottom, as shown in the right hand sketch. You will have to study the construction of the end bracket and brush holder to find out the way this can be most easily accomplished. You will probably find that the whole brush holder assembly can be turned 90 degrees. If the field connections do not readily connect to the insulated brush holders when they are located at the left and right, it will be necessary to make heavy copper extensions, to complete the proper connection.

Q.—Is it possible to change a direct current voltmeter or ammeter to an A. C. voltmeter?

No.

A Rare Bird—This Electrical Trouble

Q.—We have a Buick 6-cylinder car, model 21-45, that when it makes a long trip the battery runs down and we have to crank it for a while. When it runs around town and makes lot of stops the battery stays up in good shape. It is a new battery and the battery shows 10 to 12 amperes charge all the time. Where is the trouble? I would sure like to know.—Broadway Motor Car Co., 920 Broadway, Ft. Wayne, Ind.

When batteries discharge in service the opposite conditions are usually true and the battery runs down when the car is used on short runs and becomes well charged when long trips are taken. This is accordingly a peculiar condition. One possibility is that the third brush does not operate freely or that it is short and does not make very good contact with the commutator. If the commutator is slightly eccentric it may throw the third brush off at high speeds so that the machine does not generate.

Then as the armature circuit is connected through the switch and ammeter to the battery, it would be possible for the battery to discharge through the armature. However, if this occurs you would notice it for the ammeter would show discharge at high speed instead of charge. Poor undercutting which leaves mica at the sides of the commutator bars would also cause this condition. When the ignition switch is turned on the battery is connected to both the armature and field circuit of the generator as well as to the ignition coil.

If there is trouble in the ignition and lighting switch it might be found that at high speeds where there would be an appreciable vibration the contact to the armature circuit would be broken and the ignition coil and the generator field would be drawing from the battery. If you are not experienced in electrical work it might be advisable to get in touch with the nearest authorized electrical service station.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Fixed Prices for Rebuilding Wrecked Cars

Electrical Flat Rate Chart

A comprehensive schedule of suggested flat rate charges for automotive electrical service operations will be published in the Nov. 5, 1925, issue of MOTOR AGE. This chart has been compiled by A. H. Packer, associate editor of MOTOR AGE and specialist in automotive electricity.

Since a large proportion of the service work required on the average automobile has to do with the electrical system, this chart will be of interest to practically every automotive shop. Owing to its comprehensive character, covering all the leading makes of passenger cars, it is suggested that MOTOR AGE subscribers probably will want to preserve the issue containing it.

This advance notice of publication is given so that those who are interested will not overlook this important feature.—Editor.

EVERY now and then someone raises the point that flat rate is all right for some operations but that you cannot apply it to all work.

For insance, some service men or shop operators state no flat rate can be given for a job of rebuilding a wrecked car, The usual reason given is that such a job often calls for repair operations not readily discernable on the face of things.

In spite of this there are plenty of shops which today quote prices on reconditioning wrecked cars. Sometimes such figures run well over several hundreds of dollars.

These shops are able to quote prices because they take a wrecked car and after checking it over split the work into various groups of operations. Very seldom is it possible to quote an immediate price on a wrecked car rebuilding job, but it is possible to do so after the shop has had a chance to check the car over and make the necessary notations for the work needed.

After all, rebuilding a wrecked car is but many repair operations crowded into one job and with a price for each operation it means only adding up these prices.

How Prices Were Obtained

Denver, Colo.

To the Editor of Motor Age:—

I have noticed that the prices in your flat rate forum are about 20 per cent higher than here in Denver, especially the Ford scale.

Can you tell me from where you get the prices. How much higher are they than the suggested price by the factory for our locality?—Frank C. Klein.

The prices listed are not guaranteed as official factory data and especially is this so in the prices given in Motor Age's Flat Rate Manual. In most instances these prices were derived from multiplying the average hours required by $1.50.



THINGS THAT HELP FLAT RATE

In meeting the time schedule set down f various operations on a car and especial where a car has to go from one departme to another, a system of ramps is a gre help. Where space is available the servi station making use of the ground floor on is, of course, working to the best advanta

Should a different hour rate seem advi able you can convert the prices to co form to any desired hour rate as follow

To sell at $1 per hour multiply t prices by .67 To sell at $1.25 per ho multiply the prices listed by .87.

For example, if you find an operatio calling for a price of $6.60 under t $1.50 per hour rate and want to find t corresponding price at $1 per hour, mu tiply 6.60 by .67 and the result is $4.4

You can readily understand that pric naturally will vary in different parts the country, especially since labor co ditions are not the same and the cost doing business fluctuates with the size town, location, etc. It is possible t prices given in our manual may be t high for your community and that is w we have made provision to change the at the dealer's discretion. Some car ma ers, however, insist that their dealers u the same prices regardless of where the are located. This is to get uniform ser ice prices.

Flat Rate a Boon to This Man

To the Editor of Motor Age:

Ingram, Ark.

As a reader of Motor Age I have bee able to increase my business almost percent in the last year. It is due most to the flat rate charges for all wor especially on Fords and Dodge Brothe cars. My shop is located 12 miles fro a railroad, in a farming country and keep busy most every day in the yea I service a number of tractors and st tionary engines.—W. E. Throgmorton.

MOTOR AGE'S FLAT RATE FORUM

No. 37

FLAT RATES FOR OVERLAND REAR AXLE OPERATIONS

Manufacturer's Official Designation		Time 4	4A	91	92
0	Install rear axle assembly	2 hrs.	2 hrs.	2 hrs.	2 hrs.
1	Install rear axle housing, right and left complete	4 hrs.	4 hrs.	4 hrs.	4 hrs.
2	Install rear axle shaft	4 hrs.	2 hrs.	2 hrs.	2 hrs.
3	Install rear axle shaft nut	¼ hr.	¼ hr.	¼ hr.	¼ hr.
4	Install rear axle shaft key—inner	4 hrs.	4 hrs.	4 hrs.	4 hrs.
5	Install rear axle shaft key—outer	½ hr.	½ hr.	½ hr.	½ hr.
6	Install rear axle grease retainer	1 hr.	1 hr.	1 hr.	1 hr.
7	Install rear axle grease retainer washer	1 hr.	1 hr.	1 hr.	1 hr.
8	Stop grease leak	3 hrs.	3 hrs.	3 hrs.	3 hrs.
9	Install rear axle grease plug	¼ hr.	¼ hr.	¼ hr.	¼ hr.
10	Overhaul rear axle, including universal propeller shaft, differential and brakes	8 hrs.	7 hrs.	7 hrs.	7 hrs.

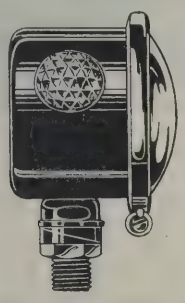
THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Tiffany Cowl Lamps

(Cut shown below)

'IFFANY Manufacturing Company, 42 Spring Street, Newark, N. J., offers e trade a new illuminating device in e form of the Model KL-2 Cowl Lamp. iis lamp is furnished with red and een jewels in the side and a milk white ont lens. The lamp body is of steel, ck enamel finished, with the bezel of lished aluminum. Packed one pair of mps to carton. Weight, 10 ounces. st price per pair, $2.75.



"Ivo"

A PREPARED glycerine solution called "Ivo" for use in automobile radiators s an anti-freeze compound has been put n the market by the Procter & Gamble o. In preparing this solution the rocter & Gamble Co. was guided by the ecommendations of the Bureau of Standrds at Washington as to the correct pecifications for a glycerine anti-freeze ompound. Owing to the non-evaporatng qualities of glycerine, it is said that nce placed in the radiator it will remain roughout the winter, requiring only the ddition of water from time to time.

"Boon"

A PREPARATION for keeping the hands clean when working around a ar or doing other grimy work is being ut out by the Boon Manufacturing Co., 35 Front Street, New York City. It is alled "Boon," being a solvent cream, oming in a convenient tube, which is to e spread over the hands before the work s begun. The preparation forms a film ver the hand and under the nails and hen the task is finished the film is emoved with soap and water.

Davis Never Freeze

AN anti-freeze solution for automobile radiators known as "Davis Never Freeze" is being marketed by the Davis Mfg. Co., 311 Burgess Street, Pittsburgh, Pa. It is claimed that this solution may be drained off and used year after year without deterioration. The solution is used to completely fill the radiator which should be proof against leakage and if evaporation occurs, water is added. The price of this solution is $2.00 a gallon.



New Sparton SOS Jr.

New Sparton SOS Jr.

THE new Sparton SOS Jr. motor horn signal is described as being of the high frequency magnetic type having strong signal power and the same harmonious note as the large Sparton SOS model which has been on the market for some time. It is said the SOS Jr. requires no oiling or adjusting It is finished in satin black enamel and fitted with adjustable bracket. Length, 13 inches; weight, including bracket, four pounds. List price, $13.50. It is made by Sparks-Withington Co., Jackson, Mich.

Do Not Neglect Your Clerk's Schooling

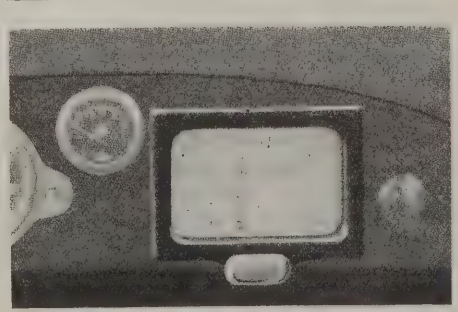
What does your sales force know about your stock, Mr. Accessory retailer?

The clerk in any store, regardless of the line, is seriously handicapped as a merchandising force if his knowledge of the stock is limited.

On the other hand if he knows the stock well he will be able to receive the trade and sell with an efficiency permitting full sway to his native selling ability.

Too little attention often is given the schooling of the clerk. Too often he is permitted to shift more or less for himself. And the clerk selling mechanical devices, more than nearly all others, should know well not only where to find an article in question but how to demonstrate it and explain its merits to a customer.

Don't neglect your clerk's education. He needs it as well as the automobile salesman.

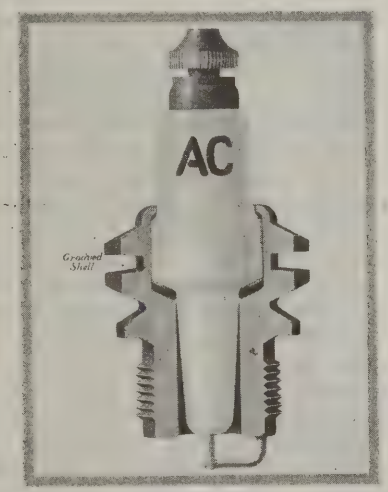


Ullrich's Auto Clamp and Pad

New AC Spark Plug

(Cut shown below)

AN advanced design of spark plug is announced by B. de Guichard, general manager of the AC Spark Plug Company of Flint, Michigan. "The main feature of the new AC Spark Plug," says B. de Guichard, general manager of the Flint company, "is a 'hot assembly' which is accompanied by a grooved steel shell being brought to a red heat by electrical current. Pressure is applied while the shell is red, and being plastic the shell is firmly and evenly drawn against the insulator core. Perfect alignment is insured. And because the plug is assembled at a heat much higher than it will ever be subjected to in service, subsequent expansion of the metal shell cannot loosen its tense grip on the core. Compression leakage is eliminated. Along with this grooved shell and 'hot assembly' we have developed a new alloy for sparking points. This alloy gives low resistance to the flow of current, insuring full, hot spark at the gap. Third, our newly developed electrically fused Kyanite insulator retains its insulation properties at elevated temperature. A new glaze, too, has been perfected so that the insulator core is hard and smooth to minimize the accumulation of soot."



Auto Clamp and Pad

ULLRICH'S Auto Clamp and Pad is urged by the Olmsted Stylus Company, Cedar Falls, Ia., distributors, as a necessity for automobilists in those states where statutes require a registration card placed conspicuously in the driver's compartment. This device is a celluloid covered aluminum frame which clamps to the instrument board in such a way that the fastening arrangement is not noticeable. Its padded under surface prevents marring of the instrument board. A thumb screw to the fastening makes it possible to take down the frame at will for changing cars, etc. The price is $1.

GETTING MORE OUT of the SHOP

Weaver Wrecking and Service Car

Shop owners who are on the lookout for new ways to keep the shop busy and increase profits will be interested in the Weaver wrecking car.

The truck is a standard Ford 1-ton job. The inside dimensions of the body are 40 in. wide by 76 in. long, affording ample room for a wrecking crane, ambulance, towing pole and gasoline can. A shorter body, 52 in. long and of the same width is also available for ¾-ton trucks. These detachable bodies can be purchased separately from Ford dealers and can easily be applied to Ford or other cars of similar dimensions.

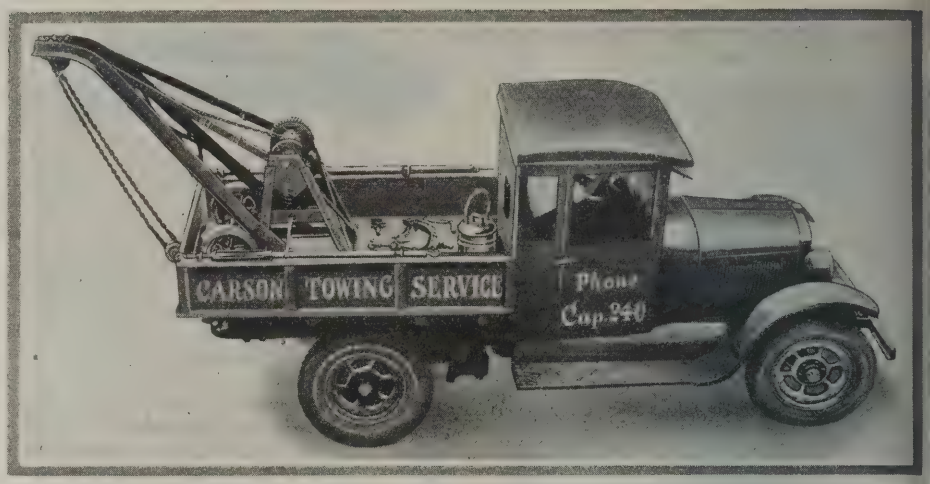
The crane is indispensable for handling general towing work and has ample strength and leverage to lift loads up to 6,000 lbs. The height of the boom can easily be adjusted by one man, using the crane's own power, and the load can be lifted by the operator while standing either on the ground or in the service car.

The ambulance is handy for minor front or rear end wrecks and can easily be run under either the front or rear axle of the disabled car. It can also be used to advantage with the crane when both wheels on the same side are out of commission.

The towing pole is used with or without the crane to prevent the wrecked car from jamming into the service car on down grades and sudden stops. Its length is adjustable and the heavy coil spring lessens shocks when stopping or starting.

The service can offers a convenient means for refueling standard cars on the road, the flexible hose readily reaching the opening of any gas tank, no matter how obstructed by tires. The can is made in two sizes: 5 gallon and 2 gallon capacity.

The crane, ambulance, towing pole and service can are made by the Weaver Manufacturing Co., Springfield, Illinois.

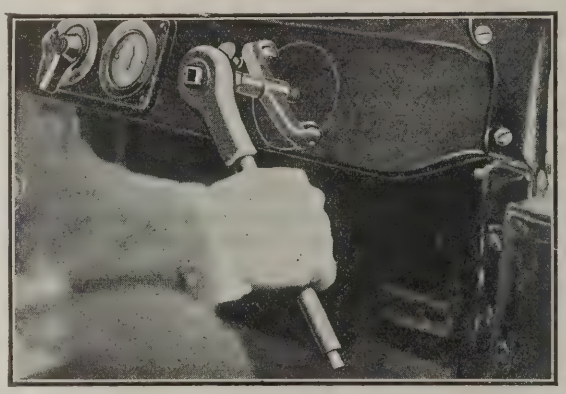


Weaver service car which is mounted on a standard one ton Ford Truck chassis

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AC Hole Cutter

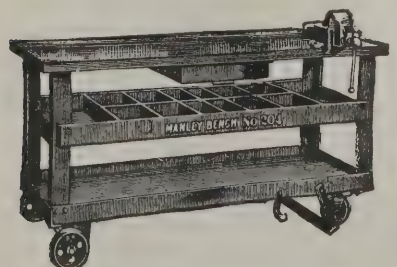
A tool has been announced by AC Spark Plug Company, Flint, Mich., for quickly and easily cutting a round hole in the instrument board for Ford cars for a speedometer installation. The tool is known as the AC Hole Cutter and lists at $1.



AC hole cutter for cutting instrument boards

Manley Portable Bench

A portable work bench for use in repair shops has been developed by the Manley Manufacturing Co. of York, Pa. The bench is substantially made with a hard wood top, partitioned shelf, and a steel drawer and it is mounted on roller bearing casters. Provision is made for locking the wheels so that the bench can not move when heavy work is being done. A saving of time is claimed when the portable bench is used as it can be brought close to the job. The Manley Portable Bench is made in two sizes, 44 in. by 16 in. and 64 in. by 20 in., prices $33 and $48 respectively.



Manley portable bench

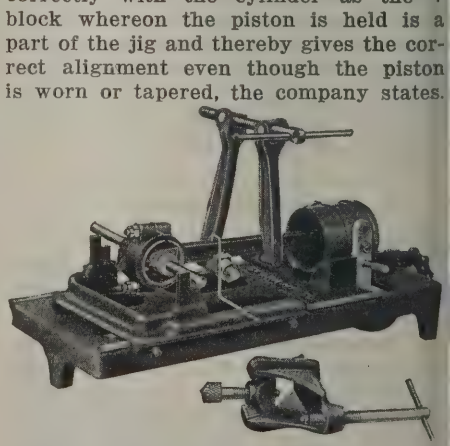
Storm Riteway Connecting Rod and Piston Aligner

The new Storm Riteway aligning jig made by the Storm Mfg. Co., Minneapolis, Minn., provides a means of checking both for twist or bend in a connecting rod in one operation either with piston on or removed. It is universal to take all sizes and makes. It is neat in design and performs all the operations necessary to correct the error on the connecting rod without disassembling same from the piston.

One adjustable tool steel bar displaces the usual set of mandrels or bushings. Is almost instantly adjusted to all size bearings, including all under or oversizes, and it makes it unnecessary to adjust the connecting rod bolts or remove the shims.

Other important features of this device are that it shows all the inaccuracies of the connecting rod. A gage attached to the aligning part of this fixture shows where the corrections are to be made. Special tools are provided to quickly and easily bend or twist rod into perfect alignment while assembly is attached to jig.

As all pistons are relieved for expansion at the top and have a tendency to wear tapered, and some makes are cut away entirely down the side, it is almost impossible to align them with a surface plate or any one-sided device. In this new Storm Fixture the piston is aligned correctly with the cylinder as the V block whereon the piston is held is a part of the jig and thereby gives the correct alignment even though the piston is worn or tapered, the company states.



Storm Riteway connecting rod and piston aligning jig showing the two straightening tools

EDITORIAL

Highways of Commerce

OPPOSING the repeal of the war tax of 5 per cent on passenger automobiles, Mr. Mellon, the capable secretary of the treasury, says that the passenger cars should continue to pay this tax because the Government, through Federal Aid, expends a sum comparable to the yield of the tax each year in the construction of improved highways. The Secretary adds significantly that automobiles "should pay their own way," as if that settled it.

We have always looked upon the Government's road building program as a broad undertaking for the good of the whole country and not for the benefit of any particular class of citizen. A good system of national highways was intended to aid the flow of commerce, promote the social welfare of the people, assist agriculture, facilitate the postal service and provide communication lines for the defense of the nation in case of war. And through all these means to build up and preserve the prosperity of the country.

We readily grant that the motor vehicle is the means through which improved highways bring about the desired ends, but we maintain that the highways are built for the purposes enumerated and not merely as boulevards upon which automobile drivers may speed for the pleasure of it.

The principle of public roads is well established in this country. For generations we have held to the theory that highways should be constructed out of public funds and free for all to travel. If any other theory were put in practice it would seriously limit the country's commerce and development.

If, as Mr. Mellon appears to believe, the highways were built for automobiles and should be paid for by them, then the logical thing to do would be to go back to the archaic system whereby he who traveled paid at the toll gate.

The automotive war tax is like scattered tacks in the highway. A clean-up job for Congress.

Equipment Business Is Good

ENTRIES and preparations for the Automotive Equipment Association's annual show at Chicago indicate that this exhibition will be one of the most successful ever staged by the association. The list of exhibitors is large and many are taking more than the usual amount of space. Manufacturers will exhibit what without doubt will be the largest and most varied assortment of automotive accessories, supplies and equipment ever assembled in one place. At the same time a considerable number of new products will be announced to a waiting trade. There is lots of life in the accessory and equipment business these days and plenty of prosperity in sight for those who connect wisely and well with this business. The week of Nov. 9 will be a great market time in Chicago for the automotive equipment trade.

Service given with a smile that makes the customer smile brings him back with a friend or two.

The European Small Car

THERE is a lot of talk about the proposed production in this country of small cars of the type very popular in Europe. A good many persons in and out of the automotive industry are clamoring for a try at the "bugs" in this country.

The smallest of the European cars are rated at seven horsepower and are said to make 40 miles to the gallon of gasoline. They have four-cylinder engines. Naturally the vehicles are very light and they do not have the power in high gear that we are accustomed to expect from American motor cars.

The trade, of course, is interested in whether or not cars of this type are likely to supplant the present American design. The answer is largely to be found in the export record of American made cars. England, where a number of the small cars are produced in quantity, is a great buyer of American cars. Australia shows a decided preference for the heavier and more powerful American product. Canada, of course, uses cars of American make or American design almost exclusively. Mexico, South America and South Africa are good markets for American automobiles. In fact, the whole world, with the exception of a small section encompassed in highly congested Europe, has shown a decided preference for automobiles of the power and stamina of those developed in the United States.

Design in this country undoubtedly will trend toward vehicles of lighter weight and more economical operation, but at present there is no indication of general acceptance of the European type of vehicle.

The car owner who hates to part with his "good old bus" should be encouraged to keep it—and buy another

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THE time to prepare for the holiday trade is now. Within a few weeks Christmas buying will be under way and then it will be too late for the dealer to reap the benefit if he has not already made preparation. A clean store well stocked with appropriate merchandise is the first requisite.

Financing Steadily Being Stabilized

Sales Show Slight Decline In Southwestern Sections

New Record for Car Production Is Indicated in September Figures

PHILADELPHIA, Oct. 28.—The West and Southwest are the weak sections so far as automotive sales are concerned, and used car conditions there are also well below par. In other parts of the country the market is in good condition, considering the season. Only a slight decline in production has been registered so far, and at most factories output is running ahead of sales. This situation is expected to continue for some time.

New companies are being added to the list of those that have concluded arrangements with financing companies to handle the instalment sales of the cars. These arrangements have the twofold purpose of bringing down financing and insurance costs to the purchaser and stabilizing the terms of down payments and the period for settling the unpaid balance. They are strengthening the automobile credit situation where support is most needed, and should help to silence the critics of the somewhat loose manner in which time sales have occasionally been handled.

Publication of the September production figures, showing that 332,759 cars and trucks were turned out at the factories that month, has inspired the prediction that a new production record will be set this year. To better the mark of 4,094,601 set in 1923, about 300,000 cars a month will have to be turned out during the remainder of the year, and from all signs this will be done.

Good business is being done by the parts and accessories firms, the original equipment manufacturers operating at a particularly high level for the season. Accessories business has shown an actual increase during the last two months, but replacement parts have fallen off, reflecting the end of the touring season.

Peerless to Bring Out New Light Six on November 1

CLEVELAND, O., Oct. 24.—A new light six model will be placed in production November 1 and will be shown on dealers' floors throughout the nation about November 21, it was announced here today by officials of the Peerless Motor Car Company, following a quarterly meeting of company directors.

Reports made at the meeting showed, among other things, continuation of financial progress which the company has been making in past months." While no figures were made public, it is understood that the operations of the last quarter were satisfactory. Sales for the quarter were reported 70 per cent greater than sales for the corresponding period in 1924.

It also was announced following the session that listing of the company's stock on the New York stock exchange is under official consideration.

MISSOURI PUSHING ROADS

JEFFERSON CITY, Mo., Oct. 24.—Missouri has completed 5,405 miles of its 7,600-mile good roads program at an expenditure of $67,997,685, according to figures of the highway department to October 1. The Missouri system is claimed by the highway engineers to be the largest in the nation and is being pushed rapidly to completion. During the last year 739 miles of concrete paving; 1,397 miles of graveling; 2,176 miles of grading preparatory to surfacing; 98 miles of combination concrete and gravel; and 93 miles of penetrating macadam roads were finished.

Studebaker Announces 3 New Models of "Big Six"

SOUTH BEND, Ind., Oct. 26.—New body models of the Studebaker "Big Six" are now being produced on a 120-in. wheel base chassis, the company announced today. Each of these three models seats five passengers and the models are:

Duplex Phaeton	$1575
Club Coupe	1750
Sedan	1995

All Studebaker models on the 127-in. wheel base "Big Six" chassis are continued.

Studebaker has announced that all its models are now fitted with oil and gasoline filters and air cleaners as regular equipment.

The bodies on the 120- in. wheel base "Big Six" are finished in lacquer. The closed models are upholstered in wool fabric and the open models in leather. All these models have artillery wheels, shock absorbers, automatic windshield wipers, sun visors, cowl ventilators, rear view mirrors, rear traffic signals, dash gasoline gages, cowl lamps, clocks and ignition locks.

CHAMBERLAIN MARMON SALES MANAGER

INDIANAPOLIS, Oct. 27.—The appointment of Percy E. Chamberlain as sales manager of the Nordyke and Marmon Co., makers of the Marmon car, has been announced by H. H. Brooks, general sales director of the company. Mr. Chamberlain is widely known among automobile dealers throughout the country because of his advocacy of flat rate and pioneer work in behalf of that system of service. Several years ago he was general manager of the R. R. Hall Cadillac Co. of Denver.

General Motors Scouts View That Durant Wants Control

Purchase of 51 Per Cent of Voting Stock in Open Market Is Held Impossible

NEW YORK, Oct. 24.—Out of the recent advance in General Motors stock on the New York Exchange from a low for the year of 64⅝ to a high on Oct. 17 of 137 has risen the report that William C. Durant is struggling with the Morgan-duPont interests to regain control of the General Motors Corp.

In the Street it is said that Durant and some other wealthy operators, believed to be associated with him, have been steady buyers of General Motors for at least six months, with the single purpose of winning back the control which he lost in 1920.

At the General Motor offices the idea that Durant could possibly accomplish his alleged purpose in the open market was scouted as absurd, and two points were emphasized—that there were at least 60,000 stockholders who could not be persuaded to relinquish their holdings unless the price was pushed far above even the high of last Saturday, and that it was Durant himself who made the agreements with the interests which succeeded to his control of the corporation five years ago.

In the Street the conservative view is that Durant could not amass sufficient power to win a battle for control against the Morgan and duPont interests. To accomplish his alleged purpose Durant would have to acquire control of 51 per cent of the common stock, in which the sole voting power lies.

PARTS PRODUCTION SOON

FULTON, Ill., Oct. 24.—The Illinois Metal Products Company, recently organized with $15,000 capital through the merger of the Clinton Kelly Manufacturing Company of Erie and the Fulton Manufacturing Company, expects to begin production about mid-November of a line of automobile accessory items that have had wide sale in retail circles. Clinton Kelly will be in charge of production and others interested in the plant are George H. Reimer, F. W. Dana, A. D. Cowan and E. C. Parker.

NEW HUDSON DEALERS

COLUMBUS, Oct. 24.—According to an announcement just received from the Walter B. Zimmerman Co., central Ohio distributor for Hudson and Essex motor cars, the following are dealers in Columbus:

George Byers & Sons Co., Hornbeck-Yates Motor Co., The Henry Motor Co., Johnson Bros., Kaiser Motor Co., Lindimore Motor Sales, Curtin-Frye Motor Co., Van Dorn Motor Co., and the E. H. Huffman & Sons Co.

Dealers Advised to Prepare for Keen Used Car Market

Detroit Manufacturers Warn That Trade Analysis Must Be Followed Closely

DETROIT, Oct. 24.—Manufacturers ere are advising their dealers and distributors throughout the country that ney can expect keener competition in he used car field and that the best anner to meet such competition is to tudy their market thoroughly, then buy nd sell accordingly.

Reports here which have been received om different sections of the country how that the Southwest and West are ot enjoying the best of sales, and that e used car business as a whole is not good. In the remaining sections it holding its own and in many cases oing quite well.

Until spring, the competition will be ost keen and those engaged in the used ar business are being advised to buy nly those makes and models of cars at are in demand. There have been ases in sections where the closed car as the most popular that dealers have ught open models, equipped them with de curtains and found ready buyers. ut at the bottom, the dealer is told study his market from all angles.

Used car men, too, are becoming bet- r merchandise. Since 1922 there has en a gradual improvement. This year e number of sales have increased conderably over those of two years ago hile the losses have shown decreases. ailures also are on the down path and e situation is taking on a rosy hue.

Nash Demand Causes More Additions in Factory Space

KENOSHA, Wis., Oct. 24.—The persistent increase in demand for Nash cars as necessitated further factory extenons at the Kenosha plant of the Nash otors Company. Five new buildings ith a total floor area of 94,428 square et are now being erected and will be ady for occupancy early in November. hey will house the pattern shops, the ol room, the motor parts departments, nd the superintendent's quarters, and ditional heat treating equipment.

These additional manufacturing facilies, together with the new Nash forge hich has been enlarged 50 per cent, will able Nash Motors to increase producon at least 100 more automobiles per y over the present production capacity, cording to C. W. Nash, president of the mpany.

"This building program," said Mr. ash, "has been going on for more than year. We have added $1,500,000 worth machinery and equipment, and more an 300,000 square feet of floor space, t it looks as if we will have to keep ght on building if we expect to keep with the constant increasing demand r Nash cars. For thirteen consecutive onths our sales have shown an average monthly increase of more than 82 per cent over the corresponding months of the previous year."

Paige-Detroit Has Developed New Car

DETROIT, Oct. 26—Development work on the new addition to the Paige and Jewett lines, which is to be announced about the time of the New York Automobile Show, has been completed and at present revisions are being made in the facilities at the West Warren plant to accommodate the production of the new job. Although all machine shop equipment and assembly are concentrated at this plant, no new buildings are required for the increased production schedule which will be brought about by the addition of the third member to the lines already established.

According to officials of the Paige-Detroit Motor Car Co., the new smaller six-cylinder car, as yet unnamed, will incorporate features of acceleration and braking ability which conform to the driving practice growing out of the increased congestion of traffic on hard highways and the block system of traffic control. In addition to these and a number of other mechanical refinements, closed bodies which are to comprise the entire production will be extremely roomy with an unusual freedom of vision.

NEW LOCOMOBILE MODEL

BRIDGEPORT, Conn., Oct. 26.—The Locomobile Co. of America, Inc., has announced a new car known as the Model 90, equipped with custom bodies and selling from $5500 to $7500 according to type. The company announces that the new model 90 is an important part of a complete line which comprises the Model 48, Series 10, and the Junior Eight, the light straight eight built by Locomobile.

STEWART HAS NEW TRUCK

BUFFALO, N. Y., Oct. 26.—A six cylinder, 1½ to 2 ton truck is now being produced by the Stewart Motor Corp. It is made in two wheel bases, 145 in. and 160 in., which lists at $1695 and $1735 respectively. The weight of the shorter chassis is 3350 lbs. The power plant has a 3¼ in. bore and a 4½ stroke, L head engine with a removable block and cylinder head. Generators, starters, and ignition are all of Remy make, and the carbureter is made by Zenith. The clutch is a dry plate, multiple disc type and is assembled with the three-speed transmission and the engine to form a unit power plant. The drive to the semi-floating, helical bevel rear axle is through a 2 in. two piece tubular shaft with three metal universal joints. The service brakes are of the internal expanding type and are on the rear wheels, while the hand brake is of the contracting type and is mounted on the rear of the transmission shaft.

Miller Rubber Stockholders Approve of Reorganization

Common Stock to Be Split to Five New Shares for One of $100 Par Value

AKRON, Oct. 24.—Stockholders of the Miller Rubber Co. at a special meeting, unanimously approved the reorganization plan recently proposed by directors, providing for a split up in the common stock on the basis of five new no par common shares for one of the $100 par value shares.

Sale of $4,000,000 par value of the unissued 8 per cent cumulative preferred stock of the company at $103.50 also was authorized. This brings the total outstanding preferred stock to $12,500,000, leaving $7,500,000 unissued.

Under the new plan Miller now has a total authorized issue of 600,000 shares of capital stock, 400,000 of which are common without par value and 200,000 8 per cent cumulative preferred. Terms and provisions of the old preferred stock are not changed.

A good demand for the new issue was reported from investors, and practically all the shares have been sold, it is announced.

STAR PRICES SOON

NEW YORK, Oct. 24.—Announcement of the prices at which the new Star line will be sold will be made next week. At the Durant offices here it was said today that the first 250 of the new models will be shipped to zone offices soon. Every effort is being made to supply dealers with the cars before the announcement of the new models is made to the public. This announcement will be made about Nov. 19 so that dealers probably will not receive their cars before Nov. 1.

Schwab Inspects Chicago Branch of Stutz Company

CHICAGO, Oct. 24.—Charles M. Schwab, chairman of the board of the Bethlehem Steel Corp. and principal stockholder and member of the board of the Stutz Motor Car Co. of America, Inc., was one of the principal speakers at the conference on education and industry at the University of Chicago this week. Following his address at the university, Mr. Schwab made a tour of inspection of the Stutz Chicago Factory Branch, Inc., under the personal guidance of Floyd D. Cerf, president of the branch. Fredrick E. Moskovics, president of the Stutz company, also was a visitor at the branch during the week.

NASH DEALERS MEET

DECATUR, Ill., Oct. 24.—Six counties were represented at the Nash salesmen's gathering here and 15 salesmen participated in the discussions. G. A. Hall, of the Chicago office of the Nash, spoke and dealers entered a roundtable discussion of their problems.

Fifteen Companies Sign for Space at Motorbus Show

Three Conventions Will Be Held in Detroit at Same Time as Big Exhibition

DETROIT, Oct. 24.—Fifteen automotive firms whose business takes them into the motorbus field have signed for 14,000 square feet of exhibition space at the First National Motorbus Show to be held in Grindley Hall November 16-21, inclusive, in this city.

Among those who have signed up for space at the show are: Denby Motor Truck Company, Continental Motors Corporation, Detroit Street Railways, Auto Body Corporation, Gotfredson Corporation, Graham Brothers, American National Omnibus Corporation, Studebaker Corporation, Reo Motor Truck Company, Commerce Motor Truck Company, Mack Motor Truck Corporation, Yellow Truck & Coach Manufacturing Co., Beens & Crenther, English & Mersick, Bragg-Kleisrath Corporation.

During the time the show is being held, the Michigan Bus Owners Association, the American Association of State Highway officials and the Society of Motor Transportation Engineers will hold conventions in the city. Invitations have been sent to members of the National Bus Owners' Association urging them to visit the city during the period of the show.

At a meeting of the executive committee held recently, Charles E. Stone chief engineer of the People's Motor Coach, was named chairman of the committee and George D. Wilcox, automotive engineer of the Detroit Street Railways, vice-chairman and R. B. Gotfredson, vice-president of the Gotfredson Corporation, treasurer.

L. H. Saunders, vice-president of the D. A. D. A. is chairman of the finance committee. He will be assisted by C. L. Grainger, general manager of the Commerce Motor Truck Company and W. D. Edenburn, secretary of the Michigan Automotive Trades Association.

Cleveland-Chandler Retail Financing Plan Is Changed

CLEVELAND, O., Oct. 24.—A new plan for financing retail time sales of Cleveland and Chandler automobiles was announced here by officials of the two companies.

The new plan, sponsored by the Commercial Investment Trust, Inc., of New York, is similar in many respects to the plan recently established by Dodge Brothers with the aid of the same New York financial institution.

Briefly, the new policy provides for the purchaser paying 8 per cent interest on deferred payments, plus 80 per cent of the local fire and theft insurance rates to cover 90 per cent of the retail sales price. Twelve months is allowed for payments.

Heretofore the Cleveland company's plan has been to allow a lump sum for interest and insurance over a period of one year while payments were being made. A plan almost identical to this had been in operation by the Chandler Company.

Here's a Horse on Barnum

DANVILLE, Ill., Oct. 24.—H. W. Orr of the Orr Battery & Electric Company, placed a number of $1 bills in his window, attached to a huge placard, announcing that they would be sold at 75 cents each. Scores of persons stopped, read the sign, smiled and went on; a city detective examined the bills and announced them highly clever imitations; one Chicago printer invested in one. "I'll try anything once," he said. The bills were genuine and Mr. Orr is convinced that the public is suspicious of bargains if the price is apparently too low.

NEW REO CHAIR BUS

LANSING, Mich., Oct. 26.—The Reo Motor Car Co., has announced a new 21 passenger chair coach to sell for $6250, at the factory. This coach is mounted on the model W chassis, having 176 in. wheel base, which permits a body length from the dash of 215 in. The outside width of the body is 87½ in. and the inside height is 62 in. A 3⅞ in. bore and 5 in. stroke, 6 cylinder valve-in-head motor is used which has a rated horsepower of 24.3. The rear axle is of the semi-floating type with a reduction ratio of 5.71 to 1. Three universal joints are provided between the transmission and the rear axle. The coach has a turning radius of 31 ft. and is mounted on 32x6 steel disc wheels, dual type tires being used on the rear.

NASH TO CHANGE FINANCING

KENOSHA, Wis., Oct. 24.—Nash Motors Co. has concluded a new arrangement with the Commercial Investment Trust Co. of New York for the financing of Nash sales. The plan is said to mean lower rates than were formerly available. It is understood that the terms are approximately the same as under the Dodge Brothers agreement with the trust company, calling for 8 per cent on the unpaid balance with fire and theft insurance at about 80 per cent of the local conference insurance rates.

FORD PLANT EXPANDS

DES MOINES, Oct. 24.—The local Ford assembly plant has increased its force 200 men, according to O. H. Perkins, manager, bringing the total force to 1,600, producing 286 cars a day to meet the dealers' demand for the new models. The Des Moines plant is not only filling the Iowa territory but shipping to St. Louis, Oklahoma City, Los Angeles and Denver. Before the last increase in the force the plant was operating at 1,000 hours overtime a day as the result of the rush order. At the present the 1,600 man force is divided into two shifts.

Reeves Sees New High Mark in 1925 Automobile Output

Head of N. A. C. C. Believes 4,200,000 Cars Will Be Produced by End of Year

NEW YORK, Oct. 24.—Automobile production will reach a new high mark this year, probably 4,200,000 passenger cars, trucks, busses and taxicabs, according to Alfred Reeves, general manager of the National Automobile Chamber of Commerce. The highest previous yearly total was 4,094,601 in 1923.

Production in the United States and Canada during the first nine months of 1925 was 3,165,942, or 928,659 less than the total for 1923. In order to reach 4,200,000 for 1925 the production will have to average 309,553 per month during the final quarter.

Government figures show that September production in the United States and Canada was 332,759, or 272,396 passenger cars and 60,363 trucks, of which 262,036 passenger cars and 57,883 trucks were produced in the United States and 10,360 passenger cars and 2,480 trucks in Canada.

Total truck production in both countries show a September gain of 26 per cent over April, the previous high month this year, and a 60 per cent increase over August, while total passenger car production rose from 221,756 in August and decreased from the high of 391,302 in April. The total of 332,759 passenger cars and trucks produced in both countries in September was a decrease of 24 per cent from the high month of April, when the output was 439,124, and a decrease of 73,360 from the output of 259,399 in August.

G. M. A. C. Business Volume More than Billion Dollars

NEW YORK, Oct. 27.—General Motors Acceptance Corporation, the financing organization of General Motors, announced today that on October 8 its volume reached the billion-dollar class—a total of $1,000,105,782, having been financed from inception, January 27, 1919, up to the close of business on the date mentioned.

The figures for the various years follow:

1919	$ 20,880,088
1920	104,102,634
1921	77,457,029
1922	135,256,702
1923	218,616,114
1924	253,649,315
1925—Oct. 8	*190,143,000
	$1,000,105,782

*Preliminary figures for foreign business.

Even more significant, however, than the huge total of business is the fact that it has been transacted on such a plane of good credits, that the losses incurred have been extremely small. The loss experience on all classes of paper to August 31st, amounted to only $1,299,207 or .135 per cent of the volume transacted.

Details of Tire Dealers' Convention Are Arranged

National Association Announces Tentative Program for St. Louis Session, Nov. 17-19

ST. LOUIS, Oct. 24.—Announcement of the details of the tentative program for the National Tire Dealers' Association convention in St. Louis, November 17-19, has been made in New York by George J. Burger, president of the association.

The program as announced by Mr. Burger follows:

TUESDAY, NOV. 17

10 a. m.—Registration at Headquarters—Hotel Chase. Validation of railroad certificates and distribution of receipts for same.

11 a. m.—Combined meeting at Hotel headquarters—board of directors. National Tire Dealers' Association and convention committee, Associated Tire Dealers of St. Louis.

2 p. m.—Opening of convention, George J. Burger, president National Tire Dealers' Association, presiding. Prayer—Reverend Ivan Lee Holt, pastor St. John's Methodist Episcopal Church, St. Louis. Greetings—Mayor Victor J. Miller. Address of Welcome—A. P. Woehrle, president Associated Tire Dealers of St. Louis. Announcement of entertainment—C. V. Quinn, chairman convention committee. Response, George J. Burger. Address—Speaker to be selected. Address—R. M. Hudson, chief, division of simplified practice, Department of Commerce, Washington.

4 p. m.—Business meeting. Reading of 1924 convention minutes. Appointment of committee.

WEDNESDAY, NOV. 18

9 a. m.—Address—Paul L. Palmerton, chief, rubber division, Department of Commerce, Washington. Executive Business meeting. Report of president. Report of board of directors. Financial report. Report of district deputies. Report of truck tire dealers' committee. General discussion of business and new business.

2 p. m.—Trip through Cupples Company tire factory and sight seeing trip.

7:30 p. m.—Banquet and entertainment.

THURSDAY, NOV. 19

9 a. m.—Business meeting. Unfinished business. Nomination of officers and directors.

2 p. m.—Business meeting. Election of officers. Designation of 1926 convention city. Closing of business meeting followed by special meeting of newly elected officers and directors.

7:30 p. m.—Banquet and entertainment. Address by George J. Burger, president presiding. Address by newly elected president. Address speaker to be selected. Address—Robert E. Lee, manager St. Louis Automobile Dealers' Association.

Texas Dealers Spend Day Planning Sales Campaigns

DALLAS, Tex., Oct. 24.—Automobile distributors had their dealers in Dallas last week to discuss campaigns for business for the remainder of the year. Dealers from 119 counties spent the day discussing the outlook for Chryslers with William Morris, distributor.

Dodge Brothers dealers from a large territory were here conferring with E. Gordon Perry, distributor. These dealers reported brisk business with outlook brighter for the remainder of the year.

Hudson-Essex dealers from a large number of counties were in conference with Adam Ferguson, distributor. The Hudson-Essex business is said to be the best in the history of auto merchandising in Texas.

The Peerless, Studebaker, Nash and Buick dealers were also in the city conferring with their distributors. In every instance the dealers declared the sale of new cars is increasing and business should be brisk for the remainder of the year.

Delegates Will Hear Addresses in Own Tongue

NEW YORK, Oct. 24.—Nearly a score of languages are expected to be represented by the delegates to the second World Motor Transport Congress to be held at Grand Central Palace Jan. 9-16. At the first Congress in Detroit many foreign delegates were at a distinct disadvantage because English was the language of the sessions. This difficulty will be obviated here. Translators in booths adjoining the assembly room will receive the speeches in English through microphones and relay them in various languages through ear phones provided for all delegates not speaking English. Each delegate may choose the phones delivering the translation in his own language. This is expected to do away with the delays caused by translation in the usual manner at the first Congress.

PIERCE SALES INCREASE

BUFFALO, N. Y., Oct. 24.—President Myron E. Forbes of the Pierce Arrow Motor Car Company issued a report today on the sales of the company for the first nine months of 1925. For the first nine months of 1925 the total increase in passenger car shipments is 146 per cent. The third quarter of the year marked the shipment of passenger car units representing an increase of 91 per cent over shipments during the same period in 1924.

CAMERON HEADS BRANCH

DALLAS, Tex., Oct. 24.—G. B. Gillespie, branch manager for the Peerless Motor Company at Dallas, announces the appointment of Walter C. Cameron as retail sales manager for the branch. Mr. Cameron comes to Dallas from Memphis, where he was connected with distribution of Dodge cars.

OREGON FEES INCREASE

SALEM, Ore., Oct. 24.—Fees collected by the secretary of state for the registration of motor vehicles of all kinds, chauffeurs and operators for the period Jan. 1 to Sept. 15, 1925, inclusive, amounted to $5,234.034.67, an increase of $562,830.07 over the collections for the same period of 1924.

Car Makers to Cut Delivery Price if Tax Is Repealed

Every Automobile and Truck Builder Guarantees Public Full Benefit of Action

COLUMBUS, O. Oct. 24.—Lower delivered prices on all makes of automobiles and commercial vehicles are guaranteed by the car and truck manufacturers of the country as soon as the federal war excise taxes on motor products are repealed, according to a letter from the National Automobile Chamber of Commerce to the farm organizations, made public today.

The automobile makers have been campaigning for the removal of the Federal war taxes on motor products, stating that they are a burden on the consumer.

The question of whether the consumer would benefit from such tax repeal or whether the saving would go into the pocket of the manufacturer was raised by L. J. Taber of the National Grange, the American Farm Bureau Federation and other groups whom the automobile makers have been addressing.

A unanimous reply that the cost of vehicles will be lowered to the consumer to the full extent of the tax revision came from every plant in resounse to a query by H. H. Rice, chairman of the Taxation committee of the National Automobile Chamber of Commerce who took a poll of the motor manufacturers of the country.

PLAN TRADE EXCURSIONS

PORTLAND, Ore., Oct. 24.—Portland automobile dealers have announced a trade excursion once each month hereafter to communities within a radius of 100 miles of Portland. The first such trade excursion will be to Hood River and The Dalles on Oct. 28.

Dyer Motor Theft Act Is Upheld by U. S. High Court

WASHINGTON, Oct. 24.—The validity of the Dyer national motor vehicle theft act, was upheld by the United States Supreme Court this week. Norman T. Whitaker, a lawyer, of Washington, was convicted and sentenced to Leavenworth penitentiary for two years on a charge of violation of the act. He appealed on the ground of illegal imprisonment.

Counsel for Whitaker insisted the law provided specifically that any violator "may be punished in any district in or through which such motor vehicle has been transported or removed by such offender."

The stolen vehicle in the case was driven from New Jersey to California and Whitaker denied that he went through Kansas on the trip and his imprisonment at Leavenworth was therefore unlawful. The Supreme Court held, however, that his place of servitude was immaterial in-so-far as the application of the act is concerned.

General Motors Offers New Capital for Vauxhall Control

Negotiations for Purchase Completed and Stockholders Will Now Decide Plan

PHILADELPHIA, Oct. 24.—According to cable reports from London, negotiations by the General Motors Corp. of Detroit for control of Vauxhall Motors, Ltd., a British concern, were said to be completed. Under the agreement, the American company would obtain control of the English concern, and furnish it £300,000 new capital.

If the agreement is approved by Vauxhall shareholders, each will receive 6 per cent preference shares and fourteen shillings cash for each two existing shares of nominal value of ten shillings. Thus, £300,000 of existing Vauxhall capital would become 6 per cent preference, and new ordinary capital for an equal amount would be created to rank behind it.

Ordinary shares of Vauxhall rose sharply in London on the report. Net profits for the last two years were £50,000. The company was formed in 1914 with an issued capital of £600,000. In incurred heavy losses in 1921 and 1922, and in June last year the capital was reduced to £300,000 by writing off as loss ten shillings from each original pound sterling. Last week, the company issued £155,990 of 7 per cent debenture stock to pay a bank draft. The announcement of the negotiations was made to stockholders in a circular signed by Thomas Mackenzie, secretary of the company.

Like most British companies, Vauxhall, Ltd., turns out a rather extensive line of cars. It comprises a 14 hp. 4-cylinder model, with L-head engine; a 22 hp. 4-cylinder model, with valve-in-head engine; a 23 hp. 4-clinder model, with valve-in-head engine; and a 24 hp. 6-cylinder model, with single sleeve valve engine, the last-mentioned being a recent addition.

Farm Buying Power Gains 7.7 Per Cent This Season

WASHINGTON, Oct. 24.—Farm buying power this year, 1925-26, and consequently the ability of farmers to more completely motorize their equipment is 7.7 per cent higher than the 1909-13 period and 10.5 per cent higher than the average from 1922 to 1925, according to announcement just made by the Agricultural Publishers' Association.

Another reason why the farm field offers an exceptional sales opportunity, it is stated, is the complete national spread of farm prosperity.

Farm cash income is now estimated, says this same authority, to be several million dollars higher than last year's mark of $10,335,000,000 and farm buying is predicated on an enormous scale. Farmers are replacing their operating equipment, modernizing their homes and carrying out necessary building programs.

NEW MARMON DEALERS

INDIANAPOLIS, Ind., Oct. 24.—A large number of new distributors, dealers and associate dealers, representative of various sections of the country, have been signed by the Nordyke & Marmon Company in the last few weeks.

New dealers are as follows:

Carver-Coon Motor Sales, Wyandotte, Mich.; Leach Bros., Castine, Me.; Nash-Miller Motor Co., Englewood, N. J.; Passaic Motor Sales, Passaic, N. J., Bester-Long Co., Hagerstown, Md.; Dortchester Motor Co., Inc., Yonkers, N. Y.; Osage Overland Co., Pawhuska, Okla.; Paige-Jewett Sales, Hillsdale, Mich.; Ross C. Scupholm, Port Huron, Mich., The McElravy Bros. Motor Co., East Liverpool, O.; Evans & Gifford, Vero, Fla.; Green Motor Co., Ft. Lauderdale, Fla.; Willard McAllister Co., Chicago, Ill.; Nevada Marmon Co., Reno, Nev.; J. C. Madigan, Houlton, Me.; Red Dowell, Yuba City, Cal.; Lostro Auto Sales Co., Athens, O.; Becker Bros., Marietta, O.; Tatum & Hoylman, Clifton Forge, Va.; Payne & Dillon, Lynchburg, Va.; Colorado Motor Car Co., Pueblo, Colo.; and E. D. Baker, Zanesville, O.

Charlotte Ford Plant Is Operating at Capacity

CHARLOTTE, N. C., Oct. 24.—The Charlotte assembly plant of the Ford Motor Company increased its operations to capacity, employing 1,200 men and assembling slightly more than 300 cars per day, according to an announcement by branch officials. It was explained that almost no reduction is being made in the number of cars sold and undelivered. Within a week after the new models were announced in August, the branch received orders for more than 10,000 cars.

At least 20,000 cars would be needed to meet the existing demand and provide the dealers of North Carolina and South Carolina, who are served by this branch, with a satisfactory reserve stock, according to the announcement. Approximately 7,000 cars would be needed to provide that reserve, which has been completely exhausted by the recent demand, following the announcement of the new models.

The branch plant is working day and night, and general business conditions, according to official reports, are the best in the history of the branch.

JANESVILLE HAS BRANCH

MILWAUKEE, Oct. 24.—A branch of the Martin-Parry Co., commercial body manufacturers, has begun operations at Janesville, Wis., in the building formerly used by the Robert Buggs Motor Sales Co. The Janesville branch is the forty-ninth opened by the company in various parts of the country. J. T. Frost, who has been with the Martin-Parry branch at Flint, Mich., will be supervisor of the Janesville branch, and James Hanson, formerly of the Milwaukee unit of the company is shop foreman. R. A. Weber, also of Milwaukee, will be sales representative in Janesville territory.

Chevrolet Engineer Predicts Small Car for Future U. S.

Chandler Official Also Tells S.A.E. That America Demands Comfort With Compactness

CLEVELAND, Oct. 24.—O. E. Hunt, chief engineer of the Chevrolet Motor Co., of Detroit, told members of the Cleveland section of the Society of Automotive Engineers at their October meeting that a 1,000 pound three-passenger automobile may be the future American small car.

He also informed his auditors that in his judgment, the future small car will be a six cylinder one, if the engineers can not take the vibration out of the four cylinder car.

The speaker asserted this would be the development in the industry in the next few years, because the American public is demanding a small car with the facilities for comfort of a big car. The small car, in placing an automobile at the disposal of every family, has become the most important problem in the automobile industry, says Hunt. It is no longer a question of cheaper price, but a better car for the same price.

There were persons in the audience of engineers, who have been wondering how the American car owners would take to the small popular priced cars that are so popular in Europe. To these Mr. Hunt made the statement that there never would be a market in America for the European, small and low priced car, because our people expect better performance in a car than the European cars give.

A. H. Frauenthal, chief inspector for the Chandler Motor Car Co., was asked to discuss the address given by Mr. Hunt. He agreed with the speaker of the evening about the development of a small car, and stated that he was looking forward to the time when there would be a tremendous demand for a small car for persons to ride to and from their occupations, and to use for errands that must be performed quickly.

HELM RESIGNS AS MANAGER

DETROIT, Oct. 24.—C. J. Helm, for the last two years secretary and general manager of the Acme Motor Truck Company, has resigned although remaining a member of the board of directors. Mr. Helm joined the company when it was first organized and was secretary, sales and advertising manager for eight years before taking over the duties of general manager and secretary.

HOOD BACK AT DESK

DETROIT, Oct. 24.—P. W. Hood, vice-president in charge of sales for the Timken-Detroit Axle Company has returned to his desk after a four months vacation due to ill health. Mr. Hood joined the company in 1911 and was made sales manager in 1919. He was appointed vice-president in charge of sales the first part of 1923.

Rubber Stocks Are Larger Oct. 1 This Year Than Last

Survey of Department of Commerce Accompanies Fifth Rise in Prices

NEW YORK, Oct. 24.—Announcement of the fifth advance in tire prices this year, with crude rubber having returned from a drop of about 25 per cent to a spot price of $1.02, is accompanied by the report of the third semi-annual survey by the Department of Commerce, showing that stocks of casings, tubes and solid and cushion tires held by dealers in the United States on Oct. 1 were much larger than the figures for Oct. 1 last year.

This report shows that 82,432 dealers on Oct. 1 this year had on hand 1,857,862 casings, 3,210,384 inner tubes and 45,176 solid and cushion tires, compared with 63,395 dealers reporting 1,402,879 casings, 2,197,553 inner tubes and 30,538 solid and cushion tires on hand Oct. 1 last year.

An interesting feature of the survey is that 88.67 per cent of dealers reporting on Oct. 1 last had less than 100 casings on hand compared with 91.65 per cent on Oct. 1 the previous year.

Production of high pressure inner tubes in August, according to the October report of the Rubber Association of America, Inc., was 4,436,578, an increase of 139,083 over the July total, while shipments decreased from 5,357,295 to 4,102,160. Production of balloon inner tubes decreased from 1,360,719 to 1,276,717 and shipments fell from 1,497,747 to 1,089,752. Cord casings production rose from 2,181,645 to 2,409,070 and shipments decreased from 2,497,160 to 1,999,548.

NEW MOON DEALERS

ST. LOUIS, Oct. 24.—Moon Motor Car Co. has expanded its sales organization by adding 14 distributors and seventy-one dealers. A list of the dealers added follows:

Alexopulos Ellis, El Monte, Cal.; Fowler & Abbott, Los Angeles; Kemble Bros., Los Angeles; Lehigh Motor Co., Los Angeles; Girola Bros., Oakland, Cal.; Tower & Leveridge, Santa Anna, Cal.; W. J. Booth, Ventura, Cal.; Diana-Moon Motor Co., Pueblo, Colo.; Nichols Auto Sales Co., Dayton, Fla.; H. H. Scribner, Eustis, Fla.; Robert Hutchinson & Son, Carpron, Ill.; H. J. Egger, Centralia, Ill.; Auditorium Motors, Chicago; Capitol Motor Sales, Chicago; G. Goode Motor Sales Co., Chicago; Logan Square Auto Sales Co., Chicago; Leghley Motor Sales Co., Chicago; Peak Motor Sales Co., Chicago; Werner Bros., Chicago; Wood Motor Sales, Chicago; Fred Fehrkon, Creta, Ill.; Mitchell Motor Co., Le Porte, Ill.; Harry Kipnis, Savanna, Ill.; Modern Service Co., Streator, Ill.; Charles J. Nissen, Utica, Ill.; Parker Motor Sales Co., Wheaton, Ill.; Phillip Pheiffer, Huntington, Ind.; James Crook, Chanute, Kans.; H. H. Breschinski, Goodland, Kans.; Leonard Motor Co., Leavenworth, Kans.; Geo. O. Swiercinsky, Belleville, Kans.; Morgan-Rarick, Lawrence, Kans.; Ironwood Storage Garage, Ironwood, Mich.; J. W. Schmidt, Anoka, Minn.; A. N. Company, Shelby, Miss.; F. C. Welliver, Corder, Mo.; C. A. Welling, Webster Groves, Mo.; J. Jay Vandergrift, W. Atlantic City, N. J.; Sowder Motor Co., Roswell, N. M.; Chas. L. Sipperley, Albany, N. Y.; International Garage, Niagera Falls, N. Y.; Geraghty & Haynes, White Palins, N. Y.; E. C. Reineke & J. W. Johnson, Fargo, N. D.; Summit Auto Co., Akron, O.; Haulk-Leatherman Co., Canton, O.; Klinker Motor Sales Co., Springfield, O.; The Brier Hill Motor Sales Co., Youngstown, O.; Robin Reed, Corvalis, Ore.; Howard Ackerman, Eugene, Ore.; Terminal Auto Co., Eugene, Ore.; McKenzie & Howton, Freewater, Ore.; Bowman Auto Co., Marshfield, Ore.; Mohn Bros., Akron, Pa.; R. H. Koch Garage, Allentown, Pa.; Carlisle-Keystone Motor Co., Carlisle, Pa.; Peerless Harrisburg Co., Harrisburg, Pa.; Wright Motor Sales Co., Hazelton, Pa.; Eureka Sales Co., Kingston, Pa.; Fisk's Garage, Lancaster, Pa.; W. E. Dentler & Son, Milton, Pa.; E. A. Slape, Philadelphia; Berks Auto Sales & Service, Inc., Reading, Pa.; Dewey L. White, Scranton, Pa.; Frank H. Graeber, Peerless Garage, Shamokin, Pa.; J. K. Shafer, Stoudsburg, Pa.; T. R. Atkinson, Upland, Delaware County, Pa.; Culver's Garage, Williamsport, Pa.; C. A. Wolf, York, Pa.; F. S. Plaeten, Aberdeen, S. D.; McKenzie & Howton, Walla Walla, Wash.; Wikstrom & Widner, Yakima, Wash.; Reo Motor Sales Co., Welch, West Va.; Rinden Garage, Madison, Wis.; Joseph E. Engels, Mineral Point, Wis.; W. H. Moon, Rosendale, Wis.

Wins First Prize



Here is Mitchell Gaucher, salesman for the Detroit branch of the Federal Motor Truck Company, who won first prize in a recent national sales contest conducted by the company. He sold $110,069.82 worth of Federal products during June and July, the months of the contest. This is the best individual selling record in the history of the company

CHADBOURNE SUCCEEDS KILBURN

NEW YORK, Oct. 24.—Dean K. Chadbourne has been appointed general manager of the Westinghouse Electric International Co. to succeed E. D. Kilburn, recently elected president of Westinghouse Electric and Manufacturing Co.

CORRECTION

In a recent description of the new Diana Eight, built by the Moon Motor Car Co., St. Louis, Mo., the diameter of the piston pins was incorrectly given as 5/64 in. The correct diameter is 55/64 in.

Michigan Car Titles Gain 3,215 Over Last September

New Trucks Also Show Increase of 635 as Compared to Same Month Year Ago

DETROIT, Oct. 24.—Three thousand two hundred and fifteen more new passenger cars were titled in Michigan during September than for the same month in 1924, figures just released here show.

September 1925 saw 15,560 new cars titled as compared to 12,345 titled for the corresponding period a year ago. New trucks also showed a gain of 635 as compared to the same period for last year.

Practically all makes of cars showed an increase, Buick, Hudson-Essex, Nash, Chrevolet, Chrysler being among those who registered the largest gains, Buick, Essex and Chevrolet showed gains of over 1,000. Ford showed the largest loss but this is attributed to changing over to the new models and not as a loss that results from prospects declining to buy. The Ford loss was around 2,837.

The miscellaneous makes of cars dropped off 252 for the period, showing that the buyers are concentrating on the better known and standard makes of cars.

Of the 1,796 new trucks titled, 1,057 gains, six losses and one was even.

Of the 1,796 new trucks titled, 1,057 were Fords. Dodge, Federal, Reo, and Graham Brothers were the companies that showed the largest gains. Trucks listed as miscellaneous gained 45.

BRITISH INDUSTRY PLEASED

WASHINGTON, Oct. 24.—British automobile manufacturers are enjoying an unprecedented wave of prosperity, according to cable from the commercial attache in London. As evidence, he quotes the speech of Sir William Joynson-Hicks, home secretary, before the Society of Motor Manufacturers and Traders, to the effect that British automobile exports for 1925 will amount to 50 per cent more than for last year. The speech of Sir William was made before the manufacturers in connection with the Ninth annual motor show at Olympia, which opened on October 8. There are more cars being shown at the present show than any British automobile show since before the war, the cable states. The small British car is decidedly the feature of the show, it is stated.

CHANDLER DEALERS MEET

SAN FRANCISCO, Oct. 24.—Chandler and Cleveland dealers to the number of 63 held their annual meeting for northern California in the showrooms of the Chandler-Cleveland Motor Car Company here October 14. Roy B. Alexander, president of the local company, and other executives, addressed the dealers on merchandising plans for the year to come. New models, new low prices and the advertising program also came in for discussion at the meeting over which Alexander presided.

Fageol-American Car Merger Plans Put to Stockholders

Hall-Scott Business and Plant Already Purchased at Reported Price of $5,000,000

OAKLAND, Cal., Oct. 24.—Announcement is made by officials of the American Car and Foundry Company of New York, and the Fageol Motors Company, of Oakland, that plans for the organization of the subsidiary company which is to operate the Fageol Motors Company and Hall-Scott Motors, Inc., of Berkeley, California, have been revamped so as to avoid conflict with the state corporation laws of California. The set-up originally proposed by the American Car and Foundry Company was found to be impossible under these laws, and Frank Fageol, vice-president of the local concern, has been in the East for some time, in conferences with officials of the American Car to rearrange this plan.

According to the same statement, the new proposition, which accomplishes the merger of Fageol Motors Company, will be presented to the stockholders of the Fageol concern between the 20th and 30th of October. The Hall-Scot business and plant already has been purchased by the American Car and Foundry Company, at a price which, while not made public, is reliably reported to have been about $5,000,000, but the Fageol sale has to be confirmed by a 70 per cent vote of the stockholders.

The Fageol company claims to have orders which will carry it at capacity operation for the next 10 months, with contracts now being negotiated calling for approximately $1,000,000 in new work. The corporation is engaged in the construction of motor stages, known as "Fageol Safety Coaches," and five capacities of motor trucks. It is generally conceded in automotive and financial circles on the coast that Fageol is earning sufficient to pay dividends on the common stock, and probably would declare them if this merger were not pending.

Fageol has obtained a contract to build 50 buses for the Orange Belt Motor Line of Florida at a gross cost of $400,000. The company also is bidding on 100 more buses for the same concern involving $800,000. All these buses are to be narrow tread and must be finished by November 15. The working force at the Fageol plant has been increased 50 per cent to complete the contract by that date.

CHEVROLET DEALERS MEET

MEMPHIS, Oct. 24.—Chevrolet dealers from the Memphis territory met here recently to hear talks by L. F. Garlock, service representative promotion manager of the Chevrolet Motor Co.; E. W. Fuller, regional sales manager, from St. Louis; C. E. O'Meara of the Dallas office and others. Following a luncheon a train load of Chevrolets was distributed among the dealers.

DALLMANN CO. EXPANDS

MILWAUKEE, Oct. 24.—The entire gear manufacturing division of the Western Rawhide Co. of this city has been taken over by the Dallmann Machine & Manufacturing Co., doubling the gear output of the latter concern. To accommodate the new division, more space has been taken in the Pabst Corporation building on Winnebago street, bringing the ground area of the company to more than a half block.

WHARTON SELLS INTEREST

PHILADELPHIA, Oct. 24.—A. W. Wharton, president of the Churchville Manufacturing and Laboratories Co., manufacturers of the Wharton Cushion Guard Rail, has disposed of his entire interest to the corporation, it is announced. Mr. Wharton's resignation has already taken effect but he will continue with the company for a short time. His future activity has not been announced but it is understood he will enter some phase of the radio business. V. S. Fry, who has been vice-president of the company, has been elected the new president. Charles H. Davis, a director of the corporation for the last three years, has been elected vice-president; Joseph T. Pfister is the new director of finances, a newly created position; C. J. Stover remains as secretary and treasurer.

CHAPMAN TAKES SOUTH

EL PASO, Tex., Oct. 24.—R. C. Chapman, factory representative for the Willys-Overland company has been assigned to the district covered by the Bannell Overland company here. This district covers most of West Texas and New Mexico and Arizona as well as a large part of Old Mexico. He succeeds C. M. Hutson who has been transferred to the Dallas branch of the Willys-Overland company.

Overland Sponsors National Sales Race for $50,000

Willys Derby Entered by 20,000 Contestants in Entire Field Organization

TOLEDO, Oct. 24.—More than 20,000 members of Willys-Overland's national field organization are in the throes of a great sales contest known to the automobile industry in the Willys Derby.

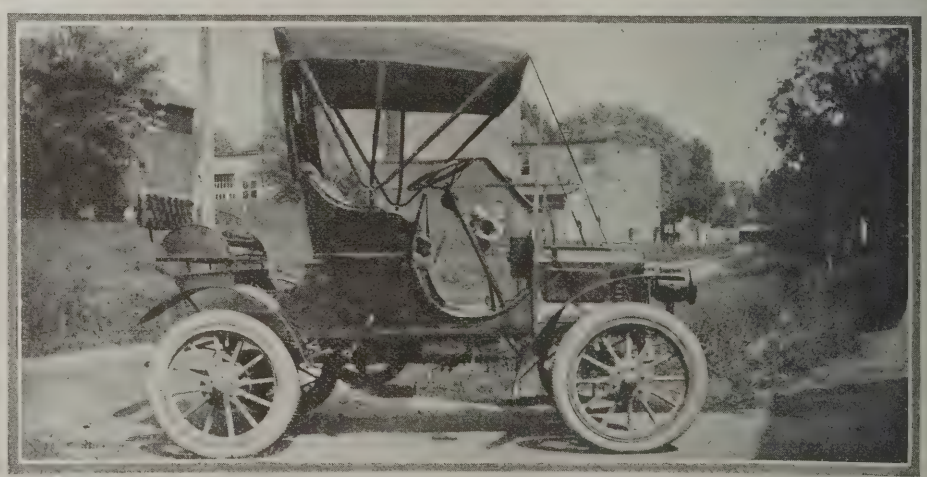
Titled "The Willys Derby," this huge sales contest commemorates the twenty-fifth anniversary of President John N. Willys' entry into the automobile business.

More than 740 individual prizes totaling $50,000 are offered in the Willys Derby, so distributed among the classifications of the retail organization that no one man can compete for more than one prize. Four main classifications are provided, including dealers, retail salesmen, retail sales managers, and district representatives, car order clerks and wholesale managers, with subdivisions for various types of contestants in these classes.

Prizes in the contest vary from engraved gold pencil and pen sets to an Overland Six DeLuxe sedan, together with silver chests, watches and cash awards.

The opening of the Willys Derby has already reflected its pressure in an extended volume of future orders at the Willys-Overland factory. With special prizes held out for members of the $100,000 Club, Willys-Overland's prize retail salesmen's organization, every member of the field organization is extending himself to the limit according to the dealer, branch and distributor reports flooding the office of the contest manager at the Willys-Overland factory.

Aged Reo Still Performing



Above is pictured the 1904 model one-cylinder Reo which is owned and still used as a "pleasure" car by John O. Schwartz of Hope, Ind. The rear seat folds down, making the car either a two or four-passenger roadster. It has wooden fenders.

Fiat Places New 7 H. P. Model on French Market

Company Plans Big Export Business with 60 Cubic inch Car Selling at $1,043

PARIS, Oct. 8.—(By mail)—Fiat this week placed on the French market the new 7 h.p. model, the appearance of which has been expected for a year. This is the smallest chassis ever built by the Fiat Company, and has a four cylinder engine of 57 by 97 mm. bore and stroke, giving a piston displacement of 60 cubic inches. Wheelbase is 100 inches, track 47 inches and body length 83 inches.

Selling price in France, which includes the government 12 per cent luxury tax, is $766 for chassis with tires; $940 for runabout; $1043 for four passenger phaeton, and $1,278 for two-passenger cabriolet or four passenger sedan. These prices are caluclated with exchange at 21 francs to the dollar.

The Fiat Company at Turin is planning for a big export business with this model for it is admittedly one of the most successful and modern cars of this type on the market at the present time. The four cylinder engine has a detachable head with overhead camshaft driven by two short chains at the rear, the first chain going to the magneto drive pinion and the second from the magneto shaft to the camshaft.

The crankshaft has a diameter of 45 mm. and is carried in two white metal bearings. Lubrication is forced feed throughout. Unlike other Fiat models, cooling is by thermo-syphon, there is a combined electric generator and starting motor on the front end of the crankshaft and transmission gives three speds ahead and reverse. Brakes are fitted on front and rear wheels, with a semi-servo mechanism which operates in both ahead and rearward directions.

The immediate Fiat program is for an output of 200 cars per day of this model. To provide for this production additional factory buildings, having a covered floor space of 770,000 square feet, have been erected.

DRIVURSELF ORGANIZED

SAN FRANCISCO, Oct. 24.—P. L. Emerson, vice-president of the Hertz Drivurself System and one of the executives of the Yellow Truck & Coach Manufacturing Company, has completed the organization of a Northern California Drivurself Association, composed of operators licensed under the Hertz system, and a branch of a national organization known as the American Drivurself Association. Charles J. Evans, of San Francisco, is chairman of the branch, with S. J. Newcomer of Oakland, and James N. Sewall, of San Jose, assistant chairmen. Emerson, who is best known here as former president of the Reo Motor Company of California, has gone to the southern end of the state to organize another section of the association.

FINANCE TERMS HELP

CHARLOTTE, N. C., Oct. 24.—The full effect of the revision of the terms of companies financing automobile installment paper is now being felt in this territory, and distributors of automobiles report the more favorable basis is enabling their dealers to close numerous sales which otherwise probably would be lost. No important need for a longer period for payment exists at this time in this territory though some wholesalers indicate their opinion that conditions expected to develop next spring might make such a concession advisable. An unusually large percentage of automobile sales are cash sales, according to dealers in the low and medium priced lines.

J. J. Plath Dies



J. J. Plath, former director of sales for the Chrysler Corp. and recently Chrysler distributor at Miami, who died there last week. He was extremely popular with the Chrysler organization

DURANT PROMOTES NISBET

DENVER, Colo., Oct. 24.—Announcement has been made of the appointment of R. C. Nisbet of this city as sales manager of the Denver office of the Durant Motor Company, succeeding E. D. Knowles. The latter has been promoted to regional sales manager, supervising factory branches. Mr. Nisbet has been working under Mr. Knowles for 13 months, and is well acquainted with the dealers of his line in Colorado, Wyoming and New Mexico. In addition to these states his new duties will take him to Utah and Idaho.

TAKES FLORIDA BRANCH

AKRON, Oct. 24.—The Indian Tire & Rubber Co. announces the appointment of B. B. Wright as manager of the Jacksonville, Fla., branch, which has just been established. Wright was formerly assistant manager of the Dallas branch of India Tire & Rubber Co. Previous to that he held various executive positions with the Gates Rubber Co.

Southwestern Car Show in Dallas Is Emphatic Success

Dealers from Eight States Help Swell Attendance of 700,000 in Sixteen Days

DALLAS, Tex., Oct. 24.—Combining a complete display of the very latest models and makes of motor vehicles with a varied program of social events the Dallas Automotive Trades Association made the annual Southwestern Automobile Show this year one of the most interesting and attractive events at the State Fair of Texas. While the number of cars displayed was no greater than at previous shows, the manner in which they were displayed and the social events the Dallas dealers pulled in connection with the show made the exhibition the most successful they have yet staged.

Coming months ahead of the annual shows at Chicago and New York the big show, extending over a period of sixteen days, offered an opporunity for dealers and the public in the Southwest to see just what is being put on the market by the manufacturers in 1926. The dealers were here from eight different states to see and study the exhibition of passenger and commercial cars, the displays of newest accessories and the showing of various makes and kinds of tires.

The enclosed cars featured the display at the show. Here the bodies were found about the same in appearance as last year, but they were roomier. Beading or moulding around most of them added to the beauty of the designs. The gay and bright colors of a year ago were not so much in evidence. Blues, browns and grays predominated in the color schemes.

The only radical departure from old body lines shown was the Ford. Many of those attending the show lamented the passing of the old "flivver" type.

Dealers and distributors said more than 700,000 persons visited the automobile show during the sixteen days operation. The interest stimulated in new cars was immense local and visiting dealers declared.

SOUTHERN SALES GOOD

NEW ORLEANS, Oct. 24.—Despite the continued hot weather in New Orleans and other parts of Louisiana and Mississippi, car dealers and automotive merchants report satisfactory sales for October. A general "slicking-up" activity has been in progress in New Orleans in particular and the fall season finds several new and remodelled distributor and dealer establishments.

WILLS STE. CLAIRE DEALERS

MARYSVILLE, Mich., Oct. 24.—Dealers who have recently taken on the Wills Sainte Claire line include:

Stover Motor Company, Baldwin, Long Island; Wills Sainte Claire Company of Bergen County, Hackensack, N. J.; Franklin A. Loomis, Binghamton, N. Y.; S. A. Calder, Fort Lauderdale, Fla.; Coyle & Weichner, Brooklyn, N. Y.

Along Automobile Row

LOUISVILLE.—Third Avenue Motors Company, Oldsmobile dealer has opened a new showroom at 653 South Third Street. The old location, 1529 South Third Street, will be utlized as a service station.

DECATUR, Ill.—J. D. Keiner, former works manager for the Streator Car company, has purchased the Midway Garage, 152 East Packard Street, and taken the local Auburn agency.

CINCINNATI.—Charles Kelsey, well known locally as an automobile salesman, has joined the sales staff of the Southern Ohio Motors Company, to sell Pierce-Arrow trucks and omnibuses.

LAYTON, Utah.—Lucius Laudie of the Layton Auto Co., has sold his interests in the company to Murray and Wallace Cowley of Layton, who will continue to conduct the business as a Ford agency.

DUBUQUE, Ia.—The Dubuque Nash company has filed its articles of incorporation, listing $10,000 capital. W. H. Klauer is president; H. A. Engel, vice president, and W. E. Klauer, secretary and treasurer.

MILWAUKEE.—Joseph Doering, formerly a member of the firm of McFadzen-Doering, Chrysler dealers of West Allis, Wis., has established a Chrysler sales and service business at 4329 North Avenue in Milwaukee, under the name of Doering Motor Co. Thomas McGurn is manager of the service department with John Bleeser as office manager.

JOLIET, Ill.—The Hudson Motor Car Company will maintain two agencies here, the H. & B. Garage being named a new distributor with the Ehler Motor Sales, which has been Hudson-Essex dealer for many years.

BOSTON.—James F. Marr, for many years used car sales manager for the J. W. Maguire Company, has taken the agency for the Pierce-Arrow line for Malden and vicinity.

WATERLOO, Ia.—The Dumond Motor Company, Inc., has completed its organization and will handle the Packard lines.

ST. LOUIS, Mo.—H. F. Fahrenkrog, member of the firm of Steiner and Fahrenkrog, Reo dealers, has been elected to the presidency of the St. Louis Board of Education. He is a member of the board of directors of the St. Louis Automobile Dealers' Association and is a former president of that body.

EDMONTON, Alta.—W. G. Parsons, for two and a half years manager of McLaughlin Motor Car Co., Ltd., Buick representative, has removed to Vancouver, B. C., to take charge of the McLaughlin factory branch. His successor in the Edmonton office will be Elmer Brink, who has been manager in Saskatoon, Sask., for the last three years. George A. Carnes will remain here in the position of sales manager of the company.

DENVER, Colo.—H. C. Drum, factory superintendent for the Sampson Tire & Rubber Company has placed an agency for his products with Ralph Campbell, local tire dealer.

MINNEAPOLIS.—The Pence Automobile Co., Buick distributor, has arranged to use half of a building which is being erected by the Butte Buick Co., Butte Mont., to be ready Jan. 1, 1926.

NEWTON, Ia.—The Jensen Motor Company of Des Moines has secured the Ford agency for Newton and vicinity, succeeding the Newton Motor Company, which cancelled its contract.

DETROIT. — Eighty-five Paige and Jewett dealers and service managers in Michigan and Ohio were guests of their distributor, Paige Sales and Service Company, for a service convention. The meeting was arranged by S. D. Bolton, manager and Frank Dorbandt, service manager, to demonstrate the latest service methods, tools and equipment to the dealer organization.

ROCHESTER, N. Y.—The Leader Garage, Inc., has been appointed distributor for the Detroit Electric. This makes the third electric which the garage is distributing in this territory, the other two being the Rauch and Lang and the Milburn. The garage is also sub-agent for Chrysler.

CHICAGO.—F. G. Peabody has been appointed Chicago retail store manager for the Chicago Durant Co., the local branch for Durant and Star.

SPRINGFIELD, Mass.—Jack Stone, used car dealer and associate dealer for the Hudson and Essex, has opened a large show room at 631 Main Street and is adding accessories designed to strengthen his merchandising of the Hudson and Essex lines.

SEATTLE.—A. S. Eldridge, president of the Eldridge Buick Company, is in Spokane, Wash., supervising the construction of the new Eldridge Buick building, which will be opened early in December.

LOUISVILLE.—Franklin Motors, Inc., distributor of the Franklin and Junior 8, has opened a used car department at 904-6 South Third Street. This location was occupied until recently by the David-Kummert Motor Company, Overland and Willys-Knight dealer. The latter firm has been dissolved.

MILWAUKEE. — Stebbins-Dentz Company of Milwaukee has been appointed Case dealers for the city.

DULUTH, Minn.—J. T. Connery, who has sold his local franchise for sale of Paige and Jewett cars for the Payne Motor Co., Minneapolis, has taken active charge of his own company in Winona, Minn., which he established some time ago. He has also a Paige-Jewett agency in LaCrosse, Wis.

CHICAGO.—The Gabriel Snubber Co., has been appointed exclusive distributors of Perfection Heaters for nothern Illinois and Indiana, it is announced by the Perfection Heater Manufacturing Co., Cleveland.

DETROIT.—Names of four managers of as many new retail stores together with several new department heads have been announced by the Willys-Overland Co., of this city. Associated with A. C. Tiedermann, assistant branch manager, are H. J. Gauley, manager of the Woodward and Canfield store; H. Perkins, of the recently opened Jefferson Avenue store; E. H. Chase, of the Hamtramack store, and W. P. Hammond of the Grand River store. Other appointments announced are Harry O'Brien as manager of the Detroit used car department and F. S. Bird who will have charge of the wholesale distribution of cars to the retail store system.

ST. LOUIS.—Foster Motor Car Co., 2914 Washington avenue, has been authorized as an Oldsmobile dealer by the De Luxe Automobile Co., Oldsmobile distributors here.

ROCHESTER, N. Y.—Louis Barlow, who has been connected with several Ford agencies in Rochester has joined the sales staff of the MacConnell Motor Corporation, Ford dealers here.

MONTREAL.—Adolphe Mogenais, for seven and a half years manager of the Chevrolet Motor Company of Canada, Ltd., for the province of Quebec with headquarters in Montreal, has resigned to take charge of the newly opened radio department of Legare, Regd. Montreal.

PENDLETON, Ore.—Glenn C. Sater and Ralph C. Parker are the new owners of the Ford agency. The business will be conducted as the East Oregon Motor Company.

SPRINGFIELD, O.—The secretary of state has granted the Springfield Buick Company permission to change its name to the Stevens Buick Company.

DETROIT.—Harry M. Robbins, formerly with Continental Motors, Dodge Brothers and the Oakland Motor Car Company, has opened offices in this city, preparatory to distributing American cars abroad for his own company.

MANKATO, Minn.—The Oakland-Perrin Co. has added the Cadillac line and will sell this car in the city.

DULUTH, Minn. — Martin Rosendahl, Oakland distributor for the city and adjacent territory, has moved into the former Zenith Motor Co. building at 316 East Superior street, where he will sell new and used cars. He has just taken the Marmon agency.

LOS ANGELES.—The Locomobile Company of California announces the appointment of the Kendall Auto Company of Pasadena to handle the Locomobile line in that city.

SIOUX CITY, Ia.—The Overland-Willys Knight Motor Co. of which Charles T. Mauller is president, has changed its name to the C. T. Mauller Motor Company, coincident with its occupancy of the new location at 219 West Seventh street.

NEW ORLEANS.—Leo G. Lob, 623 North Rampart Street, New Orleans, has been named distributor and dealer for the Locomobile line in New Orleans and surrounding territory.

CHICAGO.—The Seggebruch-Buick Co., Chicago Heights, announces the removal of its sales and service headquarters to 1646 Vincennes Avenue.

SPRINGFIELD, Mass.—Springfield Auto Livery Co. has added a truck-renting department to its "drive yourself" passenger car service. One-ton trucks are being put in commission for rental on a mileage basis.

OAKLAND.—The Berkeley Star Motor Company has been organized to retail Stars at 2210 San Pablo Avenue, Berkeley, according to announcement by N. T. Tuller, sales manager of the Durant Motors Company of California. Marvin H. Brown and Peter Jensen make up the new firm.

SAN ANTONIO, Tex. — The Charles George Motor Company of San Antonio, one of the authorized Ford, Lincoln and Fordson dealers of the city, has been sold to Ed Harpel and Frank Gillespie.

DES MOINES, Ia.—The Stewart-Warner Speedometer corporation has established one of its 62 exclusive radio offices in the country, at 1433 Locust street, Des Moines. It will direct the distribution of the Stewart-Warner matched radio units and Mortimer Zucher, manager, is making arrangements for broadcasting programs under its name from station WHO.

CARTHAGE, Ill.—Oliver Kirchner has purchased the battery business here, conducted for several years by Robert Compton, who retires to engage exclusively in handling of radio sets and equipment.

TOLEDO.—F. O. Tanner, formerly with the Martin-Parry Co., here has joined the sales staff of the Francis-Raitz Auto Sales Co., Hudson-Essex dealers.

HOLYOKE, Mass.—K. R. Charlton, Inc., Ford dealer, is adding a second story to its sales and service establishment, to be ready for use in January.

SAN ANTONIO, Tex.—The Travis Automobile Company has been organized and accepted a franchise from the Crockett Automobile Company, Hudson-Essex distributors, for retailing those cars in San Antonio.

CHICAGO.—The Velie-Bell Co. has disposed of its retail business to W. P. Sawyer and E. P. McGough, who wil establish sales rooms at 2618 South Michigan ave. Velie-Bell will handle only the wholesale distribution of the Velie hereafter.

With the Associations

Northern Cal. S. A. E. Formed

SAN FRANCISCO, Oct. 24.—As a result of the visit to this city of H. L. Horning, president of the Society of Automotive Engineers, a Northern California Section of the S. A. E., with a membership of 130, has been organized. E. C. Wood, superintendent of the motor vehicle division of the Pacific Gas and Electric Company, was elected chairman of the branch; G. B. Ridley, vice-chairman; W. S. Crowell, secretary, and F. Gerhart, treasurer. More than 200 men of the industry attended the organization meeting.

The northern California section of the S. A. E. differs from the eastern sections, which are largely composed of men in the automotive manufacturing industry, in that it will pay more attention to maintenance and operation problems, only recommending changed processes of manufacturing to the national body, based on actual field conditions of automotive vehicle operation in the hands of owners. It is hoped that the reports from this section on these subjects eventually will have an influence on the manufacture of automobiles, trucks, tractors, stages and trailers, through suggestions of improvements demonstrated as needful by actual operations in the field.

Organization of the branch was preceded by a year's work of a membership committee under W. W. MacDonald, of the MacDonald Truck Company and past president of the S. A. E., as chairman, and A. A. MacCullum as secretary. Monthly meetings, with entertaining and instructive programs were held for some seven months before the actual formation of the Northern California chapter, and then President Horning was invited to San Francisco to perfect the organization. He made a special trip across the continent for the purpose. Frank Fageol, of Fageol Motors Company, and Stanley Holt, of the Holt Tractor Company, were among the engineers prominent in the organization work.

Brooklyn Show Dates Set

NEW YORK, Oct. 24.—Brooklyn Motor Vehicle Dealers' Association has decided to hold the fifteenth annual Brooklyn automobile show from January 23 to 30 in the Twenty-third Regiment Armory, Bedford and Atlantic Avenues. L. C. Brown, president, and Ralph Ebbert, manager, with other members of the committee are working out diagrams and laying plans for the drawings of exhibition space, which will take place soon.

Black Hawk Bureau Elects

WATERLOO, Ia., Oct. 24.—C. A. West of the West Motor Sales Company was elected president of the Black Hawk County Motor Trades Bureau at the annual meeting, succeeding A. B. Chambers of the Repass Auto Company. Other officers are W. F. Marshall, of the H. & M. Chevrolet Company, vice president; Frank Collord of the Collord-Hull Dodge Bros. agency, secretary, succeeding William Keefe of the Hudson-Essex agency. The bureau went on record as endorsing the civic slogan "Trade in Waterloo" and participating fully in the campaign expressed in that slogan.

Mississippi Boosters Organize

ST. LOUIS, Oct. 24. — Mississippi Valley Boosters' Club No. 15 has been organized here with nineteen charter members. The officers of the new club are William F. Wedler, Tiffany Manufacturing Co., Newark, N. J., president; R. F. Herold, American Hammered Piston Ring Co., Baltimore, vice president; F. F. Weir, Thermoid Rubber Co., Trenton, N. J., secretary; and James K. Courim, Black & Decker Mfg. Co., Baltimore, treasurer.

New President



George A. Hoeveler, new president of Pennsylvania Automotive Association

Baltimore Plans Show

BALTIMORE, Md., Oct. 24.—The Baltimore Automobile Trade Association, Inc., under whose auspices the annual automobile show is staged at the Fifth Regiment Armory in January, has started plans for the event and hopes to make it the greatest in the history of the local trade. John E. Raine, secretary of the association, has been appointed show manager, a position he has held for a number of years. The board of directors also has named the show committee. This consists of A. H. Bishop, W. F. Kneip, E. R. Myers, Raymond Thompson, Louis Fox, Harry Reeves, Thomas G. Young and E. T. Backus.

Price-Cutting Scored

LOS ANGELES, Oct. 24.—An energetic campaign to check the price-cutting war which is rampant in the service station field throughout Southern California has been launched by the Los Angeles Automobile Trade Association. In a bulletin to its membership, the executive office of the association declares that "if the fool killer were turned loose at this date it is our prediction that about seven-eighths of the service stations would be without operators in a very short time."

Continuing, the bulletin says:

"Without a doubt the most foolhardy thing that can be attempted by the business man today is to sell his merchandise at a cut price. Volumes have been written on this subject, speeches of hours' duration have been delivered on it, and we still have with us the man who not only destroys his own business but that of his competitor and leaves his source of supply, the jobber, with a lot of unpaid bills on his hands, when he has proved, as thousands before him have already proved, that you can't cut prices and exist.

"The sooner the operator learns that a legitimate profit is service and that a first class service is absolutely imperative to a satisfied clientele which is willing to pay a legitimate profit, just so soon will your business be on the foundation it should occupy."

Legislative Board Formed

SEATTLE, Oct. 24.—At a recent meeting of automotive interests of the Pacific Northwest eight groups have gone together and formed the Washington legislative conference, each group being allowed three representatives in the conference. The co-operative agencies include the Washington branch of the American Automobile Association, Truck Owners' Association, Passenger Bus Association, Freight Bus Association, gasoline companies, insurance companies and good roads associations. Under the scheme this conference refuses to recommend anything to the legislature unless a unanimous vote is secured. Committees will keep in close touch with the various state departments.

Service Managers Meet

ST. LOUIS, Oct. 24.—Edward Weber, president of the Weber Motor Car Co., Studebaker distributor and director of the St. Louis Automobile Dealers' Association was the principal speaker at a recent meeting of the Service Managers' Bureau of the Association.

Weber gave his version of what the duties of a service manager should be and stated the chief of these is to keep the customer satisfied as "more sales are made through the back door than through the front, as it is the back door that keeps the customer satisfied."

Overseas Club to Entertain Foreign Jobbers in Chicago

Boosters to Hold Banquet During A. E. A. Show and Convention in November

CHICAGO, Oct. 24.—Automotive accessory wholesalers from many foreign countries will be the guests of the Overseas Club, Boosters No. 9, at a dinner and smoker during the Automotive Equipment Association show and convention at Chicago next month. The date and place for the meeting, which will be attended by members of the club and sales executives of American factories, has been announced by officers as Wednesday, November 11, Congress Hotel. More than 100 are expected in attendance.

Each year the show has been attended by many overseas wholesalers and, this year, as a result of special invitation by Commissioner William E. Webster, of the A. E. A., a larger attendance than at any other meeting is anticipated. Jobbers from Denmark, Holland, Great Britain, Germany, Sweden, Mexico, Cuba, Chile and Australia have already announced their acceptance of the invitation and the attendance of these overseas visitors will undoubtedly total several scores.

The Overseas Club, which will hold the dinner in co-operation with the A. E. A., is the export section of the Automotive Boosters International. It comprises in its membership more than 40 export managers of representative accessory and equipment lines, which this year are selling their products in more than 100 different countries of Africa, America, Asia, Europe and Oceania.

New officers of the club, elected this month are, F. J. Werner, Shaler Export Corp., New York, president; P. A. Karl, export manager, Brunner Mfg. Co., Utica, N. Y., vice-president; George E. Quisenberry, editor, The American Automobile (Overseas Edition) and El Automovil Americano, New York, secretary; and P. F. Baillet, export manager, Sparton, Mossberg and Multibestos companies, New York, treasurer. The directors in addition to the officers, are H. L. Kraus, export manager, Apeo, Biflex, Halliday, Blackhawk and Thompson companies; E. C. Steinacher, export manager, Moto Meter Co., Inc., Long Island City; James P. Kane, Kane Bros., New York City; Walter Rinck, Stevens & Co., New York City; and George Tiffany, sales manager, Overseas Motor Service Corp., New York City.

NEW VELIE DEALERS

MOLINE, Ill., Oct. 24.—New dealers added to the organization of the Velie Motors Corp. include the following:

Overland Motor Company, Estherville, Ia., R. D. Lawrence, Miami, Fla., Alfred Matson, Algonia, Ia., Linden Garage Corporation, Hackensack, N. J., Hubbard-Velie Co., Tacoma, Wash., James D. Barber, Evanston, Ill., Carl J. Simon, Van Wert, O., Velie Sales Company, Waukegan, Ill., Calumet Garage, Harvey, Ill., Yakima Motor Company, Yakima, Wash., Holt Motor Co., Arkansas City, Kas., A. C. Ennis, Bueis Creek, N. C., Hester Motor Service, Henderson, N. C., Wide-A-Wake Garage, Eau Galle, Fla., C. L. Harris, Franklin, Mass., A. K. Lewis, Westerly, R. I., Lane's Garage, Stuart, Fla.,

Five of Eight Air Lines Get U. S. Mail Contracts

WASHINGTON, Oct. 24.—Postmaster General New this week awarded contracts to private corporations to operate air mail service on five of the eight commercial routes for which bids were recently opened at the Post Office Department.

Names of the successful bidders on the five routes follow: Boston to New York via Hartford, Colonial Air Lines, Inc., Naugatuck, Conn.; Chicago to St. Louis via Springfield, Robertson Aircraft Corporation, St. Louis; Chicago to Dallas and Ft. Worth, the National Air Transport, Inc., Chicago; Salt Lake City to Los Angeles, the Western Air Express, Inc., of Los Angeles; Elko to Pasco, Walter T. Varney of San Francisco.

It is announced on the route from Seattle, Wash., to Los Angeles that the bid for Vern C. Corst is now under consideration. The bids previously received from the Chicago to Minneapolis and St. Paul route and over the Chicago to Birmingham route were rejected and additional proposals will be received up to December 8, and contracts will then be awarded if satisfactory bids are received.

NEW CADILLAC DEALERS

DEROIT, Oct. 24.—New dealers announced by the Cadillac Motor Car Co. include the following:

E. R. Taylor Auto Company, LaGrange, Ga., Charles Mancuso & Son, Batavia, N. Y., George W. Brokhausen Auto Company, Freeport, Ill., Kickels Motor Sales Company, Gary Ind., R. J. Harris, Pontiac, Ill., A. Vincent Sons Company, Roseland, Ill., Fulwiler Motor Company, Breckenridge, Tex., Ft. Pierce Cadillac Company, Ft. Pierce, Fla., Ventura County Cadillac Company, Santa Paula, Cal., Escanaba Motor Company, Escanaba, Mich., Universal Auto Company, Ironwood, Mich., Lowry Motor Sales Company, Kenosha, Wis., Putrow & Voelker, Menominee, Mich., J. M. Bannach, Stevens Point, Wis., Klinger Buick Company, Watertown, Wis., Central Auto Company, West Bend, Wis., F. F. Harrison, Minot, N. D., Blackwell Buick Company, Blackwell, Okla., W. O. Harlow, Kalamazoo, Mich., J. O. McCauley, Sturgis, Ky., Park Motor Car Company, Rutherford, N. J., Standard Automobile Company, Cleveland, Miss., Wm. Hamacheck Buick Company, Sheboygan, Wis., C. E. Cleaves, Biddeford, Me., Superior Motor Company, Redwood City, Cal., Allen Motor Company, Tacoma, Wash.

Coming Motor Events

Automobile Shows

Chicago ..... Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Chicago ..... Nov. 16-17
Annual convention, National Association of Finance Companies, Hotel Sherman. C. C. Hanch, secretary-manager, 76 W. Monroe St., Chicago.

Chicago ..... Nov. 16-18
Convention and exhibition of the National Standard Parts Association, Hotel Sherman, C. B. Fraser, secretary, 310 Hofman Bldg., Detroit.

Detroit ..... Nov. 16-21
National Motorbus Show in Grindley Hall, C. E. Stone, chief engineer People's Motor Coach Co., in charge of committee.

New York ..... Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J. ..... Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Washington ..... Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

San Francisco ..... Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bdg., manager.

Denver ..... Feb. 2-6
Annual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Louisville, Ky. ..... Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Races

Charlotte, N. C. ..... Nov. 11
Los Angeles, Cal. ..... Nov. 26

Conventions

Des Moines, Ia. ..... Nov. 12-13
Automotive Merchants' Association Convention.

St. Louis ..... Nov. 17-19
Annual Convention of National Tire Dealers' Association.

New York ..... Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago ..... Feb. 9-10
American Drivurself Association Annual Convention.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

January 1—National Shows Number—Automobile Trade Journal.

January 7—Motor Age—National Shows Number.

January 14.—Motor World Wholesale—New York Show Report.

February 4—Motor Age—Chicago Show Number.

February 4—Motor World Wholesale—Chicago Show Report.

February 18—Automotive Industries—Statistical Issue.

rogram Is Announced for Chicago Service Convention

peakers Representing All Phases of Industry to Address N.A.C.C. and S.A.E. Meeting

NEW YORK, Oct. 24.—The complete ogram for the Service Convention to held at the Hotel LaSalle, Chicago, vember 9 and 10, has been announced the National Automobile Chamber of mmerce and the Society of Automotive gineers, the two organizations co-erating in the promotion of this event. e speakers and the subjects on which ey will talk follow:

Corrosion in Internal Combustion En-nes—Frank Jardine, Aluminum Co. of nerica and M. A. Thorne, Tidewater l Co.

Diagnosis of Troubles—C. L. Sheppy, alter Pleuther and John C. Talcott, erce-Arrow Motor Car Co., and Carl eer and John Squires, Chrysler Corp.

Maintenance for the Protection of the r Owner's Investment—J. F. Lord, irant Motors, Inc.

Fuel from a Service Standpoint—T. A. yd, General Motors Research Corp.

The Year's Development in New De-es for Improving Car Operation—nald Blanchard, Technical Editor, otor World Wholesale.

WEAR DEDUCTION FIXED

WASHINGTON, Oct. 24.—An allowance 12½ per cent per year for the ex-austion, wear and tear of trucks and tomobiles used for business purposes s been ruled reasonable in figuring come taxes by the United States Board Tax Appeals in a decision just made blic here. The ruling was made in e case of Yost and Herrell, local lum-r merchants, who had made deduc-ns for depreciation of trucks and tomobiles which had been challenged r the commissioner of internal revenue.

CORCORAN LEAVES FIRM

CINCINNATI, Oct. 24.—Thomas J. rcoran has sold the controlling inter-t in the Thomas J. Corcoran Lamp Co. d has retired from the presidency. he stock was secured by G. P. Doll, cretary and treasurer of the company r several years, who now becomes esident. Mr. Corcoran will retire from tive business, but after an extended ip abroad he will continue with the mpany in an advisory capacity. The mpany was formed in 1919 and ab-rbed the Corcoran-Victor Co. in 1923, us becoming one of the largest con-rns of its kind in the world, with an-al sales of about $2,000,000.

NEW KELLY TIRE BRANCH

SYRACUSE, Oct. 24.—The Kelly ringfield Tire Co. is to open a whole-le branch in this city. The district ill embrace the territory from Bingham-n to Watertown to Utica and Syracuse. T. Hoag has been made manager of e office which has been established t 356 W. Fayette Street.

SQUEEKS and RATTLES

HE EARNED IT



Nurse: "Are you the young lady who was with him when the car went into the ditch?"

Visitor: "Yes. I thought it would only be fair to come and give him the kiss he was trying for."

—Automotive News.

A Nightmare

Ma: "Did you dream that you were out riding with Bill last night?"

Sis: "Yes. How did you guess it?"

Ma: "I saw you walking in your sleep."

—Pitt Panther.

Afraid

First Pedestrain: Gosh, that taxi nearly got you.

Second O'Sullivanite: I knew it wouldn't hit me.

First: How's that?

Second: It was yellow.

—Stevens Stone Mill.

Here lies what's left
Of Henry Glenn;
Match in gas tank—
Up went Hen.

—San Francisco Chronicle.

Accommodating

It was just after the big game. Automobiles jammed the street and taxis were scarce. An extremely agitated man jumped on the running-board of a passing cab and shouted:—

"Let me ride as far as the station, will you? I can hang on out here."

Eventually, they reached his destination. The man alighted and paid his fare. Then, turning to the occupants of the car—

"Thanks a lot!" he said.

But the cab was empty.

—Princeton Tiger.

GRAVITY OF THE CELL



Testing times for the rental battery thief.

Overland Six Orders Are Ahead of Output Schedule

TOLEDO, Oct. 24.—Despite the fact that throughout the summer and early fall months production on the new Overland Sixes has been greatly increased, orders from the Willys-Overland national dealer organization continue to pile up in advance of the production schedule, the factory announces.

Production on the Overland Sixes during the first nine months of 1925 totalled approximately 40,000 cars, and the Willys-Overland factory during the month of October entered into a production schedule of more than 200 cars per day of this model.

SPECIFICATIONS TO BE TOPIC

WASHINGTON, Oct. 24.—Conferences with representatives of automotive manufacturers, distributors and consumers will be held here in the near future by the division of simplified practice of the Department of Commerce to consider recommendations now being framed by automotive engineers regarding specifications for brake lining, oversize piston rings, spark plugs and taper rolling bearings. Officials of the simplified practice division hope to obtain the same acceptance of revised standards which has been accorded by other industries.

VALVE SHOP OPENS

OAKLAND, Cal., Oct. 17.—The first flat-rate valve specialty shop on the mainland side of San Francisco Bay has been opened here by George E. Reed. Nothing but valve work will be handled and all will be done on the flat-rate system, with guaranteed statement of cost before the job is started.

New York Sales for Nine Months Gain Over 1924

NEW YORK, Oct. 24.—September sales of 41 makes of passenger vehicles in the Metropolitan district were 7485, a decrease of 1035 from the August total and sales for the first nine months of 1925 were 73,877 against 73,264 in the same period last year and 66,612 and 54,023 in the corresponding months of 1923 and 1922 respectively, according to an analysis by Sherlock & Arnold.

The peak of the nine months this year was the 11,301 sales in April and the totals have been declining since July, when 11,151 cars were sold.

Sales of 1925 passenger models totaling 910 in September have been increasing since June and during the first nine months of this year 7206 new models were sold compared with 5318 in the same period of 1924, 6548 in the 1923 and 5581 in the 1922 period.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
.....	7-p	Sedan	1,995
		"8-88"	
.....	3-p	Sport Roadster	1,975
.....	6-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	7-p	Sedan	2,550
.....	.....	Wanderer	2,400
BUICK		"Standard"	
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
3350	2-p	Roadster	1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Brougham Sedan	1,925
3940	7-p	Sedan	1,995
CADILLAC			
		"V-63" Standard Line	
		(132 in. W. B.)	
4075	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
4155	7-p	Sedan	3,295
4240	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built (132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	.....	Phaeton	3,250
.....	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2345	5-p	Touring	$895
2435	5-p	Touring DeLuxe	1,025
2470	3-p	Coupe	975
2600	5-p	Sedan	995
		"43"	
2750	5-p	Touring	1,095
2910	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2950	3-p	Coupe	1,175
3050	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
DODGE BROTHERS			
2473	2-p	Roadster	$855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2703	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
.....	2-p	Sp. Roadster	$900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$765
2395	5-p	Coach	795
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
		With Starter and Dem. Rims	
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER		6A	
.....	5-p	Brougham	$1,495
3070	5-p	Touring	1,395
.....	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	.....	DeLuxe Sedan	1,895
		8A	
.....	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3360	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		D-1	
3360	5-p	Sedan	$1,695
HUDSON		"Super Six"	
3400	7-p	Phaeton	$1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4 d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE "A"			
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		"23-25"	
3060	4-p	DeLuxe Road.	$1,50
3000	5-p	DeLuxe Touring	1,32
2990	5-p	Coach 2d.	1,24
3160	5-p	DeL. Coach 2d.	1,40
3325	5-p	DeLuxe Sedan	1,68
JORDAN		"J"	
.....	4-p	Playboy Road.	$1,69
.....	5-p	Sedan	1,84
		Series "A"	
3340	5-p	Touring	2,27
3625	5-p	Brougham	2,57
3525	5-p	Sedan	2,67
3470	7-p	Sedan	2,92
KISSEL		"55"	
3130	2-p	Speedster	$1,79
.....	2-p	Sp'dster DeLuxe	2,08
.....	4-p	Speedster	1,89
.....	4-p	Sp'dster DeLuxe	2,18
3530	2-p	Enc. Speedster	2,08
.....	4-p	Enc. Speedster	2,18
.....	4-p	Enc. Spdstr. DeL.	2,68
.....	2-p	Enc. Spdstr. DeL.	2,58
3190	4-p	Tourster	1,79
.....	4-p	Tourster DeL.	1,98
2980	5-p	Phaeton	1,58
3170	5-p	Phaeton DeL.	1,78
.....	7-p	Touring	1,68
.....	7-p	Touring De L.	1,88
3430	4-p	Coupe	2,08
.....	4-p	Coupe De Luxe	2,48
3540	5-p	Brougham Sedan	1,99
.....	5-p	Broug. Sed. DeL.	2,48
.....	5-p	Brougham 2 d.	1,69
4070	7-p	Sedan De Luxe	3,08
4010	7-p	Berline Sed. DeL.	3,18
3530	5-p	Victoria	2,18
.....	5-p	Victoria DeLuxe	2,48
		"75"	
.....	2-p	Speedster	2,19
.....	2-p	Speedster De L.	2,48
.....	4-p	Speedster	2,29
.....	4-p	Speedster DeL.	2,58
.....	2-p	Enc. Speedster	2,48
.....	2-p	Enc. Sp'd'r DeL.	2,98
.....	4-p	Tourster	2,19
.....	4-p	Enc. Speedster	2,58
.....	4-p	Enc. Sp'd'r DeL.	3,08
.....	4-p	Tourster DeL.	2,88
.....	5-p	Phaeton	1,98
.....	5-p	Phaeton De Luxe	2,18
.....	7-p	Touring	2,08
.....	7-p	Touring De Luxe	2,28
.....	4-p	Coupe	2,48
.....	4-p	Coupe De Duxe	2,88
.....	5-p	Brougham Sedan	2,89
.....	5-p	Broug. Sed. DeL.	2,98
.....	5-p	Brougham 2 d.	2,09
.....	7-p	Sedan De Luxe	3,48
.....	7-p	Berl. Sed. De L.	3,58
.....	7-p	Victoria	2,58
.....	7-p	Victoria De Luxe	2,88
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,58
3000	5-p	Touring (Enc.)	1,69
2950	5-p	Spec. Touring	1,79
3200	5-p	Sedan	2,19
3425	5-p	Spec. Sedan	2,44
		"Minute Man"	
3120	2-p	Roadster	2,14
3195	5-p	Touring	2,09
3489	7-p	Touring	2,19
3230	5-p	Lark Touring	2,84
3368	5-p	Cal. Touring	2,49
3395	7-p	Cal. Touring	2,49
3375	7-p	Royal Coach	2,49
3440	5-p	Brougham	2,59
3542	5-p	Sedan	2,89
LINCOLN			
4460	2-p	Roadster	$4,00
4580	7-p	Touring	4,00
4565	4-p	Phaeton	4,00
4740	.....	Sport Touring	4,50
4750	4-p	Coupe	4,60
4885	4-p	Sedan	4,80
4960	5-p	Sedan	4,90
4890	7-p	Sedan	5,10
4945	7-p	Limousine	5,30
LOCOMOBILE "48"			
5280	4-p	Sportif Tour	$7,40
5330	7-p	Touring	7,40
5630	5-p	Victoria Sedan	10,00
5464	7-p	Brougham	10,00
5640	7-p	Touring Lim.	9,50
5868	7-p	Enc. Drive Lim.	10,00
5600	7-p	Cabriolet	10,30
		"Jr.-8"	
3100	2-p	Roadster	2,10
3000	5-p	Touring	1,70
3400	5-p	Sedan	2,20
3350	5-p	Brougham	2,20

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Summary and Index of Important Events in

This Week's Automotive News

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DETAILS of Automotive Equipment Association annual show and convention in Chicago are announced by officials. Page 32.

Production registers slight decline in October. Ford output jumps ahead. Page 32.

Studebaker net profits reported at $5,035,177 for quarter. Page 33.

Cincinnati dealers report advanced business during early fall. Page 34.

New car sales show big increases in San Francisco territory. Page 34.

Chrysler Corp. reports profits of more than $8,000,000 in last three months. Page 34.

Tire makers planning greatest output in history during 1926. Page 33.

Colorado automotive volume shows improvement in October. Page 33.

Nash prices are reduced from $20 to $300 in both series. Page 33.

Sales and profits in September are reported largest in the history of the General Motors Corp. Page 43.

Cleveland Automobile Company adopts flat rate system of service for dealers and distributors. Page 43.

Ford of Canada reports earnings of $6,132,327 in last year. Page 36.

Chicago sales volume for October considered normal for this time of year with no unusual decline. Page 36.

Representatives of automotive industry make pleas for repeal of automobile war excises. Page 35.

North Carolina service men organize four new divisions at convention. Page 36.

Studebaker company is pleased with success of pledge plan. Page 36.

New seven-passenger sedan model is announced by Diana. Page 35.

Details of program for second conference of automobile finance companies are announced. Page 37.

Stanley Zweibel is named service manager of Marmon. Page 37.

New seven-passenger Willys-Knight six is announced in two styles. Page 37.

Financial report of Packard Motor Car Company reveals greatest year in history of the firm. Page 38.

Oakland announces larger and roomier landau sedan style with new colors and other refinements at same price. Page 39.

R. C. Rueschaw, sales manager, and one of six original executives, retires from active participation in affairs of Reo. Page 39.

Overland shipments surpass entire 1924 output by 44,000 on October 20. Page 38.

Revenue collections from automotive industry again show an increase in September. Page 43.

Dealers in Los Angeles report 10 to 20 per cent sales gain in October with every indication of good winter. Page 43.

New financing plan for sale of equipment and tools is put forth by Atlas Securities Co., of Indianapolis. Page 35.

In Next Week's Issue—Cold Weather Profit in Saving Cars From Freezing.

Great Show of *Automotive Merchandise* Opens Nov. 9

Accessories, Parts, Supplies and Equipment Make Up Seventh Annual A. E. A. Exhibition at Chicago — Association's Tenth Convention Also Scheduled



The great market for automotive equipment. View down the main aisle of Coliseum at last year's A. E. A. Show

A WIDE variety of accessories, replacement parts and other automotive equipment will be spread out for inspection before the jobbing trade at the annual show to be held Nov. 9-14 in conjunction with the A. E. A. convention.

The show will be held, as usual, at the Chicago Coliseum, exhibits occupying the entire main floors of the Coliseum proper, the South Hall and the new North Hall. Last year the show made use of the new North Hall for the first time, this division of the big Chicago exhibition place answering the need for space but not being slicked up ideally at that time. Now, however, the North Hall presents an entirely finished appearance and displays in that part of the building will be shown to full advantage.

While this will not be a dealer's show it is to play an important role in the dealer's merchandising program of the next few months. Jobbers will be on hand to see what there is new and to stock items that will be passed along to dealers at a later time. New articles announced for the first time at the show will be listed and described, as soon after the show as printers can work, in jobbers' catalogs and literature.

Dealers will be watching for these listings and they will want to get as much early information about the new products as possible.

Realizing this and desiring to be of assistance to the dealer in speeding up this information MOTOR AGE in post-show numbers will publish a comprehensive list of new product descriptions, while in the present issue it presents an enumeration of new products covering a majority of the A. E. A. exhibit booths. In connection with this latter list, appearing on other pages, are given the general lines of products handled by many of the exhibiting companies. The dealer can use this list as a preliminary reference, making note of any products in which he is interested and then watch for the descriptions of these and other items that will appear in a later number of the magazine. The detail descriptions will appear in the issues of Nov. 12 and 19.

The number of individual exhibitors in this year's show will exceed last year's by 15, the official list showing that space for the 1925 show was alloted to 235 applicants as against 220 in 1924. The number in 1924 was 17 less than the number alloted space in 1923, so it would seem that interest this year among A. E. A. manufacturers is on the upgrade.

Utility the Keynote

It is not the number of exhibitors which makes a good show, however, nor is it the number of items on display. What constitutes a good automotive equipment show is its coverage of the field. It is doubtful if the A. E. A. has ever staged an exhibition before in which the coverage of the field has been more satisfactory and complete than that of the show to be held this year. These exhibitions year after year have been getting down to a show of the more necessary articles, where those of doubtful utility and merchandising value have been growing fewer and fewer.

The standard lines already known to the trade will be displayed more comprehensively than ever with double emphasis on coverage. It will be seen that many companies formerly making equipment for a limited number of car makes are now prepared to supply their wares for numbers of additional makes, if not the entire list.

New products for the most part will be of a practical character, many of them suggesting strong merchandising possibilities. There will be numbers of new things for car owner as well as for the shop and service station. Influence of the balloon tire will be found in a number of booths, balloons being responsible for a steadily increasing total of automotive developments. Strenuous campaigning over the country against automotive thefts will show the imprint of its influence in the numbers of locking devices. This list is a long one and locking products continue to improve. Companies making winter appliances will not overlook this seasonal opportunity, for they will be on hand with many such items, new and previously introduced, as radiator shutters, windshield wipers, radiator solutions and compounds, heaters, etc. The new

fferings will present interesting models in the shape of ools of various kinds as well as quite a list of electrical nits, radio sets and radio parts, and many other items of articular interest to the automotive world.

It would be difficult to say which group of new products ominates. The display, however, will stand as a fine tribute to inventive genius and an evidence of progress.

Concurrently with the show, which is the seventh annual automotive equipment exhibition, the tenth annual convention of the A. E. A. will be held in Chicago, the general sessions being held at the Coliseum Annex and divisional sessions at the Congress Hotel and the Coliseum

Good Business Ahead in Automotive Equipment Field

Next Year to Be Best Yet as Enlarged Car Production and Keener Competition Result in New Vehicles Being Listed With Less Equipment

By W. T. MORRIS

President Automotive Equipment Association, Vice President American Chain Co.



W. T. Morris, President A. E. A.

AS we watch the progress of the plans for 1926 automotive production, we cannot but be impressed by the fact that especially the larger units of production are working to very ambitious plans. With a potential capacity, according to some reports, of six million automobiles, two things are assured to the industry: first, that the greatest selling effort ever put forth in the industry will go into the development of 1926 business; and, second, that the condition will be highly competitive, more especially in the medium and lower price fields.

This effort will undoubtedly produce results never equalled before in the industry. And inasmuch as new car sales are a large controlling factor in accessory sales, the industry can be assured of a volume of business unequalled in previous years.

With conditions as highly competitive as they will undoubtedly be during 1926, it is quite likely that car factories generally will lean rather toward the elimination of accessories as standard equipment rather than increasing the quantities used, in order that they may compete at a lower price basis, and this of course will enable the automobile dealer to sell the accessories to car owners at a substantially greater profit to himself than would accrue to him were they sold as a part of the car, and the result of this can only be a very much better financial condition upon the part of dealers generally.

The replacement parts and equipment business is more dependent on the cars in operation than on new car sales. We believe we can see a growing tendency upon the part of car users to come more nearly to using up the car miles that the car was designed for, and this is having two decidedly good effects on the industry as a whole. First, it has tended to lessen the used car problem. Second, it has increased the market for shop equipment and replacement parts. Both of which are evidences of a more healthy condition in the trade.

At this writing the question of excise tax is still to be settled—with strong possibilities, however, of its being removed. And inasmuch as the car manufacturers are on record to pass this saving on to the consumer, an increased market will be the result in every price class.

The farm market for automobiles is very nearly, if not entirely, back now to normal. Employment conditions generally throughout the country are better than they have been since 1920, which must be reflected in urban business. And coupled with these general conditions, we have the development of the fastest growing unit of transportation in the industry—the passenger bus—which must not be overlooked in its effect on the industry as a whole.

Serving the Retail Trade



N. F. Ozburn, vice-president, A. E. A.

How the Automotive Equipment Jobber Acts as a Great Reservoir for Merchandise on the Way to the Consumer by Way of the Retail Dealer

By N. F. OZBURN,
Ozburn-Abston & Co., Vice President Automotive Equipment Association

THE Automotive Equipment Jobber has a distinct and important part to play, and a duty to perform in properly servicing and distributing replacement parts, accessories and shop equipment to the retail dealer in the territory which he serves. If the jobber is to properly do his part in servicing the retail dealer, and be successful, his first must be a house that is adequately financed —have a trained efficient sales force and a house organization that appreciates all the words SERVICE and CO-OPERATION mean. Last but not least, he must have adequate warehouse facilities where orders can be filled correctly and with a minimum delay.

The retail dealer should look upon his jobber as his buying department, and the jobber's buyer should ever have in mind that he is not only buying for his individual house, but for the thousands of Dealers whom the jobber serves. The lines he purchases for resale should first be of proven quality, rightly priced, made by a manufacturer with a policy, and merchandise that will meet ready demand upon the part of the consuming public and show a legitimate profit to both the dealer and the jobber.

Prices from all legitimate jobbers, quality of merchandise being considered, are practically the same. The jobber who, therefore, expects to properly serve the retail trade to advantage, must necessarily sell more than merchandise. He must sell his SERVICE to the dealer in more ways than one. First—his ability to cut down the Dealer's investment in stock by pointing out advantages to be derived by carrying an adequate, but small stock of the quick and profitable selling items, using the enormous stock of his jobber as a surplus stock and ordering frequently, resting assured that the jobber will be in a position to fill his orders on the day received. The dealer who follows this policy will find that he will have additional capital free to use in the further upbuilding of his business.

The dealer will find it to his distinct benefit to confine his purchases, as far as possible, to one or two good jobbers. For by so doing, the account will be a worthwhile one and in times of stress he will find that the credit departments of these jobbers will be more than willing to co-operate by extending him special terms or carrying his account until his finances are once more on a sound basis. The writer knows personally dozens of successful retail automotive dealers today who owe their success to the co-operation, help and assistance rendered by their jobbing connections. Dealers who started in business with nothing more than a will to do, and a high sense of moral obligation, were assisted up the ladder of success and prosperity by the guidance of a good jobber.

Salesmen Can Help

The properly trained jobber salesman can and should be of immense benefit to the dealer trade. In traveling over his territory, he is constantly coming in contact with successful dealers, who in their business have established tried and proved sales methods, which he in turn can pass on to the benefit of his other customers. Having a broader and better knowledge of the automotive line which he sells, he can assist the dealer in educating his men to be real "Ask 'Em To Buy" merchants. He should demonstrate labor saving devices for the shop men and offer suggestions for dressing show windows and the proper display of merchandise, thus making his sales efforts something more than simply the exchange of MERCHANDISE for DOLLARS.

It is doubtful whether the car manufacturer or the dealer fully appreciate the distinct service that the automotive equipment jobber is performing in the replacement parts field. With the 18,000,000 passenger cars now on the American highways, it would be an impossibility for the car manufacturers or their authorized dealers to supply parts for and service this enormous number of cars. To carry in stock the different oversize pistons, pins, and rings, together with such items as gears, springs and articles of a like nature for the different and numerous models which have been brought out during the past few years, would place a financial burden on the car dealer which very few would be in position to carry.

The jobber in most instances is carrying standard replacement parts of proven merit, rendering prompt and efficient service to the retail trade and keeping the cars on the American highways moving, and at less cost and more efficiently than could be accomplished in any other manner.

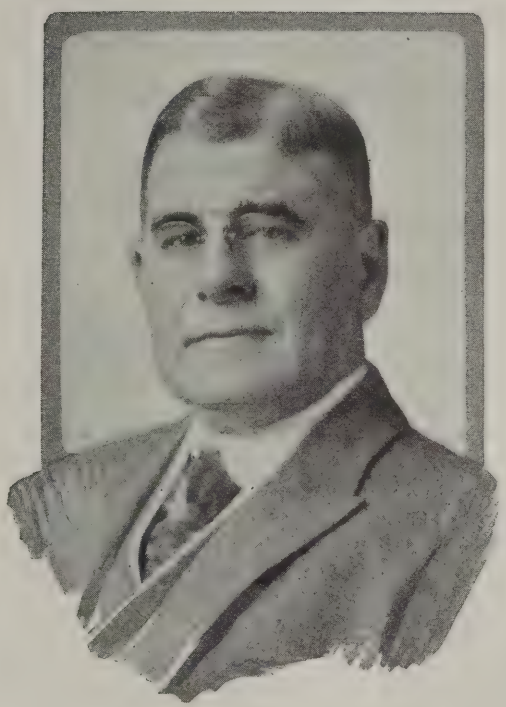
ars that normally would be out of commission for anyhere from a week to ten days, awaiting the arrival of arts from factories, are being supplied parts from the obber's stock and put back in running condition within a w hours.

If the dealer will but realize that discount is not everything in business, and that his interests and the jobber's are one and the same, he will find the jobber his best friend, and ever willing to lend all co-operation and aid in helping to build permanent and profitable business—thereby overcoming the efforts and work of their greatest common enemy the "gyp."

A Good Jobber Is the Retailer's Best Friend

Dealer Who Makes Himself Worthwhile Customer of Dependable Wholesaler Has Business Advantage

By WILLIAM M. WEBSTER
Commissioner of the Automotive Equipment Association



William M. Webster, commissioner, Automotive Equipment Association

THERE is no more important thing for the retail merchant to consider than that of securing and maintaining an adequate and dependable source of upply. Profits in business result from selling. Goods ust be bought before they can be sold, and good buying , therefore, a mighty important factor and it is impossible without the right kind of a supply source, which ften means the difference between a profit or loss in perating a business.

Too many merchants buy on price only. One must ecure his merchandise at fair prices, else he cannot meet ompetition, but price is not the only and all-important onsideration. In times now gone, when rentals were heap, warehousing cost low, transportation difficult, and hen merchants bought supplies for six months or more, oney could be made by price-haggling and bargaining, ut money in a business today is made in the selling—y the quick turnover and many small profits rather than few large ones. Successful merchants recognize this nd act accordingly.

If I were a retailer, I would expect to pay my jobber a air price, that is, his cost plus a profit that would enable im to pay his operating expenses and then some—which his just and reasonable due. I would then carefully nalyze his ability to supply my needs of quality merhandise in an efficient and dependable way in order to ring to my business the advantages of a jobbing conection on which I could rely.

The public today more and more demands well-known and randed merchandise. A dependable wholesaler will have the confidence of manufacturers and will be enabled to furnish merchandise that is in demand on reasonably short notice, thereby enabling the retailer to serve his customers with a minimum of expense.

The great problem in business today is that of efficient distribution. As a rule, anything that can be sold can be made, but it does not work the other way around, for many things made might not be capable of being sold, so leaders in the industry now emphasize the necessity of efficient distribution. A dependable wholesaler understands the problems of his dealers, gives thought to their merchandising needs and co-operates with them in stimulating the sale of merchandise that he supplies them.

The wise retailer will tie closely to a wholesaler of established reputation, give him a volume of business that will justify his having a real interest in the well being of the retailer's business, and he will work with the dealer in helping him build a greater business by every possible and legitimate means of increasing sales.

When a wholesaler has a real interest in his dealer he is willing to give him all aid consistent with good business to help him place and keep his business on a sound basis.

The writer recalls a grocery merchant in Eastern Carolina, who, in the depressing days of 1892, found the going mighty hard. He had always worked closely with his

jobber, had taken care of his obligations at the appointed time or had made satisfactory arrangements. He had avoided the practice of giving many wholesalers a little dab of business, but gave a limited number a volume that made his business worth while to them. As a result, when he was hard-pushed, those wholesalers with whom he had been doing business came to his rescue, helped him over the hard period and thereby kept him and his business from going on the rocks; and there are thousands upon thousands of like instances. Your wholesaler is your friend—cultivate and develop close relations with him. It will pay both him and you.

I think it well, in closing to re-state the thought expressed in the beginning—There is no more important thing for a merchant to consider than that of securing and maintaining a dependable source of supply.

Christmas Profit in Automotive Merchandise

Alive to the Christmas Opportunity

The following manufacturers, members of the Automotive Equipment Association, had notified the A. E. A. Merchandising Department of their plans to feature their products as Christmas gifts, up to the time the accompanying article was written:

	Will have Xmas Boxes	Will have Xmas Wrappers	Will have Display Material	Will adv. in Trade Papers	Will adv. in Newspapers	Will adv. in Magazines	Will have Direct Mail
American Chain Co.	------	------	Yes	Yes	------	Yes	------
Apco Mfg Co.	Yes	------	------	------	------	------	------
Apex Electric Mfg. Co.	------	Yes	Yes	Yes	------	------	------
Appleton Electric Co.	------	Yes	------	------	------	------	------
Benzer Corporation	------	Yes	------	------	------	Yes	------
Blackhawk Mfg. Co.	Yes	------	Yes	Yes	------	Yes	Yes
Champion Spark Plug Co.	------	------	Yes	------	------	Yes	Yes
Cincinnati Victor Co.	Yes	Yes	Yes	------	------	------	------
Crescent Tool Co.	Yes	------	Yes	Yes	------	Yes	Yes
Cuno Engineering Corporation	Yes	------	Yes	Yes	------	Yes	Yes
Delta Electric Co.	------	Yes	------	Yes	------	Yes	Yes
Dominion Chain Co., Ltd.	Bags	Yes	Yes	Yes	------	Yes	------
E. A. Laboratories, Inc.	------	Yes	------	Yes	------	Yes	------
E. Edelman & Co.	Yes	------	------	Yes	------	Yes	Yes
Elite Mfg. Co.	Yes	Yes	------	Yes	------	------	Yes
French Battery & Carbon Co.	------	------	Yes	------	Yes	Some	Yes
Fisher Motor Co.	------	Yes	Yes	------	------	------	------
Hastings Mfg. Co.	------	Yes	------	------	------	------	------
Kay Bee Mfg. Co.	------	Yes	Yes	Yes	------	Yes	------
K. D. Lamp Co.	Yes	------	------	Yes	------	------	Yes
Kingsley-Miller Co.	Yes	------	Yes	Yes	------	------	------
LeCompte Mfg. Co.	------	Yes	------	Yes	------	------	------
J. C. McAdams Co.	------	Yes	Yes	Yes	------	Yes	------
Metal Specialties Mfg. Co.	Yes	------	Yes	Yes	------	Yes	------
Miller Lock Co.	------	Yes	Yes	Yes	------	------	Yes
Frank Mossberg Co.	Yes	Yes	------	------	------	------	------
National Carbon Co.	Yes	Yes	Yes	------	Yes	Yes	Yes
New Era Spring & Specialty Co.	------	Yes	Yes	Yes	------	------	------
Norlipp Co.	Yes	------	Yes	------	------	------	------
Phinney-Walker Co., Inc.	Yes	------	Yes	Yes	------	Yes	------
Pyrene Mfg. Co.	Yes	------	Yes	------	------	------	Yes
Rees Mfg. Co.	------	Yes	------	Yes	------	------	Yes
G. A. Roth Mfg. Co.	------	Yes	------	Yes	------	Yes	------
S & M Lamp Co.	------	Yes	------	------	------	------	Yes
C. A Shaler Co.	------	------	Yes	Yes	------	------	------
Spark-Withington Co.	Yes	------	------	------	------	------	Yes
Splitdorf Electrical Co.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F. W. Stewart Mfg. Co.	------	Yes	Yes	------	------	------	------
W. H. Thomas Mfg. Co.	------	Yes	Yes	Yes	------	------	------
Williams Bros. Aircraft Corp.	Yes	------	Yes	Yes	------	Yes	------

How A. E. A. Manufacturers and Jobbers Are Campaigning to Help Dealers Sell Accessories and Equipment as Holiday Gifts.



Arthur R. Mogge, Merchandising Director A. E. A.

By ARTHUR R. MOGGE

Merchandising Director Automotive Equipment Association

THE idea of merchandising automotive equipment as Christmas gifts has been growing more popular every year, and all advance reports indicate that this season will be the most successful on record.

Following a general program outlined by the Merchandising Department of the Automotive Equipment Association, many manufacturers started several months ago to make preparations for the Christmas business. To assist dealers to sell more accessories this season, manufacturers have put their products up in holly boxes or holly wrappers, special display material has been prepared, direct-mail campaigns have been arranged, and extensive advertising campaigns released in trade papers, consumer publications, and newspapers.

In addition to the sales helps provided by the manufacturers, representative jobbers in the United States and

anada have gone further and through the A. E. A. have rranged to supply very attractive window display ma- rial, gift suggestion booklets, Christmas tape, string, ickers, holly wrapping paper, and even cuts and copy for ewspaper ads.

To further stimulate interest in the Christmas program, ie A. E. A. Merchandising Department, for the third iccessive year, has announced a Christmas Window isplay Contest for Dealers. Fifteen prizes totalling 500 will be awarded for pictures of the best trimmed indows featuring the idea "Give Something for the Car his Christmas." The contest does not close until ecember 24, and entry blanks are available through . E. A. jobbers and their representatives.

The real success of the whole undertaking, however, epends upon the volume of sales made by dealers. The est of plans are of little value if merchandise is moved rom manufacturers to jobbers to dealers and then emains on dealers' shelves. Early reports received from ealers, however, indicate that they are putting in stocks, ill display, advertise and "Ask 'Em to Buy." The result ill be that they will get consumer interest and will sell ccessories as Christmas gifts.

The most enthusiastic dealers are those who have gone fter the Christmas business in former years and found : paid. One dealer in Oregon recently stated that his usiness last Christmas was 400 per cent better than the ear before. An Illinois dealer got busy last year and ut in a Christmas window, advertised and sent out everal hundred gift suggestion letters. The result was hat his sales were three times those of the previous)ecember.

Any dealer who will put the necessary effort behind he Christmas campaign will find it pays. In case a sales- nan finds a dealer who may be skeptical, the following oints outline the dealer's opportunity:

1—The owners of the nineteen million automobiles in the United States and Canada represent the group of people who have money to spend.

2—Interest in automobiles is not limited to the car owners, but has spread out to include the interests of whole families and circles of friends. Thus, while there are nineteen million cars, each car offers the basis for at least five automotive gifts or a total of 100,000,000 gifts.

3—The purchasing public in the past has wandered from store to store, looking for gifts which would be practical and appreciated. Automotive accessories solve the problem in most cases.

4—Women do most of the Christmas shopping and if automotive dealers want their patronage they must go after the business in the same way that leading merchants in other lines have found successful in former years. Many women drive cars and have occasion to patronize car dealers and garagemen for service and supplies. They offer every automotive merchant an excellent opportunity to "Ask 'Em to Buy Something for the Car This Christmas."

It is easy to get the Christmas business, and the following points may help those who want to cash-in on the Christmas trade, but do not know just how to begin:

1—Put in a stock of accessories suitable to be sold as Christmas gifts.

2—Sell entire organization on Christmas possibilities if they "Ask 'Em to Buy."

3—Put in an attractive Christmas window display. Ask your jobber about special display materials.

4—Put up a large card or streamer with the caption: "Give Something for the Car This Christmas."

5—Procure holly paper and wrap up some of the stock on hand that should sell during the holiday season.

6—Run newspaper ads. Send letters to everybody in the community, and remember telephone calls often help sell goods.

7—Solicit the help of school children. They can get the "grown-ups" interested when others can't.

Use of Benzol as Motor Fuel

'N a paper recently read before the industrial division of the American hemical Society, Mr. E. L. Hall, gen- ral superintendent of the Portland Gas : Coke Company, brought out the salient eatures of benzol as an engine fuel. n abstract of Mr. Hall's paper follows:

Benzol can be used successfully by tself as a motor fuel provided car- uretors are adjusted specially for it. 'or complete combustion 1 lb. of benzol equires theoretically 13.33 lbs. of air nd 1 lb. of gasoline 15.01 lbs. of air. 'he weight of benzol is 7.35 lbs. per allon and gasoline 6.37 lbs. per gallon. t follows then that 1 gallon of benzol equires 98 lbs. of air and 1 gallon of asoline 95.6 lbs.

For several months after the Portland lant was started all the motor equip- nent of the Portland Gas & Coke Co., ogether with several other local truck leets were operated on straight benzol.)uring this period careful records of nileage, etc., were kept. Increases of .5 per cent to 30 per cent in miles per allon of fuel were obtained and after 00 miles running the dilution of crank- ase oil was found to be 7 per cent with asoline and only .3 per cent with benzol. 'he absolute viscosity of oil after use with gasoline decreased 62 per cent at 75 deg. F., with benzol it increased 71 per cent at 75 deg. F.

This shows practically no dilution of the lubricating oil with unburned portions of fuel when using benzol. The dilution of crankcase oil has been recognized by automobile manufacturers as one of the most vital factors affecting the wear and tear on engines.

The disadvantage of requiring carburetor adjustment, and also the fact that the benzol froze at 27 deg. F. led to the decision to blend the benzol with gasoline before placing it on sale to the general public. Blending reduces slightly the increased mileage obtainable with straight benzol, but experience has shown that the gasoline benzol blend increases mileage from 10 per cent to 20 per cent. More power is developed particularly on hills and in most cases the spark can be carried fully advanced without any tendency to "knocking." This is due to the slower flame propagation of benzol the explosion taking place less suddenly than with gasoline, and exerting the driving force for a greater portion of the piston stroke. The great volatility of benzol produces greater ease of starting, particularly in cold weather.

Benzol is a powerful solvent, and it has been found that when using benzol mixtures in a car that has been running up on gasoline the accumulation of dirt in the tank and fuel pipe is sometimes loosened up and carried forward into the carburetor.

It has also been found on certain low priced cars with cork floats in the carburetors, that the benzol would dissolve the varnish off the cork, and the float would become soaked which causes flooding of the carburetor. On the more recent models this trouble has been obviated by the use of a pure shellac varnish which resists the solvent action of the benzol.

Some work has been done, particularly in the European countries, on benzol-alcohol mixtures for motor fuel, but apparently they do not give the satisfaction that a benzol-gasoline mixture gives. To develop the power from alcohol, higher compression engines are needed, and it has been found that alcohol causes corrosion of tanks and fuel piping on automobiles. Unless the combustion is carefully regulated acids are formed in the motor which corrode valves, etc.

Electrical Flat Rates *Are* Practicable

Motor Age Chart Points the Way to Standardized Prices by Service Stations

By A. H. PACKER

"HOW much will it cost," is still the cry of the car owner, no matter whether he is shopping around for a new tire or is hunting for a shop which is capable of replacing a few thousandths of an inch, lost in some unaccountable way from his generator bearings.

Many shops are giving him the answer as far as labor is concerned, some even including material. Electrical operations are more simple than mechanical jobs done on the engine. Is there any reason then why they too can not be done on a flat rate basis? The chart in this issue is the answer of MOTOR AGE to this question.

In this chart the prices are given in dollars, and while some variation from the figures may seem advisable in certain localities it is felt that conditions in various places balance one another to a great extent. A city shop may have high overhead expense, which may raise the cost of doing the work, while on the other hand its men are so experienced that they do each job very quickly. The country shop, however, may have low overhead but will take more time to do the same operation. In like manner the expense of equipment in one shop will be more than offset by the length of time required when little equipment is available, while a continuous run of work in the city shop will be offset by more lost time in the country shop.

Another great advantage of a fixed and standardized price is that it is accepted as fair by the car owner and goes a long way toward eliminating from his mind the idea that he is being stung in one shop but is slipping something over or getting a bargain in another.

In looking over the chart it may be felt by some who are accustomed to work on a close margin that a few of the prices are too high. It should be remembered, however, that flat rates imply guaranteed work, making good on the job in the first place and doing it over if it comes back, so that a margin to cover such contingencies is necessary.

Some flat rate systems assume that when the car comes to the service station, that it is known what is wrong. In many cases this is true while in others it is not. Where the ammeter does not register charging current, a wire may be broken and a fuse blown or the generator may need overhauling. A test of some sort is needed to find the nature of the trouble. That is the reason for operation No. 1 on the chart, but the charge must be applied with discretion.

If the service salesman can close the cutout points by hand and from the ammeter indication know that the generator is at fault it might be inadvisable to add the testing charge, for the price of overhauling the generator would cover the time spent in this simple test. On the other hand if considerable time is spent in locating the nature of the trouble, and especially if the car owner drives out and says he will come in some other time, then it would be advisable to apply the testing charge.

In the generator work, operation No. 2 covers taking the machine off, replacing it and making the necessary final adjustment of the charging rate on the car.

Electrical maintenance and repair operations on the automobile are as readily standardized in price as any other operations. In the accompanying article Mr. Packer shows how the flat rate method can be applied in pricing electrical service jobs and in the chart that follows he presents a complete schedule of suggested prices that will be found useful in arriving at fair prices in any service shop.

No. 3 covers repairing the generator, that is, the bench work, but does not include a charge for changing field coils or under-cutting the commutator. In this way there is an approximate division of expense in proportion to the work required.

Some Examples

A generator is brought in, armature shorted. This requires replacement of the armature only and the labor charge is found under operation No. 3. Taking the first car given, which is an Ajax, this would be $4.00.

Anderson car driven in. Commutator burnt, brushes worn down, field coil open. The labor prices to use would be

No 2	$1.50
No. 3	4.25
No. 4	1.00
No. 5	1.00
Total	$7.75

Item No. 7 is not recommended, but is put in the chart to cover emergency jobs where a tourist, for example, can not wait to have the generator properly taken care of. Sanding the commutator is usually required on account of oily brushes or some such condition, which means the job can not be permanent.

Item No. 8 in most cases covers construction where adjustment of the generator position also adjusts the tension of the front end timing chain.

Operations No. 11, 12 and 13 appear to be similar, but the difference arises in the variation in the starter drive mechanism on various cars. No. 11 is intended to take care of the removal of this mechanism, the starter being taken off if necessary. In a Dodge Brothers car this would be the chain, in a Cadillac or Buick previous to 1926 it would be the gears which transmit the drive to the flywheel. On a Ford it would be the Bendix. In Operation No. 11 the starter is not removed unless necessary.

Operation No. 12 means removal and replacement of both the starter and the drive mechanism, while No. 13 is designed to take care of removing and replacing the starter only, the mechanism being left on the car. For example, it would cover the Dodge Brothers motor generator, when the chain is held up in place with wire, but is not removed. It would also cover the older Buicks where the motor generator only is taken off and the gear and clutch mechanism remain on the car.

Operation No. 14 covers the bench work on the starter including change of field coils if needed, but does not include turning the commutator which is an extra charge as given in operation No. 15.

Operations from No. 17 to No. 24 cover work on the ignition system. Where there are two coils, two sets of contacts or two distributer caps to be worked on, the price given should be twice that in the table, which is the unit price in each case.

Operations No. 25 and No. 27 cover work on the old spark plugs, while operations No. 26 and No. 28 cover the installation of new ones. In the later jobs, the question of policy may affect the charge made. If a customer orders new plugs installed, some shops make a practice of putting them in without charge.

The nature of the work covered by the remaining operations should be evident from the description given in the chart. The last item, covering carbureter adjustment, is given because, when the engine misses, the first thing the owner is likely to do is to play with the adjustments. The consequence is that when the car gets to the electrical department to have the ignition taken care of, it is also necessary to have the carbureter adjusted. The prices given in operation No. 46 do not, however, cover any repair work on the carbureter.

his chart has been prepared after obtaining all possible in-
rmation from factories, service stations and specialized
ectrical stations. It is not represented as official and
ould not be indiscriminately applied. It should serve as a
arting point, however, for service station managers who
sh to extend the flat rate principle to the electrical de-
rtment.

MOTOR AGE ELEC

Suggested Prices for 46 Automo

OPERATIONS

TROUBLE ANALYSIS

1. Testing electrical system to locate units or wires affected. (Does not include unit repair or wire replacement.)

GENERATOR OR MOTOR GEN.

2. Remove and replace, including test. (All necessary work such as retiming ign. or removing and replacing carbureter included.)
3. Repair generator after (2) or when brought in
4. Turn and undercut commutator after (3) Includes turning motor commutator on motor generators
5. Change one or more field coils after (3)
6. Adjust charging rate only, on car
7. Sand commutator only, on car
8. Adjust driving chain

CUTOUT

9. Remove and replace
10. Clean and adjust points

STARTER OR MOTOR GEN.

11. Remove and replace starter mechanical drive (Bendix, chain or gears and clutch)
12. Remove starter, replace and test (11 included)
13. Remove starter, replace and test (11 not included)
14. Repair starter after (12) or (13) or when brought in
15. Turn commutator after (14)

STARTER SWITCH

16. Remove and replace

IGNITION

17. Retime ignition (battery system)
18. Remove and replace distributer unit (Retiming included)
19. Resurface and adjust contacts (per pair)
20. Replace and adjust contacts (per pair)
21. Replace condenser (each)
22. Replace coil (time basis if screws must be drilled out)
23. Replace ballast resistance
24. Replace distributer cap

SPARK PLUGS

25. Clean and adjust one
26. Clean and adjust all
27. Install one new plug
28. Install all new plugs

WIRES AND CABLES

29. Replace one spark plug wire
30. Replace all high tension wiring
31. Replace any one starter cable

AMMETER AND SWITCH

32. Replace ammeter
33. Replace ignition and lighting switch

LAMPS

34. Replace head lamp glass
35. Replace tail lamp glass
36. Replace one bulb
37. Additional bulbs, each
38. Focus head lamp bulbs and aim lamps (time basis if focusing device is rusty or stuck with paint)

FUSES

39. Replace one
40. Replace all

HORN

41. Oil and tune horn
42. Remove and replace horn

BATTERY

43. Fill with water and take hydrometer readings
44. Clean terminals after test (43)
45. Tighten hold down

CARBURETER

46. Adjust in connection with ign. work

Operation No.	Ajax	Anderson 41 & 50	Apperson 6 & Str. 8	Auburn 6 & 8	Barley 6-50	Buick Std. & M'str.	Buick 1926	Cadillac V-63	Cadillac 1926	Case	Chandler	Chevrolet K	Chrysler 6	Cleveland 31 & 43	Cole	Cunningham V-8	Daniels
1	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.00	1.00	0.75	0.75	0.75	0.75	0.75	0.75	1.00	1.00
2	1.50	1.50	1.50	1.50	1.50	2.50	1.50	3.50	1.50	1.50	0.75	1.75	1.50	('25) 1.60 ('24) 7.50	1.50	1.50	10.00
3	4.00	4.25	4.25	4.25	4.25	6.00	4.25	6.25	4.25	4.25	3.20	4.38	4.25	3.20	4.25	5.25	5.75
4	1.00	1.00	1.00	1.00	1.00	1.25	1.00	1.25	1.00	1.00	1.00	0.80	1.00	1.00	1.00	1.00	1.00
5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6	0.50	0.50	0.50	0.50	050	0.65	0.50	0.65	0.50	0.50	0.45	0.70	0.50	0.40	0.50	0.50	1.00
7	0.50	0.50	0.50	0.50	0.50	0.75	0.50	0.65	0.50	0.50	0.45	0.50	0.50	0.40	0.50	0.50	1.00
8	0.50	----	0.50	0.50	----	----	----	----	0.75	----	----	----	----	0.40	0.60	----	----
9	0.50	0.75	0.75	0.75	0.75	----	0.75	----	0.75	0.75	0.40	0.50	0.75	0.80	0.75	0.75	0.75
10	0.35	0.50	0.50	0.50	0.50	----	0.50	----	0.50	0.50	0.40	0.35	0.50	0.40	0.50	0.50	0.75
11	1.50	2.25	2.25	2.25	2.25	3.00	2.25	4.00	2.25	2.25	2.25	1.50	2.25	1.60	2.25	2.25	2.50
12	1.50	2.25	2.25	2.25	2.25	----	2.25	----	2.25	2.25	2.25	1.75	2.25	2.00	2.25	2.25	2.50
13	1.50	1.50	1.50	1.50	1.50	----	1.50	----	1.50	1.50	1.75	1.50	1.50	0.80	1.50	1.50	1.50
14	3.75	3.75	3.75	3.75	3.75	----	3.75	----	3.75	3.75	3.25	3.50	3.75	3.00	3.75	3.75	5.00
15	0.75	0.75	0.75	0.75	0.75	----	0.75	----	0.75	0.75	0.75	0.60	0.75	0.75	0.75	0.75	0.75
16	1.00	1.00	1.00	1.00	1.00	----	0.75	----	0.75	1.00	0.75	1.50	1.00	0.80	0.75	1.25	2.00
17	0.75	0.90	0.90	0.90	0.90	1.20	0.90	1.20	1.50	0.90	0.75	1.00	0.90	0.80	0.90	2.00	2.00
18	1.00	1.40	1.40	1.40	1.40	1.50	1.40	2.55	2.00	1.40	0.95	1.00	2.00	1.20	2.00	2.00	2.00
19	0.50	0.90	0.90	0.90	0.90	1.00	0.90	1.00	0.95	0.90	0.45	0.53	1.00	0.80	0.90	1.00	1.00
20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.30	1.00	1.00	0.45	1.05	1.00	0.80	1.00	1.00	1.00
21	0.50	0.85	0.85	0.85	0.85	0.60	0.85	0.60	1.00	0.85	0.75	0.50	0.85	0.40	0.85	1.00	1.00
22	1.00	1.00	0.75	1.00	1.00	1.00	1.00	0.60	1.00	1.00	0.40	0.75	1.00	0.40	1.00	1.00	1.00
23	0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	----	0.35	0.50	----	0.50	0.50	0.50
24	0.50	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.00	0.75	0.45	0.50	0.75	0.45	1.00	1.50	1.50
25	0.15	0.15	0.25	0.15	0.15	0.30	0.25	0.15	0.15	0.15	0.15	0.15	0.15	0.20	0.15	0.15	0.15
26	0.75	0.75	1.25	----	0.75	1.50	0.75	0.75	1.00	0.75	0.75	0.53	0.75	0.80	1.05	1.05	1.05
27	0.10	0.10	0.15	0.10	0.10	0.20	0.25	0.15	0.10	0.10	0.10	0.10	0.10	0.20	0.10	0.10	0.10
28	0.50	0.50	0.80	----	0.50	0.70	0.60	0.60	0.70	0.50	0.50	0.30	0.50	0.60	0.70	0.70	0.70
29	0.25	0.75	0.75	0.75	----	0.75	0.60	0.75	2.00	0.75	0.40	0.40	0.60	0.20	0.75	1.50	1.50
30	0.75	2.50	6cyl. 3.00 8cyl. 4.00	3.00	----	3.00	1.80	4.50	4.00	2.40	2.00	0.75	1.60	0.80	3.65	4.00	4.00
31	0.75	1.00	0.75	1.25	1.00	1.05	0.85	1.10	1.00	0.95	0.75	0.88	0.85	0.60	1.25	1.25	1.00
32	----	----	0.75	0.75	----	0.75	2.00	0.60	----	1.50	1.50	0.53	0.75	1.00	1.00	0.75	0.75
33	----	----	1.00	1.00	----	0.90	1.00	1.65	1.00	1.00	1.50	0.88	1.00	1.20	1.00	2.00	2.00
34	0.50	0.85	0.75	0.50	0.75	0.55	0.75	0.60	0.75	0.65	0.80	0.50	0.75	0.60	0.75	1.00	1.00
35	.25	0.45	0.50	0.50	0.50	0.30	0.40	0.30	0.40	0.40	0.45	0.30	0.45	0.40	0.50	0.40	0.40
36	0.25	0.35	0.50	0.50	0.50	0.30	0.30	0.40	0.30	0.30	0.30	0.20	0.40	0.40	0.35	0.40	0.40
37	0.15	0.15	0.25	0.25	0.25	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
38	1.00	1.40	1.75	1.40	----	1.50	1.25	1.25	1.50	1.30	1.40	0.90	1.50	0.90	1.55	1.50	1.50
39	----	----	0.50	0.10	----	----	----	----	----	----	0.10	0.10	0.10	0.20	----	----	----
40	----	----	0.50	----	----	----	----	----	----	----	----	----	----	0..40	----	----	----
41	0.75	0.75	0.75	0.75	----	1.80	0.75	----	0.75	0.75	1.40	0.75	0.75	0.40	1.50	0.75	0.75
42	0.50	0.75	0.75	0.75	----	0.80	0.50	0.75	0.75	0.60	0.70	1.00	1.50	0.80	1.10	0.75	0.75
43	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.30	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
44	0.25	0.25	0.25	0.25	0.25	0.50	0.25	0.50	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
45	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.30	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
46	0.50	0.70	0.75	0.75	0.75	0.60	0.75	0.45	1.25	0.65	0.50	0.50	0.25	0.60	1.50	0.75	----

Operation No.	Davis 90 & 91	Diana	Dodge Bros.	Duesenberg	Durant A-22	Elcar 6 & Str. 8	Essex 6	Flint 40 & 55	Ford
1	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.5
2	1.50	1.50	2.00	2.50	3.50	1.50	1.25	2.00	0.7
3	4.25	4.25	5.50	5.20	4.30	4.25	3.20	4.00	2.5
4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.8
5	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.0
6	0.50	0.50	0.50	0.75	0.75	0.50	0.45	0.50	0.3
7	----	0.50	0.50	----	0.50	0.50	0.45	0.50	----
8	0.75	----	1.13	----	----	6cyl. 0.75	2.25	0.75	----
9	0.75	0.75	3.00	1.00	----	0.75	----	0.50	0.3
10	0.50	0.50	3.00	0.50	----	0.50	----	0.35	0.5
11	2.25	2.25	2.50	3.50	1.80	2.25	1.15	1.50	1.2
12	2.25	2.25	3.00	3.50	1.80	2.25	1.85	1.50	2.5
13	1.50	1.50	2.00	3.50	1.40	1.50	1.15	1.50	----
14	3.75	3.75	5.50	5.00	3.60	3.75	3.00	3.75	2.0
15	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.5
16	1.00	1.00	3.00	2.00	1.00	1.00	0.75	1.00	0.7
17	0.90	0.75	0.75	1.50	1.00	0.90	0.75	0.75	0.7
18	1.40	1.00	1.50	2.50	1.40	1.40	0.95	1.00	0.9
19	0.90	0.50	0.75	1.00	0.80	0.90	0.45	0.50	----
20	1.00	1.00	1.25	1.50	0.80	1.00	0.45	1.00	----
21	0.85	0.50	0.75	1.00	----	0.85	0.75	0.50	----
22	1.00	1.00	0.75	0.75	0.50	1.00	1.65	0.75	0.1
23	0.50	0.25	----	0.50	0.25	0.50	----	0.25	----
24	0.75	0.75	0.40	1.00	0.40	0.75	0.40	0.50	----
25	0.15	0.15	0.15	----	0.15	0.15	0.25	0.15	0.1
26	0.75	1.00	0.50	----	----	----	1.25	0.75	0.4
27	0.10	0.10	0.10	----	0.10	0.10	0.15	0.10	0.1
28	0.50	0.75	0.35	----	----	----	0.75	0.50	0.3
29	0.50	1.50	0.25	----	0.75	0.75	0.40	0.75	0.1
30	1.00	3.90	0.50	----	2.40	6cyl. 2.50 8cyl. 3.50	1.30	1.50	0.3
31	0.75	1.00	0.40	----	0.90	0.75	0.75	0.75	0.5
32	----	----	1.10	----	0.95	0.90	0.65	----	0.5
33	1.00	----	1.10	1.50	1.50	1.00	1.35	----	1.0
34	0.80	0.65	0.55	----	0.65	0.85	0.75	0.75	0.3
35	0.45	0.35	0.35	----	0.35	0.45	0.50	0.50	0.2
36	0.30	0.25	0.25	----	0.35	0.50	0.50	0.50	0.3
37	0.20	0.20	0.15	----	0.15	0.25	0.20	0.20	0.1
38	1.40	1.25	1.25	----	1.10	1.50	0.75	1.25	0.7
39	----	----	----	----	0.30	----	----	----	----
40	----	----	----	----	----	----	----	----	----
41	0.75	0.65	0.50	0.75	0.75	0.75	----	0.50	0.6
42	0.50	0.50	0.50	----	0.50	0.50	0.90	0.90	0.3
43	0.15	0.15	0.15	----	0.15	0.15	----	0.15	0.1
44	0.25	0.25	0.25	----	0.50	0.25	----	0.25	0.2
45	0.15	0.15	0.15	----	0.15	0.15	----	0.15	0.1
46	0.75	0.75	0.75	----	0.65	0.75	----	0.75	0.2

Miscellaneous electrical repair operations:

Synchronize ignition contacts on straight 8 or other car having two pairs of interrupter contacts.....$2.00

Many New Products Will Feature A. E. A. Show

Great Exhibition Also Includes Standard Lines of Well Known Automotive Merchandise

On this and following pages MOTOR AGE publishes a list of the exhibitors at the Automotive Equipment Association Show, opening Nov. 9, and the best available forecast of the products, new and old, that will be shown. In the preparation of this list MOTOR AGE sent questionnaires to the entire list of exhibitors. From the returns received the detailed list giving the name of exhibitor, space—complete line of products and new articles was prepared. Exhibitors from whom no returns were received, or received too late, are listed more briefly showing only name and address of company and space to be occupied at the show. Information about new products illustrated and described in this issue was furnished in the returns to questionnaires. More new products will be illustrated and described in the next and subsequent issues.

AJAX AUTO PARTS CO.
Racine, Wis.
Space 188. PRODUCTS: jacks. NEW PRODUCTS: No. 5 light truck jacks.

ALLEN ELECTRIC MFG CO.
Detroit, Mich.
Space 300. PRODUCTS: automotive electric testing equipment and tools such as gap gage for Ford magneto mounting, coil tester, coil adjusting tool set, magneto tester, magneto charger; general tools for repairing Ford generator and starting motor; pullers of different types, test stand, growler, armature test meter, rheostat, etc. NEW PRODUCTS: Special Test Stands for Bus Generator Testing; Magnetizer.

AMERICAN AUTOPARTS CO.
French Road Near Gratiot, Detroit, Mich.
Space 364. PRODUCTS: springs for Ford cars and models; rubber cushion rings for Fords. NEW PRODUCT: American Spring Brake.

AMERICAN CHAIN CO., INC.
Bridgeport, Conn.
Spaces 42-3-4-5. PRODUCTS: tire chains; chain-type jacks; bumpers; tow chains; tire lock chains; hammerlok cotter pins.

AMERICAN HAMMERED PISTON RING CO.
Wash and Hamburg Sts., Baltimore, Md.
Spaces 39-40-41. PRODUCTS: piston rings, both oil and compression.

AU-TO COMPRESSOR CO.
Wilmington, O.
Spaces 269-70. PRODUCTS: air compressors.

AUTOMOTIVE MAINTENANCE MCHY. CO.
9 West Washington St., Chicago, Ill.
Space 163. PRODUCTS: cylinder reconditioning tool; crank pin re-turning tool.

BADGER MFG. CORP.
156 Clinton St. Milwaukee, Wis.
Spaces 335-6-7-8. PRODUCTS: bumpers; creepers.

BASTIAN BLESSING CO.
240 E. Ontario St., Chicago
Space 133-4-5. PRODUCTS: welding, cutting, lead burning, carbon burning, brazing and soldering equipment; air pressure regulators.

BIFLEX CORP.
Waukegan, Ill.
Space 71-2-3-4. PRODUCTS: bumpers. NEW PRODUCTS: New Biflex Superb Junior Front & Rear Bumpers.

BIMEL SPOKE & AUTO WHEEL CO.
Portland, Ind.
Space 109. PRODUCTS: full line of replacement wood wheels.

BLACK & BECKER MFG. CO.
Towson, Md.
Spaces 113-14-15-16-17. PRODUCTS: electrically driven tools for shop equipment. NEW PRODUCTS: Heavy Duty 1/4 in. Portable Electric Drill.

BLACKHAWK MFG. CO.
Milwaukee, Wis.
Spaces 281-82. PRODUCTS: wrenches; water pumps; hand tool grinders; throttles for Fords. Some NEW PRODUCTS will be shown.

BONNEY FORGE & TOOL WORKS
Allentown, Pa.
Spaces 363-363½. PRODUCTS: wrenches; rim tools; garage vises. NEW PRODUCTS: Bonney "CV" Chrome Vanadium Socket Wrenches; Bonney "CV" Chrome Vanadium Sample Kits.

BRUNNER MFG. CO.
Utica, N. Y.
Spaces 359-62 inc. PRODUCTS: compressors, paint spraying equipment. NEW PRODUCTS. Brunner Pneumatic Valve Grinder and paint spraying outfits No. 811 and No. 828.

BUCKEYE BRASS & MFG. CO.
Cleveland, O.
Space 225. PRODUCTS: motor bearings; bronze bars; bronze bushings.

BURGESS-NORTON MFG. CO.
Geneva, Ill.
Space 169. PRODUCTS: piston pins, piston pin bushings; NEW PRODUCTS: Piston Reamers.

CANEDY-OTTO MFG. CO.
Chicago Heights, Ill.
Space 229-30. PRODUCTS: drill presses; arbor presses; straightening presses; automotive equipment; grinders; motor stands.

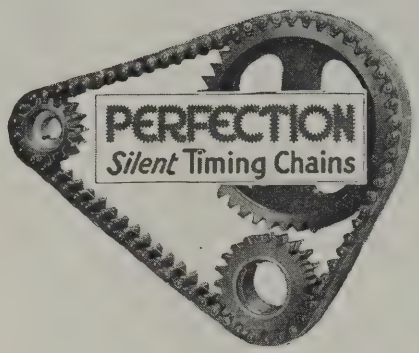
CENTRAL BRASS & FIXTURE CO.
Springfield, O.
Spaces 367-68. PRODUCTS: bumpers. NEW PRODUCTS: Buckeye Bumpers, Round and Spring Types, finished in colors to match the different automobiles.

CHAMPION SPARK PLUG CO.
Toledo, Ohio.
Spaces 46-7-8. PRODUCTS: spark plugs.

CLIFTON MFG. CO.
Waco, Texas.
Space 203. PRODUCTS: seat covers; seat top recovers; side curtains; cushion cover upholstering; automobile tents; complete line of fabric equipment.

CONTINENTAL PISTON RING CO.
Memphis, Tenn.
Space 189. Piston rings.

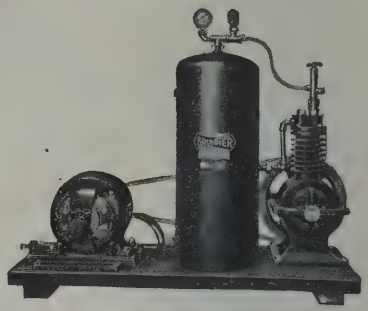
Some New Products at A. E. A. Show



Perfection Silent Timing Chain. Made by Perfection Gear Co., Chicago. Makers claim many improved features contributing to service, durability and continuous silence

Brunner Pneumatic Valve Grinder. Brunner Mfg. Co., Utica, N. Y. A power driven grinder which eliminates hand finishing. Weight, 4 lbs. Controlled speed 10 to 1,000 oscillations per minute. Also adapted for grinding valve cages. Price, with bit stock, 3 different size bits and retrieving spring, $25. Air hose with needle valve for air line and special tools extra





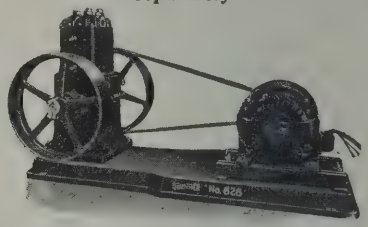
Brunner Spray Painting Outfit No. 811. Brunner Mfg. Co., Utica, N. Y. Has 3 by 4 in. single cyl. compressor and 1½ h. p. motor. Will operate one Brunner Fan Spray continuously or three Round Spray guns. Price $310 to $355, depending on motor. Special motors listed separately



Ajax Jack for Light Trucks. Model No. 5. Made by Ajax Auto Parts Co., Racine, Wis. Height 10¼ in., lift, 7 in., handle 18 in. Designed for use of owner to meet any severe load condition and with no working parts to get out of order



Polson Stick-On Tire Patch. The Polson Rubber Co., Cleveland, O. Made of strong new fabric with outside layer of thick black raw gum. When tube is inflated pressure forces raw gum into hole, entirely closing it. Said to be particularly efficient in balloon tires. Applied with or without vulcanization



Brunner Heavy Duty Spray Painting Outfit No. 828. Brunner Mfg. Co., Utica, N. Y. Equipped with Brunner's No. 28 largest compressor with 5 h. p. motor, compressor and motor mounted on heavy cast iron base. Price $770



Titanic Spring for 1926 Ford. Tuthill Spring Co., Chicago, Ill. No. 120. Eight leaves; has special hump center and lists at $6.50

CONTINENTAL RUBBER WORKS
Erie, Pa.

Space 175. PRODUCTS: blowout patches; universal joint discs; fan belts; welding hose; ex. hvy. garage hose; metal lined gasoline hose; radiator hose; radiator connections for Ford and Buick cars; rubber mallets; repair outfits; automatic windshield cleaner tubing; windshield weather strips.

COOPER MFG. CO.
Marshalltown, Iowa

Space 63. PRODUCTS: cutouts; dash controls; Ford wheel pullers; tow lines. New PRODUCT: "Frigidene" Anti-Freeze Solution.

CORCORAN MFG. CO.
Cincinnati, O.

Space 226. PRODUCT: fenders; radiators; tool boxes; illuminating devices. NEW PRODUCTS: No. 7 Commercial Fender for 1926 Ford Truck Chassis.

CRESCENT TOOL CO.
Jamestown, N. Y.

Space 54. PRODUCTS: wrenches and pliers.

CULVER-STEARNS MFG. CO.
Worcester, Mass.

Space 61. PRODUCTS: illuminating and other automotive electrical devices.

CURTIS PNEUMATIC MCHY. CO
St. Louis, Mo.

Spaces 207-8-9. PRODUCTS: air compressors for tire inflation; air compressors for paint spraying; car washing system.

DEARBORN EQUIPMENT CO.
Kalamazoo, Mich.

Space 218-19. PRODUCTS: burnishing and running-in machines; motor and axle repair stands; motor bench clamps; Fordson power unit; all types of pullers; brake band riveters; transmission reaming machine; Ford power unit; connecting rod aligners; unloading trucks; bearing fitting tools. NEW PRODUCTS: Line of Chevrolet Tools.

Additional descriptions of new products at A. E. A. show in next week's MOTOR AGE.

DOVER STAMPING & MFG. CO.
Cambridge, Mass.

Space 310. PRODUCTS: metals, fu nels and specialties. NEW PRODUCT Balloon Tire Testing Tanks; Newly A proved Oily Waste Cans.

DURKEE-ATWOOD CO.
Minneapolis, Minn.

Space 341. PRODUCTS fan belt radiator hose; rubber and chemical pro ucts. NEW PRODUCT: Pedal Pants.

E. EDELMANN & CO.
2332 Logan Blvd., Chicago.

Spaces 354-5. PRODUCTS: hydrom ters; driving light; spot light; gasoli gage for 1926 Ford cars; also addition items in line.

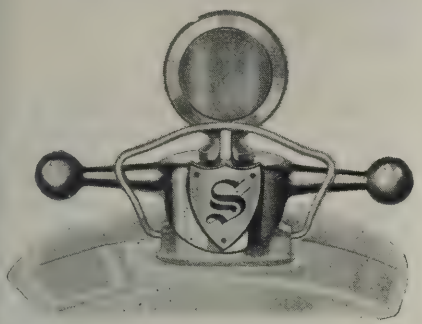
ELITE MFG. CO.
Ashland, Ohio.

Spaces 177-8. PRODUCTS: jack wrecking cranes. NEW PRODUCT Garage Jacks.

FEDERAL MOGUL CORPORATION
11031 Shoemaker Ave., Detroit, Mich.

Space 316. PRODUCTS: bronze ba

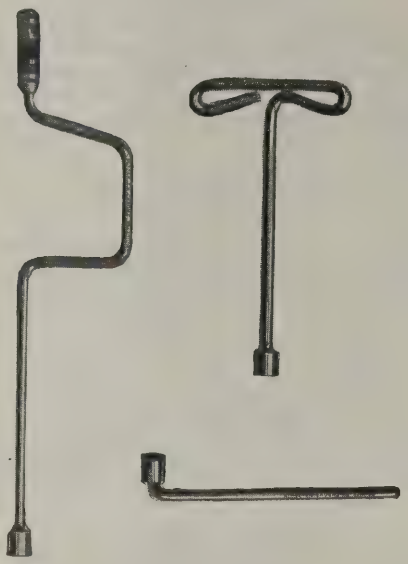
Some New Products at A. E. A. Show



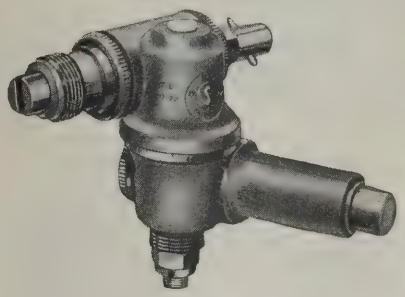
Monogram Cap for Packard. Made by the Kingsley-Miller Co., 600 W. Jackson blvd., Chicago, Ill. Embodies features of the Standard Monogram bar design with vari-colored ball ends of onyx. Device is made of solid brass, using "Bale Latch." Theft-proof and can't be removed without shop tools. Price, Royal Onyx models $10. Standard $6.



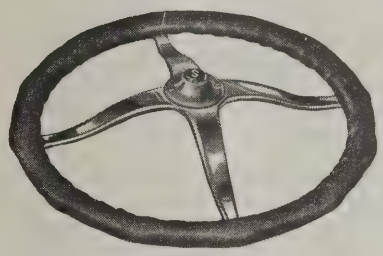
Monogram Illuminated Onyx Gear-Shift Ball, made of imported "Pedrara" Onyx. Natural white by day; illuminated at night with colored electric light. Made by Kingsley-Miller Co., Chicago, Ill. List $5.



Bonney "CV" Chrome Vanadium Socket Wrenches. Bonney Forge & Tool Works, Allentown, Pa. Made in three types, Bit-Brace Type (left) T-Type (top) Off-Set Type (bottom). All popular openings for U. S. standard, hex cap screws and S. A. E. Standard screws are listed. All of one-piece construction, with head upset on shank. Bit-Brace type in several handle lengths.



Swivel Joint With Alemite Nippel Attachment. Made by the F. W. Stewart Mfg. Co., Chicago, Ill.



Steering Wheels Designed for Ford, Chevrolet and Star Passenger Cars. Produced by F. W. Stewart Mfg. Co., 538 W. Huron St., Chicago.

earings; die cast bearings; bronze bushngs, bronze cored and solid bars; babbitt netals, connecting rod bolts and nuts; earing anchor screws.

FITZGERALD MFG. CO.
Torrington, Conn.

Space 297. PRODUCTS: cylinder head askets; manifold gaskets.

FLEMING MACHINE CO.
Worcester, Mass.

Spaces 58-59-60. PRODUCTS: electric rill attachments.

FOREST ELECTRIC CO.
272 New St., Newark, N. J.

Spaces 301-2. PRODUCTS: battery hargers; test sets for batteries; Unitron o-Bee. NEw PRODUCTS: Unitron ombination ("A" Battery Charger and o-Bee); Unitron No-Bee Radio "B" Batery Eliminator.

RAIN-SLAYMAKER HARDWARE CO.
Lancaster, Pa.

Space 96. PRODUCTS: locking deices for tire carriers, steering wheels, arages, trunks, tool and battery boxes, tc. NEW PRODUCTS: No. 8721 D Tire hain Outfit; No. 1926 Ford Tire Chain nit; No. 999 Spare Tire Bracket Lock; o. 922 Ford Tire Bracket Lock.

FRENCH BATTERY CO.
Madison, Wis.

Space 268. PRODUCTS: flashlights; ry batteries radio batteries.

GATES RUBBER CO.
999 S. Broadway, Denver, Colo.

Spaces 146-47. PRODUCTS: fan belts; radiator hose; air hose; welding hose; wash rack hose; blowout patches. NEW PRODUCTS: Gates Bullseye Patches; Gates P.D.Q. Tube Patch; Gates P.D.Q. Tire Repair Kit; Gates Fitsall Tire Flap.

GEMCO MFG. CO.
742 S. Pierce St., Milwaukee, Wis.

Spaces 284-5. PRODUCTS: bumpers; shock absorbers. NEW PRODUCTS: shock absorbers.

GENERAL ASBESTOS & RUBBER CO.
Charleston, S. C.

Spaces 29-30. PRODUCTS: brake band lining and equipment; gaskets; packings; asbestos cloth, yarn and textiles; Ford transmission sets clutch facings. NEW PRODUCTS: Heavy Duty Brake Band Lining.

GILL MFG. CO.
8300 S. Chicago Ave., Chicago, Ill.

Space 196. PRODUCTS: rings; pins; pistons. NEW PRODUCTS: Economy Oil Ring.

L. H. GILMER CO.
Tacony, Philadelphia, Pa.

Spaces 25-6. PRODUCTS: fan belts; transmission lining for Fords; radiator and hood lace; frame and body lining; tire and luggage straps.

GLADIATOR MFG. CO.
Auburn, Ind.

Space 246. PRODUCTS: automobile heaters.

GLOBE MFG. CO.
Battle Creek, Mich.

Space 179. PRODUCTS: air compressors, hand tire pumps grease guns, etc. NEW PRODUCTS: Typhoon Kar Kleener.

GOODRICH-LENHART MFG. CO.
Hamburg, Pa.

Space 346. PRODUCTS: engine testing valve; wiring assemblies; brake shoes; timers for Fords; electric cables.

GRATON & KNIGHT MFG. CO.
Worcester, Mass.

Space 217. PRODUCTS: fan belts; leather robe straps. NEW PRODUCTS: Extra Heavy Spartan Fan Belts.

HAINES MFG. CORP.
Rochester, N. Y.

Space 220. PRODUCTS: Ford and Overland replacement windows; windshield cleaners; Bendix Drive screw tools; radiator shutter; radiator ornaments; radio screw drivers. NEW PRODUCTS: Kwickway Bendix Drive Screw Tools; U-Auto-Shutter Radiator Shutters; Radio Screw Drivers.

Additional descriptions of new products at A. E. A. show in next week's MOTOR AGE.

HARVEY SPRING & FORGING CO.
Racine, Wis.

Space 190. PRODUCTS: replacement springs; drop forgings; oilers; oil. NEW PRODUCTS: bumpers.

HASTINGS MFG. CO.
Hastings, Mich.

Space 86. PRODUCTS: piston rings; glass windows.

ERNEST HOLMES CO.
Chattanooga, Tenn.

Spaces 292-3-4. PRODUCTS; automobile wreckers and wrecking equipment. NEW PRODUCTS: Holmes Improved "V" Tow Bars; Holmes Garage Press; Holmes Steering Gear Clamp.

INDIANA PISTON RING CO.
Hagerstown, Ind.

Spaces 17-18. PRODUCTS: piston rings.

INDIANAPOLIS TOOL & MFG. CO.
Indianapolis, Ind.

Space 271. PRODUCTS: ring gears and pinions for replacement, covering all makes and models of cars.

IRELAND & MATTHEWS MFG. CO.
1500 Board Ave., Detroit, Mich.

Space 129. PRODUCTS: trunks, fuel system; air cleaners. NEW PRODUCTS: All Steel Automobile Trunks; Autopulse (Magnetic Fuel System).

JAMES MOTOR VALVE CO.
1344 Maple St., Detroit, Mich.

Space 81. PRODUCTS: poppet valves.

JEFFERSON ELECTRIC MFG. CO.
501-11 S. Green St., Chicago.

Spaces 23-24. PRODUCTS: ignition coils; ignition system replacements; devices for testing electrical units of car.

JOHNSON BRONZE CO.
New Castle, Pa.

Space 106: PRODUCTS: bushings. NEW PRODUCTS: Dealers' Stock Assortments of Bushings. Assortment No. 101, Piston Pin Bushings; Assortment No. 102, Steering Knuckle and Tie Rod Bushings; Assortment No. 103, Spring Bolt and General Purpose Bushings.

JUDD & LELAND MFG. CO.
Clifton Springs, New York.

Space 106. PRODUCTS: hand tire pumps. NEW PRODUCTS: Differential Oil Pump.

KALES STAMPING CO.
Detroit, Mich.

Spaces 365-66. PRODUCTS: rear view mirrors; ash receivers; luggage racks; washers. NEW PRODUCTS: Kales Tie Rod for late Ford Models; New Kales Hindview Mirror. Style "Q U."

KANT-RUST PRODUCTS CORP.
613 St. George Ave., Rahway, N. J.

Space 38. PRODUCTS: graphite penetrating and lubricating oil; battery terminal paste for prevention of corrosion. NEW PRODUCTS: A tank mounted on wheels, containing air and Kant-Rust and to which is attached an air hose and spray gun for spraying the underbody of car, springs, etc.

KELLOGG MFG. CO.
97 Humbolt St., Rochester, N. Y.

Space 19-22. PRODUCTS: power driven tire pumps, air compressors; air and water towers. NEW PRODUCTS: Kellogg Rapid Car Washer; Air Brake Compressors.

KENNEDY MFG. CO.
Van Wert, Ohio.

Space 369. PRODUCTS: tool kits and boxes; small parts cabinet; garage kit; tool tray. NEW PRODUCTS: the "K" line of Kennedy Kits. Styles Nos. K-16, K-19, K-22.

KEYSTONE REAMER & TOOL CO.
Millersburg, Pa.

Space 168. PRODUCTS: reamers, taps; dies; screw plates. NEW PRODUCTS: Velvet Finishing Piston Pin Reamers.

KINGSLEY-MILLER CO.
600 W. Jackson Blvd., Chicago, Ill.

Spaces 351-53. PRODUCTS: radiator caps; lights; ornamental gear shift ball, etc. NEW PRODUCTS: Monogram Cap for Packard; Illuminated Onyx Gear Shift Ball; same in locking type.

KING QUALITY PRODUCTS, INC.
Buffalo, N. Y.

Space 202. PRODUCTS: piston pins; piston pin set screws; steering knuckle; tie rod and shackle bolts and bushings; radio receiving sets; radio parts.

KOKOMO AUTOMOTIVE MFG. CO.
Kokomo, Ind.

Space 65. PRODUCTS: windshield wings; mirrors; transmission linings. NEW PRODUCTS: ventilators for closed cars; checkers.

K-D LAMP CO.
Cincinnati, O.

Spaces 79-80. PRODUCTS: electric headlamps and other electrical illuminating devices; acetylene gas and headlamps.

K-W IGNITION CORP.
2811 Chester Ave., Cleveland, O.

Spaces 191-92. PRODUCTS: Ford coil units; Ford contact points and springs; timers for Fords; ignition systems for Fords. NEW PRODUCT: K-W Single Spark Battery Ignition System.

LAMINATED SHIM CO., INC.
14th St. and Governor Pl., Long Island City, N. Y.

Space 154. PRODUCTS: shims. NEW PRODUCTS: Junior Laminum Kit (containing an assortment of replacement shims); "Vernay All-Year Shutter" for Ford Radiators.

LAS-STIK PATCH MFG. CO.
Hamilton, O.

Spaces 272-3. PRODUCTS: tube patches; patching cement; radiator hose. NEW PRODUCTS: Las-Stik Casing Plaster.

LINCOLN PRODUCTS CO.
Chicago, Ill.

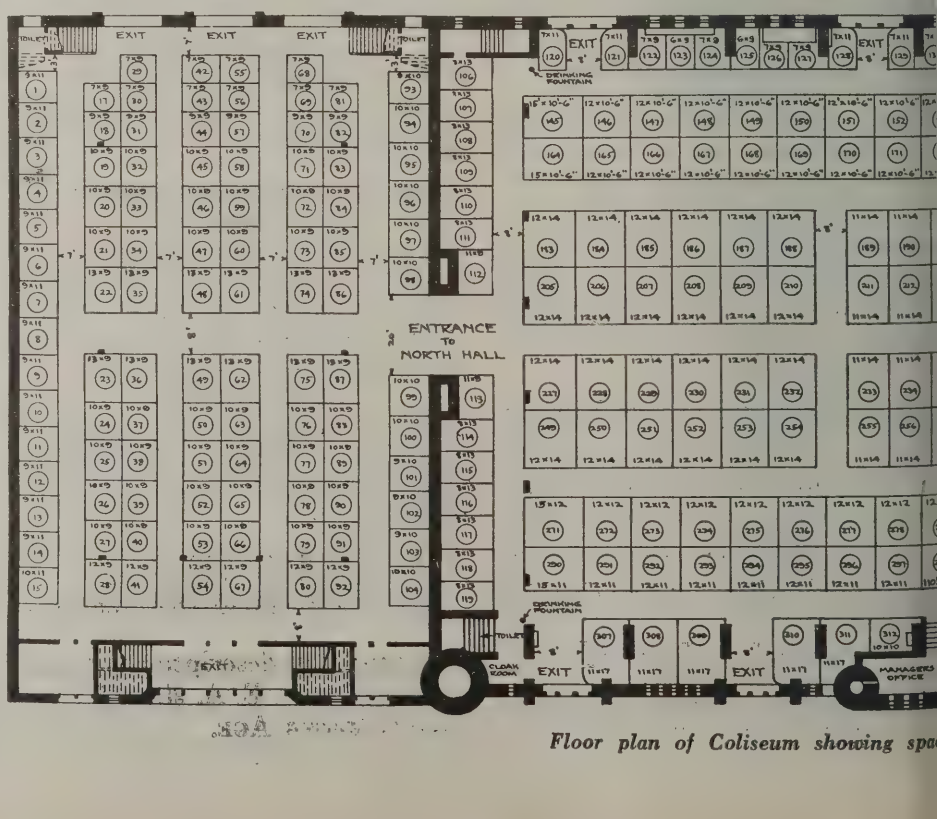
Spaces 263-4. PRODUCTS: shock absorbers.

LOCKTITE PATCH CO.
Detroit, Mich.

Space 370. PRODUCTS: tire patches and kits. NEW PRODUCTS: Addition to Locktite Patch Kit of Locktite Plug Rubber for blowout repair.

LYON METALLIC MFG. CO.
Aurora, Ill.

Spaces 147-8. PRODUCTS: steel automotive storage equipment.



Floor plan of Coliseum showing spa

McQUAY NORRIS MFG CO.
St. Louis, Mo.

Spaces 75-6-7. PRODUCTS: piston rings; piston pins, bearings, bearing screws; piston pin set screws; score filling machine. NEW PRODUCTS: Ventilated Superoyl Rings; Bulk Packages Pistons and Pins.

J. C. McADAMS CO.
912 Second Ave., Long Island City, N. Y.

Spaces 157-8. PRODUCTS: locking devices. NEW PRODUCTS: Unique Flag Holder; Schlaich Wing Type Radiator Cap.

McCORD RADIATOR & MFG. CO.
2587 E. Grand Blvd., Detroit.

Spaces 205-6. PRODUCTS: copper asbestos gaskets; cork gaskets; radiator for Fords; radiator cores. NEW PRODUCTS: McCord Cellular (Hexagonal) Type Radiator for Fords; McCord Cellular Original Type Replacement Cores.

MANLEY MFG. CO.
York, Pa.

Spaces 99-100-101-2-3. PRODUCTS: garage equipment. NEW PRODUCTS: No. 435 Machine Shop Unit; No. 909 Tire Inspector; No. 107 3½ Ton Wrecking Crane; No. 85 Chain Hoist Trestle.

MILWAUKEE MOTOR PRODUCTS, INC.
Milwaukee, Wis.

Spaces 87-8-9. PRODUCTS: timers.

MOSLER METAL PROD. CORP.
Mt. Vernon, N. Y.

Space 299. PRODUCTS: spark plugs; timers; valve grinders; intensifiers.

FRANK MOSSBERG CO.
Attleboro, Mass.

Space 151. PRODUCTS: compressors; piston rings; valve grinders; valve spring lifters; wheel pullers; wrenches.

MOTO-METER COMPANY, INC.
Long Island City, N. Y.

Spaces 181-2: PRODUCTS: motor heat indicators.

MULTIBESTOS COMPANY
Walpole, Mass.

Space 303-4. PRODUCTS: brake and clutch linings; brake relining equipment; transmission bands for Fords. NEW PRODUCTS: Multibestos Oil Grooved Fibre Lining for Ford Cars; Quick Change Bands for Ford Cars and Trucks; Taxitrux Brake Lining.

MUTUAL WHEEL CO.
Moline, Ill.

Space 322. PRODUCTS: wood spoke wheels for passenger cars and trucks; hubs for passenger cars. NEW PRODUCTS: Balloon Wheel Sets for Ford, Chevrolet, Star and all light cars; Replacement Wheels for Ford Cars; Oversize Pneumatic Wheels for Ford, Dodge, Reo and all light trucks.

NATIONAL STANDARD CO.
Niles, Mich.

Spaces 193-4. PRODUCTS: car and truck jacks; cranes; creepers; towing pole; towing ambulance; jacks. NEW PRODUCTS: No. 32 3-ton Jack; No. 61 "Standard Speed Lift" Service Jack; New Model of No. 67 Dolly Jack for Balloon Tires.

NEW ERA SPRING & SPECIALTY CO.
Grand Rapids, Mich.

Space 164. PRODUCTS: springs, tire carriers, spring bumpers. NEW PRODUCTS: fender guards for Ford rear; Challenge bumpers for Ford front.

NIMS PUMP CO.
Stockton, Cal.

Space 180. PRODUCTS: water pumps for Ford cars, trucks and tractors. NEW PRODUCTS: New "Nims" Water Circulating Pumps for Ford Cars and Trucks.

NORLIPP COMPANY
560 W. Congress St., Chicago. Ill.

Space 256. PRODUCTS: self-locking radiator caps; gear shift extension lever; NEW PRODUCT: Keystone Gear Shift Extension Lever.

NORTH BROTHERS MFG. CO.
Lehigh Ave. and American St., Philadelphia, Pa.

Space 153. PRODUCTS: screw drivers; drills; vises; wrenches; ratchet braces; brake lining cutter.

NORTHWESTERN CHEMICAL CO.
Marietta, O.

Spaces 311-12. PRODUCTS: chemical specialties.

M. L. OBERDORFER BRASS CO.
Syracuse, N. Y.

Space 204. PRODUCTS: radiator caps, plain and locking; step plates; spark and gas levers for Ford; door handle extensions for Fords; hub caps; cored and solid bronze bars; bushings. NEW PRODUCTS: Hub Caps for Chevrolets; Step Plates for 1926 Fords; New -Type Lock Caps, Fords and Chevrolets.

OHIO PARTS CO.
Cincinnati, O.

Space 149. PRODUCTS: storage, battery terminals; cable assemblies.

PACKARD ELECTRIC CO.
Warren, O.

Spaces 183-4. PRODUCTS: transformers; automotive cables.

PENNSYLVANIA PISTON RING CO.
203 St. Clair Ave., Cleveland, O.

Space 122-3. Piston rings; visors.

PERFECTION GEAR CO.
218 N. Morgan St., Chicago, Ill.

Spaces 265-66. PRODUCTS: silent timing gears; metal timing gears; ring and pinion gears; transmission gears and parts; differential parts and cases; valve silencers. NEW PRODUCTS: Perfection Silent Timing Chains.

N. A. PETRY CO., INC.
328 N. Randolph St., Philadelphia, Pa.

Space 324. PRODUCTS; tuning- up valves; dash controls, pedals; tire carriers; hand tire pumps; hand levers.

PHINNEY-WALKER CO., INC.
250 W. 57th St., New York, N. Y.

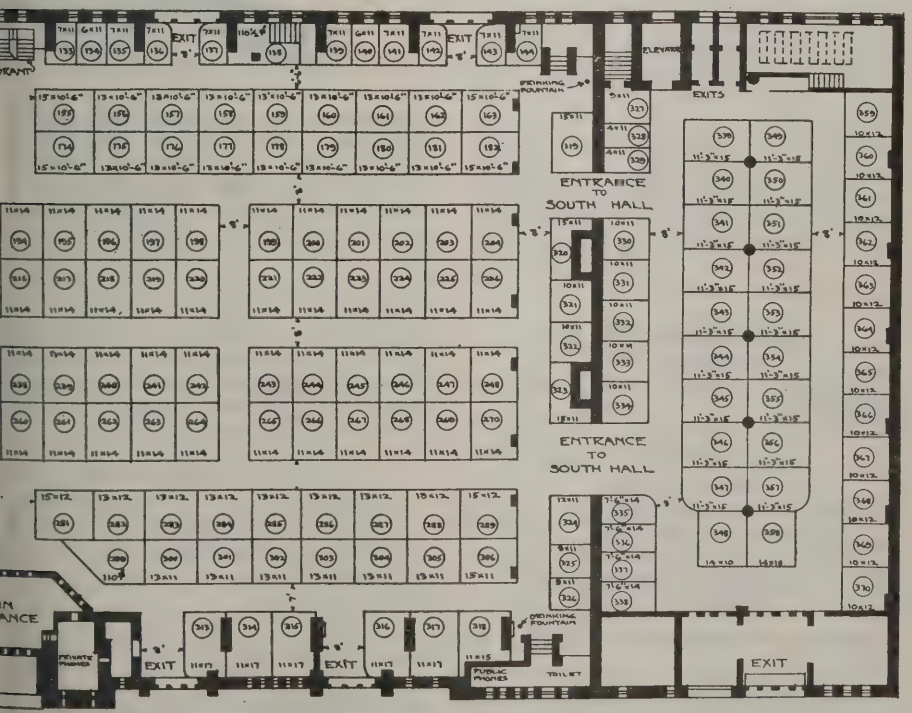
Space 236. PRODUCTS: clocks and watches.

POLSON RUBBER CO.
1783 East 11th St., Cleveland, O.

Space 298. PRODUCTS: blow-out patches; tire flaps; reliners; puncture sealing tubes; tube repair kits. NEW PRODUCT: Stick-On Tire Patch.

PYRENE MFG. CO.
560 Belmont Ave., Newark, N. J.

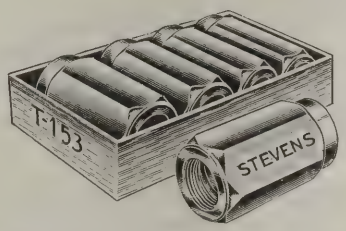
Space 286. PRODUCTS: tire chains; fire extinguishers. NEW PRODUCTS:



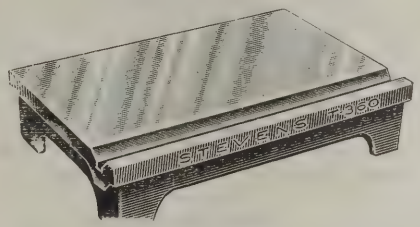
rs for A. E. A. Show Nov. 9 to 14

Some New Products at A. E. A. Show

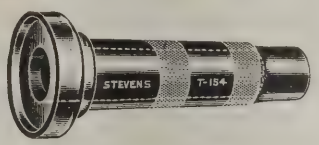
ELEVEN new items are found among the "speed-up" tools in the catalog of Stevens & Company, 375 Broadway, New York. Illustrations and brief descriptive matter relating to them will be found in the display below.



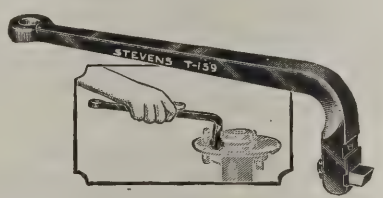
Wheel Pullers. Built of one piece. Nothing to loosen. Flat bottom of hole butts against shaft so impact does not come on axle threads. Set of four in box, $4.25. Other listings.



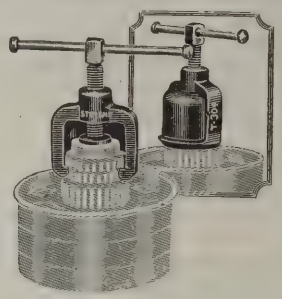
Surface Plate. For general testing of piston pins, bearing caps, piston rings, gears, etc. Medium size. V-Channel along side makes it possible to hold round or cylindrical objects. Weight, 7½ lbs., 8 by 12 in., price, $7.50.



Dust Cap Driver. Replaces rear axle dust cap on Ford car and truck. Working end shaped to drive cap firmly in place without damage. Slips over axle. Weight 3¾ lbs. Price, $3



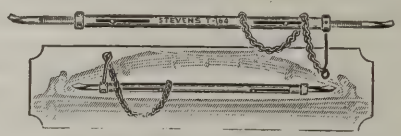
←*Dust Cap Pry Bar. Removes dust cap on rear axle of Ford car or truck quickly without damage. Illustration shows two positions for the bit—lower one for car, upper for truck. Weight, 1 lb. 5 oz. Price, $1.50*



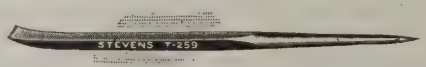
Puller for Ford Transmission Drive Gear. Quick action puller for removing Ford part No. 3317. Quickly set in place without adjustment. Can't flop over. Price $3



Rivet Set. This device forms a rivet head with the cup-shaped end. Takes all sizes. Made of tough chrome alloy steel; knurled handle; length is 6 in.; diam., 1 in. Weight, 1¼ lbs. Price, $1.25



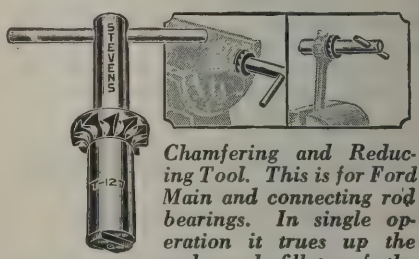
Spring Spreaders. Turning the capstans lines up the spring with the perches so that the shackle bolts can be inserted. Weight 5¼ lbs. Price, $3.50



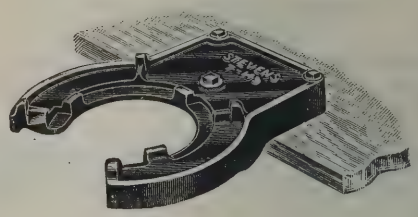
Pry Bar and Punch. A general utility tool for prying, forcing, lining up holes, etc. Round end may be used as a drift. Weight, 14 oz. Price, 65 cents



Exhaust Pipe Pack Nut Wrench. This tool is for the troublesome job on the Ford exhaust pipe pack nut. Works well in the little clearance that there is and will pull badly rusted or burned out nuts. Wrench is drop forged steel and will stand hard hammering. Weight, 2½ lbs. Price, $1



Chamfering and Reducing Tool. This is for Ford Main and connecting rod bearings. In single operation it trues up the ends and fillets of the main and connecting rod bearings after rebabbitting, for proper clearance curve and fit. Price, $3.50



Differential Holding Chuck. Holds Ford differential properly on either side without tightening any clamp or screw. Malleable iron plate has two sets of lugs that won't chip or break. No holes to be ct in bench. Easily installed. Weight 8½ lbs. Price, $3

Phomene Extinguishers and Engines; Chromine—Radiator Freeze-Proof Solution.

RAYBESTOS COMPANY
Bridgeport, Conn.

Space 315. PRODUCTS: brake and transmission linings; brake for Ford cars; transmission bands. NEW PRODUCTS: 1926 Model Raybestos (without wire); 1926 Model Chatterless; Royal Transmission Lining; Improved Royal Brake.

REESE MFG. CO.
Pittsburgh, Pa.

Spaces 93-4-5. PRODUCTS: Ford brakes; mirrors; jacks. NEW PRODUCTS: Bus Jacks.

FRANK ROSE MFG. CO.
Hastings, Neb.

Space 199. PRODUCTS: tire pumps; grease guns.

G. A. ROTH MFG. CO.
Hastings, Neb.

Spaces 97-8. PRODUCTS: luggage carrier; heaters; valve lifters, etc.

RUSSELL MFG. CO.
Middletown, Conn.

Space 215. PRODUCTS: Brake lining; clutch facings; fan belts; transmission linings for Fords; transmission bands for Fords; emergency brakes; hood and radiator lacing; waterproof web straps; top webbing.

Additional descriptions of new products at A. E. A. show in next week's MOTOR AGE.

S. & M. LAMP CO.
118 W. 36th St., Los Angeles, Cal.

Space 318. PRODUCTS: illuminating equipment. NEW PRODUCTS: No. 85 S. & M. Road-Lite; No. 95 S. & M. Road-Lite.

C. A. SHALER CO.
Waupun, Wis.

Space 227-28. PRODUCTS: electric and steam vulcanizers; vulcanizing tools. NEW PRODUCTS: Balloon Tire Vulcanizers.

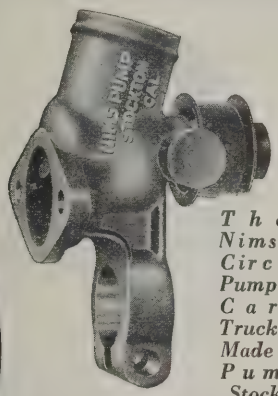
Some New Products at A. E. A. Show



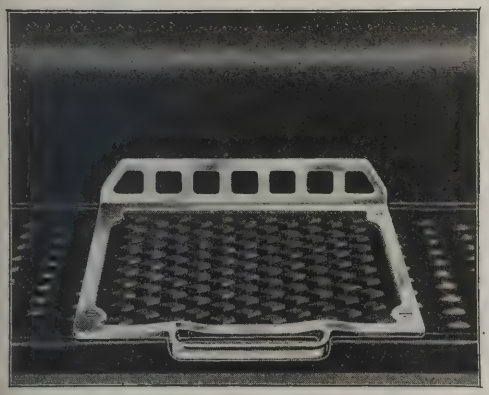
Push-Pull Switches for Automobiles or Radio. Made by Tiffany Manufacturing Co., Newark, N. J. List price is 50 cents each. Said to be ruggedly constructed and an efficient unit. Installation easily accomplished



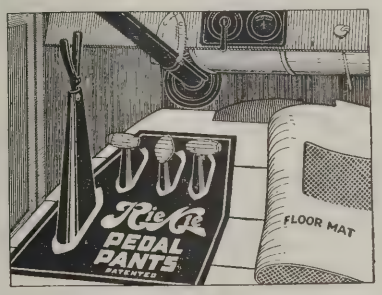
New Hub Cap for Chevrolet Cars. This is another new product of the M. L. Oberdorfer Company, of Syracuse, N. Y. The cap illustrated above is stamped with the Chevrolet emblem with a bold "C" in the center. It is finished in silver, red and blue and offered to the Chevrolet owner as an ornamental addition to his car



The New Nims" Water Circulating Pump for Ford Cars and Trucks. List $5. Made by Nims Pump Co., Stockton, Cal.



New Style Step Plate for Ford cars made by M. L. Oberdorfer Brass Co., Syracuse, N. Y.



Rie Nie Pedal Pants. Rubberized protectors that fit snugly around the pedals and brake lever of Ford to keep cold drafts, dirt and hot air from engine from coming through openings. List price, $1.25. Made by Durkee-Atwood Co., Minneapolis, Minn.

THE SIMONIZ CO.
Chicago, Ill.

Space 82-3. PRODUCTS: Simoniz; Simoniz Kleener; brake lubricant; penetrating oil; top dressing; tar remover; enamel; rust preventive.

SPARKS-WITHINGTON CO.
Jackson, Mich.

Spaces 197-8. PRODUCTS: automobile horns.

SPLITDORF ELECTRICAL CO.
392 High St., Newark, N. J.

Space 232. PRODUCTS: spark plugs; ignition cables; generator cutouts; ammeters; socket wrenches; radiator caps; radio sets; radio speakers; radio parts.

SPENCER-SMITH MACHINE CO.
Howell, Mich.

Space 36-7. Products: pistons; piston pins; piston pin set screws.

F. W. STEWART MFG. CO.
Chicago, Ill.

Space 126-7. PRODUCTS: speedometer replacement parts; steering wheels; locks for Fords; automatic windshield cleaners; bearings; stop lights; fender braces for Fords. NEW PRODUCTS: Swivel Joint With Alemite Nipple Attachment; Steering Wheels for Ford, Chevrolet and Star cars.

STEVENS & CO.
375 Broadway, New York City

Spaces 275-76. PRODUCTS: valve grinders; engine stands; axle stands, piston aligners; piston vises; timing testers; piston ring compressors; and a variety of other tools and equipment for the shop. NEW PRODUCTS: Stevens Chamfering and Refacing Tool; Stevens Rivet Set; Stevens Pry Bar and Punch; Stevens Puller for Ford Transmission Gear; Stevens Exhaust Pipe Pack Nut Wrench; Stevens Differential Holding Chuck; Stevens Dust Cap Pry Bar; Stevens Wheel Pullers; Stevens Surface Plate; Stevens Piston Oil Groove Tool for Ford and Fordson.

STILES MFG. CO.
125 E. Quincy St., St. Louis, Mo.

Space 358. PRODUCTS: reamer stoning tool; automobile whistles and sirens; step plates; toe bumpers. NEW PRODUCT: Radio Receiving Set.

STORM MFG. CO.
Minneapolis, Minn.

Space 237. PRODUCTS: cylinder reconditioning tools; cylinder hones; connecting rod aligner. NEW PRODUCT: Riteway Aligner.

Additional descriptions of new products at A. E. A. show in next week's MOTOR AGE.

W. H. THOMAS MFG. CO.
Spencer, Iowa.

Space 160. PRODUCT: foot accelerator for Fords; heaters.

THOMPSON PRODUCTS, INC.
Cleveland, O.

Spaces: 295-6. PRODUCTS: valves; bolts; bushings; starting cranks.

TIFFANY MFG. CO.
42 Spring St., Newark, N. J.

Spaces 140-141. PRODUCTS: starter switches; push-pull switches; generator cut-outs; timers; illumination equipments; horn buttons; windshield cleaners; ammeters; voltmeters. NEW PRODUCTS: Push-Pull Switches.

TOLEDO STEEL PRODUCTS CO.
3300 Summit Street, Toledo, O.

Space 176. PRODUCTS: valves.

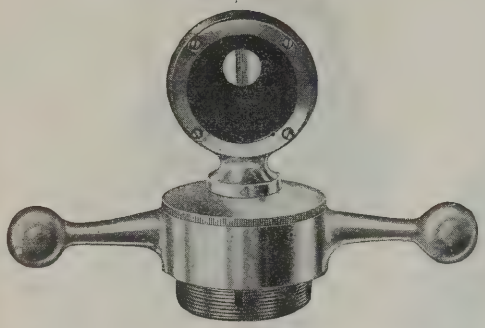
TRAINOR NATIONAL SPRING CO.
New Castle, Ind.

Space 344. PRODUCTS: Replacement springs. NEW PRODUCTS: Eight-Leaf Ford Front Spring, for new models.

TUTHILL SPRING CO.
760 Polk St., Chicago, Ill.

Space 306: PRODUCTS: springs. NEW PRODUCT: spring for 1926 Ford.

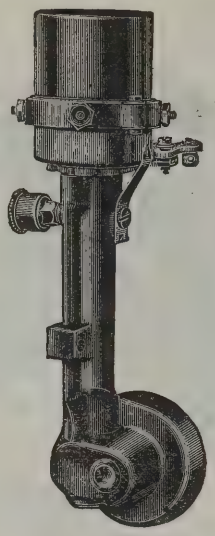
Some New Products at A. E. A. Show



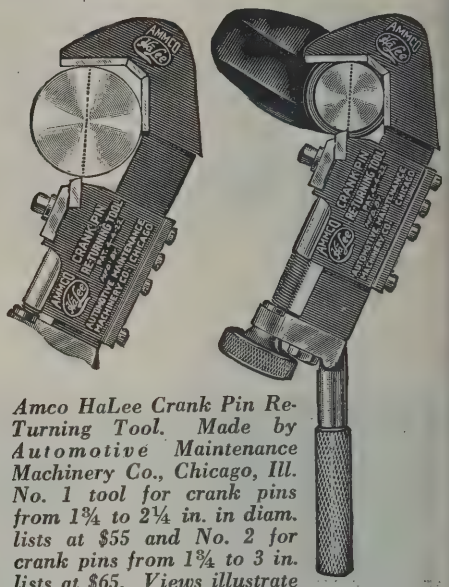
The Oberlock Cap. A new type locking cap for Fords and Chevrolets made by the M. L. Oberdorfer Brass Company of Syracuse, N. Y. Cap carries six-months' written guarantee against theft



Eight-leaf Ford Front Spring for New Models. Made by Trainor National Spring Co., New Castle, Ind. Said to give proper fender clearance so fenders will not hit tires on bumpy roads



K-W Spark Battery Ignition System, manufactured by the K-W Ignition Corporation, 2811 Chester Avenue, Cleveland, Ohio



Amco HaLee Crank Pin Re-Turning Tool. Made by Automotive Maintenance Machinery Co., Chicago, Ill. No. 1 tool for crank pins from 1¾ to 2¼ in. in diam. lists at $55 and No. 2 for crank pins from 1¾ to 3 in. lists at $65. Views illustrate angle at which sliding carriage operates with respect to jaw, thereby maintaining cutting blade in correct radial position for all sizes of crank pins

UNITED STATES ELECTRICAL TOOL CO.
Cincinnati, O.

Space 49-53. PRODUCTS: electric drills; nut setters; twist drill with grinding attachment; bench and post bracket stand; grinders and buffers, etc.

VAN CLEEF BROTHERS
Chicago, Ill.

Spaces 247-8. PRODUCTS: friction tape; rubber insulating tape; soldering paste; rubber cement; cut filler; tire repair kits; radiator sealing compounds; gasket shellac; valve grinding compound; Hi-Light Bearing Blue; penetrating oil; Neatsfoot oil solution; flake and ground graphite; automobile top and cushion coating; black enamel; aluminum paint; gold paint; automobile top cement.

VAN DORN ELECTRIC TOOL CO.
300 Woodhill Rd., Cleveland, O.

Spaces 330-1-2-3-4. PRODUCTS: electri drills; electric grinders; electric glue pot. NEW PRODUCTS: Twist Drill Grinding Attachment; Eight-Inch Grinder (bench and floor); Electric Screw Driver; 5/16 Electric Drill; Electric Valve Grinder; Low-Speed, High Torque Cylinder Regrinding Drill; Cylinder Regrinding Stand.

VAN NORMAN MACHINE TOOL CO.
160 Wilbrahm Ave., Springfield, Mass.

Spaces 165-6-7. PRODUCTS: cutters; turning and grinding machines. NEW PRODUCTS: Van Norman Auto Service Machine; Van Norman No. 96 Turning & Grinding Machine; Van Norman Model B Universal Valve Grinder; Van Norman Super Valve Grinder.

VELLUMOID COMPANY
Boston, Mass.

Spaces 1-2-3. PRODUCTS: packing; gaskets.

VICTOR MFG. & GASKET CO.
5750 Roosevelt Rd., Chicago

Spaces 253-4. PRODUCTS: copper asbestos gaskets; fibre gaskets; cork gaskets; gaskets made from various packings.

WALDEN-WORCESTER INC.
Worcester, Mass.

Spaces 245-6. PRODUCTS: wrenches.

WALKER MFG. CO.
Racine, Wis.

Space 33-4-5. PRODUCTS: jacks for car owners, jacks for garages; combination device for jacking and moving cars in the garage; counter display of Walker products; tire changer. NEW PRODUCTS will be shown.

WEAVER MFG. CO
Springfield, Ill.

Spaces 287-8-9. PRODUCTS: jacks; brake servicing machines; motor service presses and attachments; Ford transmission band reliner; safety stands; service rack; automobile and truck hoists; axle stand; assembling stand for Ford engines; rim anvil; automobile crane; automobile and truck ambulances; towing pole; safety service can; valveless bucket pump; tire changing tools; wheel alignment indicator. NEW PRODUCTS will be shown.

Additional descriptions of new products at A. E. A. show in next week's MOTOR AGE.

JOSEPH WEIDENHOFF
4352 W. Roosevelt Road, Chicago, Ill.

Spaces 213-14. PRODUCTS: test benches for ignition, starting and lighting; storage battery discharge sets; individual cell testers; bearing and gear pullers; commutator mica undercutters; lathes; armature testers. NEW PRODUCTS: Model 24 Super-Service Test Bench; 5B battery tester.

WHITE & BAGLEY CO.
100 Foster St., Worcester, Mass.

Space 262. PRODUCTS: motor and lubricating oils; oil soap; hand soap.

J. H. WILLIAMS & CO.
400 Vulcan St., Buffalo, N. Y.

Space 234-5. PRODUCTS: wrenches; wrench sets. NEW PRODUCTS: New Williams "Superrench" line in five patterns, i. e., Engineers', General Service "S," Tappet, Construction and Structural.

WOLVERINE BUMPER & SPEC. CO.
Grand Rapids, Mich.

Spaces 9-10. PRODUCTS. Bumpers.

WRIGHT MFG. CO.
Lisbon, O.

Spaces 14-15. PRODUCTS: chain hoists.

"X" LABORATORIES
25 W. 45th St., New York, N. Y.

Space 314. PRODUCTS: radiator liquid.

Additional List of A. E. A. Show Exhibitors

(Not included in list on preceding pages from whom returns to MOTOR AGE questionnaire were received)

Space No.	Name	Address
55-56-57	A. C. Spark Plug Co.	Flint, Mich.
216	The Apco Mfg. Co.	Providence, R. I.
90-91-92	American Bosch Magneto Corp.	Springfield, Mass.
357	Appleton Electric Co.	Chicago, Ill.
223-224	Albertson & Co.	Sioux City, Iowa.
317	Advance Auto Accessories Corp.	Chicago, Ill.
307	Apex Electric Mfg. Co.	Chicago, Ill.
325	Benzer Corporation	New York City, N. Y.
356	Bunting Brass & Bronze Co.	Toledo, Ohio.
27-28	Bussman Mfg. Co.	St. Louis, Mo.
321	Bell Mfg. Co.	Boston, Mass.
339-340	Columbus-McKinnon Chain Co.	Columbus, Ohio.
162	The Carborundum Co.	Niagara Falls, N. Y.
8	Cincinnati Victor Co.	Cincinnati, Ohio.
342	Crawford Mfg. Co., Inc.	Richmond, Va.
111	Chicago Fuse Mfg. Co.	Chicago, Ill.
152	Cuno Engineering Corp.	Meriden, Conn.
328-329	Davies-Young Soap Co.	Dayton, Ohio.
250	Delta Electric Co.	Marion, Ind.
319	Detroit Steel Products Co.	Detroit, Mich.
11-12-13	E. A. Laboratories, Inc.	Brooklyn, N. Y.
290-291	Edison Lamp Wks. of Gen. Elec.	Harrison, N. J.
62	The Fulton Co.	Milwaukee, Wis.
185	The Farran-oid Co.	Akron, Ohio.
66-67	W. D. Foreman	Chicago, Ill.
159	Globe Machine & Stamping Co.	Cleveland, Ohio.
259-260	Gillfillan Bros., Inc.	Los Angeles, Cal.
138	The Greb Co.	Stoughton, Mass.
267	Halstead Specialties Co.	Oakland, Cal.
161	The Hall-Thompson Co.	Hartford, Conn.
238-239	The Imperial Brass Mfg. Co.	Chicago, Ill.
274	Indianapolis Pump & Tube Co.	Indianapolis, Ind.
349-350	Johns-Manville, Inc.	New York City, N. Y.
251-252	Klaxon Company	Anderson, Ind.
118-119	David Lupton's Sons Co.	Detroit, Mich.
171	LeCompte Mfg. Co.	Newark, N. J.
313	Larkin Automotive Parts Co.	Dayton, Ohio.
211-212	Metal Specialties Mfg. Co.	Chicago, Ill.
64	Monroe Auto Equipment Co.	Monroe, Mich.
278-279-280	Marquette Mfg. Co.	St. Paul, Minn.
241	Modine Mfg. Co.	Racine, Wis.
210	Metal Stamping Co.	Long Island City, N. Y.
174	Manhattan Electrical Supply Co.	New York, N. Y.
277	Neera Mfg. Co.	Waterbury, Conn.
258	Nu-Back Mfg. Co.	St. Louis, Mo.
172-173	National Carbon Co., Inc.	New York City, N. Y.
4-5-6-7	National Lamps Wks. of Gen. Elec.	Cleveland, Ohio.
195	Protexall Company	Abingdon, Ill.
186-187	The Piston Ring Co.	Muskegon, Mich.
221-222	Price-Hollister Co.	Rockford, Ill.
112	W. E. Pratt Mfg. Co.	Chicago, Ill.
110	The Charles Parker Co.	Meriden, Conn.
348	The Reliance Mfg. Co.	Massillon, Ohio.
242	Romort Mfg. Co.	Oakfield, Wis.
249	Stone Mfg. Co.	Chicago, Ill.
343	The Spencer Mfg. Co.	Spencer, Ohio.
283	A. Schrader's Sons, Inc.	Brooklyn, N. Y.
345	Sterling Mfg. Co.	Cleveland, Ohio.
170	Smith & Hemenway Co.	Irvington, N. J.
243-244	South Bend Lathe Works	South Bend, Ind.
347	Thomas Auto Top Co.	Muncie, Ind.
255	Chas. O. Tingley & Co.	Rahway, N. J.
200	Temco Electric Motor Co.	Leipsic, Ohio.
68-69-70	Trico Products Corp.	Buffalo, N. Y.
308-309	Thermoid Rubber Co.	Trenton, N. J.
305	Timing Gears Corp.	Chicago, Ill.
261	Thompson-Neaylon Mfg. Co.	Chicago, Ill.
155-156	U. S. Air Compressor Co.	Cleveland, Ohio.
353	Voorhees Rubber Mfg. Co.	Jersey City, N. J.
31-32	Whitaker Battery Supply Co.	Kansas City, Mo.
9-10	Wolverine Bumper and Spec. Co.	Grand Rapids, Mich.
231	Williams Bros. Aircraft Corp.	San Francisco, Cal.
84-85	Westinghouse Lamp Co.	New York City, N. Y.
257	Wilkening Mfg. Co.	Philadelphia, Pa.
104	Warner-Patterson Co.	Chicago, Ill.
233	Wells Mfg. Co.	Fond du Lac, Wis.
320	Yale Electric Corp.	Brooklyn, N. Y.

GRANT SELLS INTERESTS

ATLANTA, Oct. 31.—B. M. Grant, for many years one of the principal owners of the J. W. Goldsmith, Jr.,-Grant Co., of Atlanta, Georgia, distributors of the Hudson and Essex line, has sold his interests in the business to C. H. Becker, and retired from the vice presidency to be succeeded by Mr. Becker. This is one of the pioneer distributing concerns in the South, founded by J. W. Goldsmith, Jr., seventeen years ago, who remains as active head of the business. It is also one of the three original Hudson distributors still handling the line in the United States who took on the franchise when the Hudson first started manufacturing motor cars.

STAR SIX PRICES

NEW YORK, Oct. 31.—Prices on the new Star six model are as follows:

Coupster	$745
Coupe	$820
Coach	$880

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ^ ELECTRICAL ^ FLAT RATES
SHOP ^ LEGAL ^ PAINT & TRIM ^ ACCOUNTING

A Timing Tip From an Old Timer

We have noted the answer to the question asked by Mr. G. C. Munroe, 450 W. Main Street, Compton, Calif., which appeared on page 24 of the September 10, 1925 issue of MOTOR AGE. Your advice as to the valve timing as far as I have ever learned is correct. I will say that Mr. Munroe will succeed in getting top speed and smoother running motor if he will time the ignition as follows:

Forty-one degrees before top dead center (compression stroke) with magneto fully advanced. This position may be ascertained by either of two methods. One of which is—remove elliptical hand hole cover plate, marked for cleaning of commutator of the U. S. L. starter generator, and going by marking to be found there. The other is—remove a spark plug and set magneto, fully advanced and with distributer brush on proper segment, when piston is one inch before top dead center (compression stroke).

The above applies when Bosch DU-4 magneto (factory equipment on 22-72 Mercer) or a magneto of like timing range is used. On a Dixie (Splitdorf) magneto or any other magneto having same timing range (40 degrees) the setting of full retard at top dear center will be good and the motor will idle more smoothly than with a shorter timing range magneto set 41 degrees before dead center at full advance. The following models of the Dixie magneto have the 40 degree timing range—44—46—441—447—448 and 449.

Hoping the above, learned in the school of experience, will be of benefit to those desiring information on the ignition timing of Mercer cars of the 22-72 model.—Milton Young, Hampton Court, Lexington, Ky.

The answer seems to be that with a magneto of limited timing range it may be necessary to have the spark advanced somewhat in the retard position to insure enough advance in the advance position.

A CAR THAT OVERHEATS

Q.—We are having trouble due to overheating in a Winton 6 cylinder hearse. We burned off the carbon and refaced valves, overhauled magneto but after running a mile the engine overheats. The timing chain jumped and we replaced it, but we are not sure of the correct position. We also had the radiator and cylinder block cleaned out.—L. Bass, Aberdeen, Miss.

The valves should be timed so that the exhaust valve closes 12 degrees after top dead center. You can check this with the position of the front piston. Get the piston on top dead center and then move the crank handle about one inch. This will make the piston come down about 1/64 or 1/32 inch and at this instant the exhaust valve should close. In some cases where a radiator has been used for several years it may become coated with a deposit of lime which is not readily dissolved. This may necessitate a new core for the radiator.

MOTOR AGE'S READERS' CLEARING HOUSE INDEX

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Putting Oil Gage On a Dort

Q.—Advise as to the possibility of putting an oil gage on the dash to show if pump is working on a 1922 or 1923 Dort using Lycoming motor. There is a test lead that extends out from the pump to check pressure and we wish to extend pipe from this to the dash gage if practicable. What size gage (in pounds) would be needed and should it be connected up with one quarter inch copper tubing or smaller?—Car Hospital, F. G. Stevenson, Mgr., Afton, Iowa.

A gage can be used and the range will depend on whether you have splash or pressure lubrication. As you are not sure of the year of the car this point must be determined first. A gage which will read a maximum of five pounds is sufficient for the splash system and if it indicates anything at all it shows that the pump is working and that the system is O. K. With the pressure lubrication system a 50-pound gage should be used and the pressure will vary considerably depending on circumstances. If, for example, the pump by-pass is controlled in accordance with the operation of the accelerator, then the pressure which would normally be 20 or 30 pounds may come up to 40 or 50 pounds when the throttle is opened as when climbing a hill. The size of copper tubing is immaterial. However, if it is found that the pressure gage fluctuates and the reading is unsteady it might be possible to put an obstruction in the oil tube which connects to the gage so that changes in pressure will not be quite so accurately registered.

GEAR SHIFT LEVER WILL NOT STAY IN HIGH SPEED POSITION

Q—We have in our shop for repair a Buick truck model E-35-1918 which continually gives trouble due to the high speed coming out of mesh. The last time we had this car in the shop we put in new shifter forks and selector pins although we could see nothing wrong with the old ones. We also replaced the cut-out gears—22477, 22225. In about 500 miles it began kicking out and now at about 1,000 miles it can hardly be held in. The bearings are O. K.—E. E. Neeley, Watson, Ohio.

The chief trouble is doubtless in the front bearing, a roller bearing, which having worn allows the gear at the front of the transmission to wobble around. For this reason when the shift is made into high the loose bearing permits enough motion so that the high speed drive acts like a universal joint, and the gear is forced out of mesh and the transmission slips into neutral. The parts to be replaced, which, by the way, should all be replaced at the same time, are the high speed gear, intermediate gear, front bearing together with sleeve and the clutch gear.

Planning Your New Building

By TOM WILDER

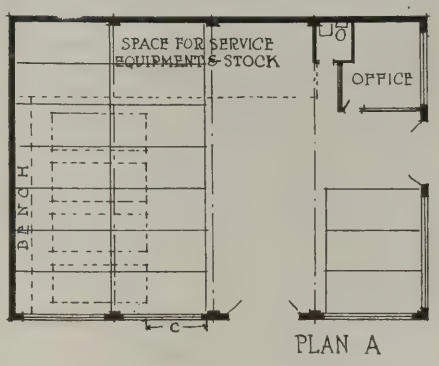
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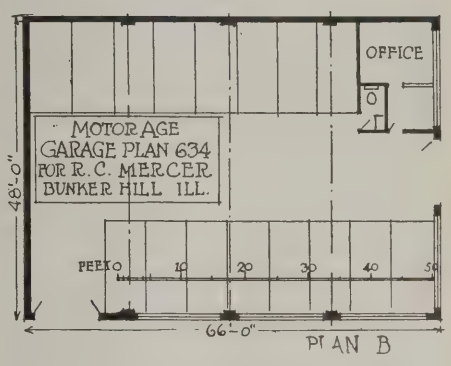
Two Layouts for a Small Garage

Q.—I am thinking of building a garage on a lot 48 by 66 feet and would appreciate any suggestions that you might be able to give me on same. Although this lot is small I think that it would be large enough on account of having a building 24 by 66 ft. just one door removed from this lot which I am now using for sales room, tire service station, battery service, accessories, etc., and would continue to use this building for this purpose and use the new building for garage purposes only, except for an office and waiting room about 15 by 15 ft.

Lot is on corner so can have front and side entrance. This is a town of about 1,000 population in a farming community and will soon be on a hard road. The lot is on one of the main streets one half block from the center of town. I am enclosing diagram of the location.—R. S. Mercer, Bunker Hill, Ill.

Your letter does not make it clear whether you want to do repairing in this building or just storage. Ordinarily we would consider using a building for garage purposes to mean that you wished to use it for a storage building, but since you have not mentioned a repair shop in your other building we judge that perhaps you want to use this for repair shop and such storage as there is room for.





It makes a difference whether this is a storage garage or a shop with space for storage

We show two possible layouts for storage purposes, one having the cars arranged along the sides of the building with a center aisle and one having two rows in the rear facing forward and one in front facing back. Plan A takes care of one more car than plan B, but for a storage garage we would favor plan B. Plan A would be more serviceable for a mixed shop and storage building, but there would not be a great amount of room for storage unless the doorway at the side were moved. By placing the doorway at C there would be space for five cars along the side of the building, or if you prefer you could close up the front entrance and storage five cars along the front of the building leaving the side entrance as it is. If you use the building for shop purposes, as shown by the dotted arrangement, windows would be desirable along the back end, but if this is not possible, skylights would do as well.

Legal Questions Answered—

By WELLINGTON GUSTIN
of the Chicago Bar

Q—We have one car here at the present time that was driven in from Canada and the parties had evidently borrowed some $600 on same before leaving that country. The Canadian authorities have served me with a "Warrant Under Lien Note," prohibiting me from delivering same to anyone but themselves. Am I forced to deliver car without collecting my charges?

There is another car that was driven in here from Indiana. The man ordered some forty odd dollars of repair work and has left the car here for over a month and a half. Can this car be taken from me without paying charges?—Ill. Reader.

The question presented in the above paragraphs is not of uniform decision in the various states. By both state laws and court decision the repairman's lien is given priority over a prior recorded lien of a chattel mortgage in many states.

But apparently on this same proportion the Supreme Court of Illinois in 1924 reversed the Appellate Court in the case of Ehrlich vs. Chapple, 311 Ill. 467, wherein it was contended "that where the mortgaged property is retained by the mortgagor with the consent of the mortgagee, to be used in the usual course of the mortgagor's business, an artisan's lien takes priority over a chattel mortgage." Instead the court herein said: "To hold that the mortgagor may, without notice or consent of the mortgagee, cause an artisan's lien to be placed on a mortgaged chattel which would be a lien prior to the mortgage, would be to make it possible to entirely defeat the lien of the mortgage. Such a holding is repugnant to our whole law relating to the priority of liens." And again this same court says: "Courts should not, therefore, indulge in the presumption that an agreement existed between the mortgagee and the mortgagor that the mortgage lien should give way to a subsequent artisan's lien, but such should be shown by clear and cogent evidence."

In the above matter the "artisan's lien" is but another name for our lien for repairs on automobiles. So according to this decision of your highest state court you repair a car at your peril if you do not first look up the records to see if there is not then a chattel mortgage or other lien upon the car. For such a lien, if good and valid, is given priority to your lien of storage and repairs. Now this prior lien does not invalidate your lien. It simply is given first right in proceeds of the sale of the car. As a practical proposition you should retain the car until it is taken from you legally. And if the car is of sufficient value you can pay the prior lien claimant and add his to your own claim.

By holding the property you can force the prior claimant to foreclose and sell the car at public sale, and you can assert your claim to any amount remaining from the proceeds of the sale after the mortgage is satisfied. Another point to remember in these cases is that the prior lien may not be valid through lack of proper acknowledgment, recording, etc., of the mortgage or other lien. For instance Illinois requires a mortgage to be recorded within 10 days of its execution in the proper county to be good against creditors of the mortgagor. There are involved in both (1) and (2) the possible conflict of laws between the various states named. While one state will, where possible, give effect to the laws of another state governing her citizens where same are involved, still it is its policy to first protect its own citizens and uphold its own laws where there is a conflict in the law. So if the Canadian and Indiana laws give priority to the liens mentioned, mortgage or conditional sale on installment or otherwise over the repairman's lien then Illinois would uphold such law. Another question presents itself. It is an almost invariable rule that where a mortgagee permits the property to be removed to another state the mortgage must be recorded in that county where the property is situated to be valid against creditors of the mortgagor.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Lean on the Get-Away

Q. We have a Studebaker special six 1922 model in the shop, this car being equipped with a Stromberg carbureter. We can get a perfect idling adjustment and the car operates all right at high speed, but on a quick getaway will often pop in the carbureter even after it is thoroughly warmed up.—P. J. Conley, 1956 Belt avenue, St. Louis, Mo.

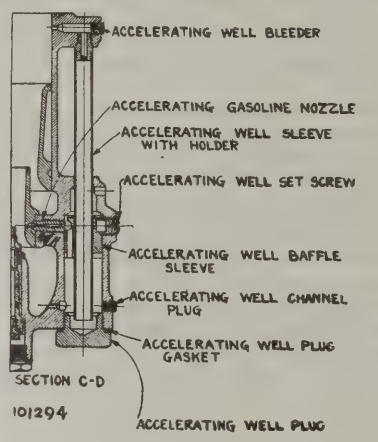
On the model Ls-2 Stromberg carbureter used on this car there is an accelerating well which contains a reserve supply of gasoline. This well is a tube running from the lower to the upper portion of the carbureter and connecting with the air passages above the throttle. When the throttle is suddenly opened a supply of gasoline diluted with air is added to the regular air flow coming past the throttle and this rich mixture gives a fuel which is suitable for rapid acceleration.

If you take the carbureter apart, we would suggest your examining the small opening between the float chamber and the accelerating well, as if this is stopped up it will prevent the proper operation of this accelerating device. The high speed adjustment is obtained by means of the high speed screw and it is possible that you would get better all around operation by backing this screw out by turning to the left or counter-clockwise a slight amount. The use of a hot spot manifold, if one is not already in use, would also improve the operation. With this carbureter it is necessary when warming up the engine to use the dash adjustment and not to return the adjustment to the running position until the engine is thoroughly warmed up. It is possible that you are not making sufficient allowance for the heavy nature of present day motor fuel and expect the engine to warm up too rapidly. A hot spot manifold will very much reduce the time that the dash adjustment must be used.

Some Pistons Slap—Others Are O. K.

Q. We have been fitting 1919 Dodge Brothers cars with Lynite pistons. In some of them the operation is all right and in others the pistons are noisy and make a clanking sound until the engine gets warmed up. Can you explain this condition?—Alex J. Mathiowet, 226 W. Arch street, Ironwood, Mich.

You can test for piston slap by pouring about a tablespoon of 600-W in one or two cylinders at a time and then running the engine. The theory is that this heavy oil will cushion the piston and prevent it from slapping. For example, if you put it in No. 1 and No. 2 and it eliminates the noise it shows that the trouble is in either one of these cylinders. The reason that we suggest this test is that at times ridges will be worn in the cylinder walls and these will not be sufficiently prominent to be noticed when the new pistons are installed. However, if it is determined that one particular cylinder is causing the trouble you can then take a dial gage and measure up that cylinder and you may find that at some point in the stroke there is a place where the diameter is small, in other words, a ridge in the cylinder wall. When the piston ring goes over this ridge and goes past it, it will then expand and make a noise as it springs out against the cylinder wall. It is also possible that due to wear, there is some difference in the diameter of the cylinder and the upper portion of the piston which is undercut and smaller than the skirt, slaps back and forth against the cylinder wall. In some cases inner rings have been used in the upper and lower ring groove so as to prevent this condition. This has been done in another make of engine which uses an aluminum alloy piston.



Sectional view of model Ls-2 Stromberg Carbureter

ENGINE MAY MISS AT HIGH SPEED

2.—Can an engine be run fast enough to make it miss fire; in other words can an engine run fast enough to make the piston pass the firing position before the spark can fire the gas?—Sylvester Klaas, Box No. 34, Silver Grove, Kentucky.

Engines sometime miss at high speed but not for the reason you mention. Electricity travels with speed of light which is 186,000 miles a second. The engine would have to move at a fairly high rate of speed according to this data to be able to run away from the spark. One thing which does happen at high speed relates to the magnetizing of the ignition coil, for this does not occur instantly. Accordingly it is possible for the engine to go fast enough so that the ignition coil core will be only partially magnetized. Then when the interrupter contacts break the circuit and a spark is produced it may be a very weak spark which may be unable to jump the spark plug gap under compression.

What Makes This Bang?

Q—There is a Ford touring car, 1924 model that has a queer knock. All the mechanics here have had a crack at it. It is not a steady knock like a connecting rod or wrist pin, but when the plug in No. 1 cylinder is shorted quick there is a distinct "bang." If it is shorted and held steady then there is no knock, but if short is applied intermittently there is a distinct "bang" as though there was short in timer wires and cylinder was firing off time. Everything has been checked, crankshaft, pistons, connecting rods, timing gears and in fact everything that would be liable to cause this "bang."—Alec Leonard, 719 Pabst Street, Ironwood, Mich.

Here's another chance for MOTOR AGE readers to render assistance. On the standard Ford ignition system we do not know of any condition that would give results of this nature when shorting a spark plug. If the car is equipped with a distributer of the replacement type where a single coil is used and the rotating distributer arm carries sparks to the various plugs, then there is a possible explanation. If the distributer arm is not correctly timed with the distributer shaft, then it might be in between segments when the interrupter points open. Then if a screw driver is held near one of the spark plugs a spark may jump to this cylinder at the wrong time and cause a knock such as you describe. We hope other MOTOR AGE readers will submit their ideas as to what is causing this trouble.

STAR AXLE ADJUSTMENT AND TIMING CHAIN INSTALLATION

Q—Give instructions for adjusting differential on Star cars.—Oklahoma Reader.

On the first Star cars, using Timken axles there was an inspection cover on the differential housing which could be removed when differential adjustment was necessary. On all later models the Adams axle is used, this being the same kind as is used in the Durant and Flint. In this axle adjustment is made by jacking up the rear axle and removing both wheels. The differential is located by means of the drive shafts.

The first step is to back off the adjustment at the right wheel for several turns. Then tighten the left hand adjustment, until the ring gear is tightly meshed with the pinion. Then turn the pinion by hand grasping the drive flange and it should be possible to feel that the pinion teeth and ring gear teeth are tightly meshed. Then back off the left hand adjustment seven notches. The right hand adjustment should now be tightened which will force the differential to the left just enough to give it the proper clearance. Then the right hand adjustment should be backed off two notches. This should give a free adjustment for the pinion and the two shafts. If any tightness is noticed the right hand adjustment should be backed off one more notch.

Clearing Up Electrical Trouble

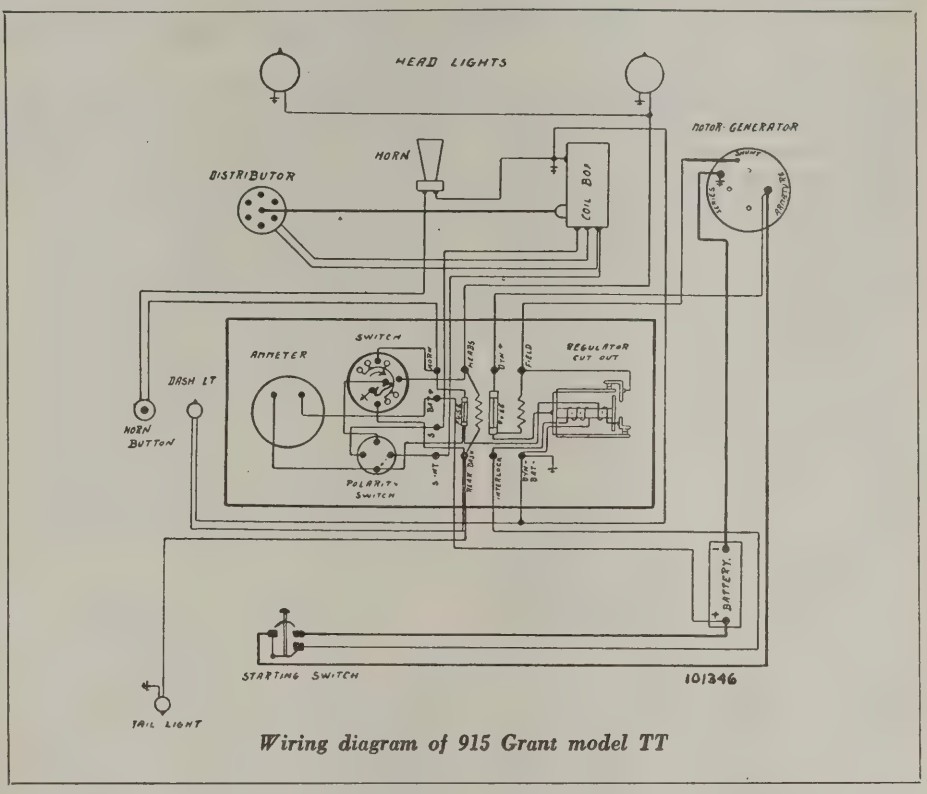
EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

gnition Current Lights the Dash Lamp

Q. We have a Grant six car model TT, ar 1915. It seems that the ignition is eak and the trouble is noticed mostly hen the lights are on or when the car driven so slowly that the generator is t out. The dash lamp burns when the gine runs or when the breaker points e held together. I do not know if it as that way from the factory as I have ly had the car a short time. It has e Atwater-Kent K2 ignition system. Can e correct this or should another ignition stem be installed?— Knute Grahn, Rau, Minn.

We are publishing wiring diagram of is car and also sending you one by parate letter. We believe that the dash mp is incorrectly connected. You will otice that one side of the dash lamp ould be connected to the same terminal hich operates the tail light. The other ash lamp connection should go to the yn. minus terminal on the instrument anel, which is supposed to be grounded. This is also the Bat. minus terminal. he wire from the dash lamp which goes this terminal also goes to the upper rminal on the coil box so as to supply ground connection for the horn and or the secondary winding in the ignition coil. We suspect that the connection on the coil box is not right and that some way the wiring is mixed p so that the ignition current has o go through the dash lamp in order o get to the coil and interrupter. We ould accordingly suggest your checking oth the ignition and the dash lamp circuits very carefully with this diagram to ake sure they are right. The two conitions you encounter, of the ignition being weak and the lamp lighting when the gnition is working, seems to indicate hat this is ignition current in the lamp nd this would account for the weakened park of which you complain. This ignition system is normally satisfactory and ve do not believe it is necessary to make ny change. If service is needed on the gnition unit itself it should be obtained rom an authorized electrical service station handling Atwater-Kent parts.



Wiring diagram of 915 Grant model TT

CONDENSATION IN THE DISTRIBUTER CAP

Q. We have in our possession a Stutz model H. After this car stands still for four or five hours, the two distributers become so damp on the inside that they have to be wiped out before the engine can be started. What would you recommend to stop this?—W. E. Compton, Central Motor Company, Somerset, Ky.

This condition is due to the changes of temperature which take place in the distributer assembly when the engine runs and stops. When the engine operates, heat is generated and when the engine stops the lowering of the temperature permits moisture to condense. We feel that this can be overcome by drilling in each distributer cap a ⅛ in hole through the Bakelite at a point slightly above the casting. Do not drill the hole high enough to interfere with the action of the distributer arm, or so as to have it very near any of the high tension segments. The ⅛ in. hole will permit air to enter and leave the inside of the distributer cap and the rotation of the distributer arm will further the tendency for this ventilating action to take place. It would also be well to use cup grease instead of 600-W or other light oil in the base of the ignition unit. The unit should be about half full of cup grease.

Grounding a Generator— When and Why

Q.—Why is it necessary to ground the Ford generator when the battery is removed from the car?

When operating normally the generator becomes connected to the battery due to the action of the cutout when the voltage is about 6 or 7. Any tendency for the generator voltage to increase then results in increased current going to the battery instead of increasing the voltage. When the generator is not connected to the battery however, and the speed rises the voltage will also increase as there is no current taken from the generator to hold down the voltage.

An increase in the generator voltage will send more current to its field winding, which makes the magnetism stronger. This in turn makes the voltage greater which again makes the field current stronger. This gives rise to a pyramiding effect and what we call a 6 volt generator may produce 35 or 40 volts.

The heating which results, due to the abnormal current in the shunt field winding makes the whole machine abnormally hot, throws out the solder from the commutator bars and burns up the winding unless something is done to prevent it. On the other hand if the generator is grounded when the battery is disconnected there is no chance for the voltage to rise.

2.—Does this same condition apply to all automobile generators?

Yes with the exception of voltage regulated machines which have regulators usually of the vibrating contact type.

3.—I am told that no harmful results are caused by reversing the storage battery leads. In this case it appears that the polarity of the generator is changed. How about the cutout action?—H. W. Daw, Box No. 206, Moosemm, Saskatchewan, Canada.

If the cutout points are once closed by hand the battery current which flows to the generator will automatically magnetize the field poles in the proper direction so that the generator when it builds up will send charging current to the battery. If this is done the cutout action will be all right. If it is not done the cutout points may stick together long enough to allow the generator to reverse or in other cases they may flutter which will cause the points to burn, the opening and closing of the points being too fast to permit of the generator reversing its field magnetism.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Flat Rate and the Small Town Dealer

NOT so long ago the proprietor of a small automotive establishment told us that flat rate was all right for the dealers and service stations in large cities, but does not work out so well for the garage or shop in the smaller towns.

His criticism was that you cannot keep the car owner out of the shop in the small town. The result is the car owner sees you do the work and then when you have finished the job he jumps all over you because he feels he has been robbed.

He feels robbed because in his mind the amount of time it took to do the work is not commensurate with the cost for the job. It is true that perhaps many hundreds of dollars worth of good equipment was used on this particular job, but the car owner does not see it that way. Hence he feels that it is wrong to set a flat price on a job that can be rather quickly performed by means of modern equipment and methods and which in his mind is far above what it ought to be.

For example, if a car owner burns out a connecting rod bearing and has to be towed into the service station or shop, he unconsciously pictures a rather high repair job. Upon talking with the mechanic, shop foreman or dealer, as the case might be, he may be given a flat price for the labor and for the parts required and may give his entire consent to do the work feeling that the flat price is perfectly all right.

If it happens to be in a small town he may remain around the shop while the work is being done. Here he sees the car quickly elevated by means of a hoist, the mechanic taking off the oil pan with speed wrenches and so on before he knows it his engine is fitted up with a new rod and ready to run. Then he begins to think that the mechanic or mechanics didn't work very long on the job and thinks that $8 or $10 or whatever the price may be, is a pretty high figure for such a job. He knows the work has been well done and all that, but still he thinks if it had been done on a purely so much per hour charge the cost would have been very much less.

Had this same car owner left the car, let us say for a day or so and the work had been done meanwhile, he would have paid the repair bill without a murmur. The trouble is largely due to the fact that such car owners do not appreciate the investment in machinery and tools that makes possible quick work of this kind.

Many shop owners do not allow the customer in the shop, but it obviously is quite a difficult matter to do this in a small town where everybody knows everybody else.

Consult Flat Rate Manual

Seattle, Wash.

To The Editor of MOTOR AGE:

I think a loose leaf book on flat rates alphabetically arranged by cars giving your suggested prices and with one or two columns left blank for our own notations would be a fine thing. I think every shop owner would purchase such a book for their own make of car serviced and the general shops the complete list.—J. B. Ridley.

The nearest thing we have to such a book is MOTOR AGE'S Flat Rate Manual, which gives suggested contract prices for 277 repair operations on practically all makes of American passenger cars. In this list the cars are arranged alphabetically.

Again Equipment Helps

Many automotive establishments have installed what is commonly called a drain plug service wherein the old oil in the crankcase of a customer's car is drained and fresh lubricant put in. Crankcase service is another name for it.



THINGS THAT HELP FLAT RATE

It is well to equip the shop for quickly performing lubrication operations on the engine and chassis. Here is shown a rack and electrically driven grease gun which quickly takes care of lubricating the chassis

Although many of the newer model cars are fitted with draining devices which do not require a mechanic's crawling under the car to remove and replace the plug in the crankcase, there still are plenty of motor vehicles whose engines are not so fitted and the job is still one of taking out and removing the plug.

An advertisement which recently impressed us favorably related to a set of speed wrenches designed especially to facilitate drain plug service and the maker of these wrenches said in this advertisement that the wrenches fitted 90 per cent of the cars, trucks and tractors and not only took in the engine, but the transmission case, differential housing, etc.

The shops making a specialty of lubricating service certainly should come under the wire easily on their flat rate time schedules with such equipment at hand.

THE CASH AND CARRY IDEA

The history of merchandising shows that people buy more readily when they see a price attached to an article and when the thing they buy is something more or less tangible.

That's why flat rate has worked out so well for dealers and service stations. When you sell a customer a group of maintenance operations listed on a card and for which a definite sum is specified you literally hand him a package of merchandise as the furniture man or grocer does. He sees what he is buying, the price thereof and all is well.

MOTOR AGE'S FLAT RATE FORUM

No. 38

FLAT RATES FOR MAXWELL CRANKSHAFT MAIN BEARINGS

Manufacturers Official Designation		Time
2010	Remove and install full set of new main bearings. Requires same labor as operation No. 2000	24 hrs.
2011	Remove and install new rear main bearing. Requires same labor as operation No. 2000	24 hrs.
2012	Remove and install new front main bearing, including removal and installation of radiator, generator, distributer, fan pulley, front motor support, timing gear cover and bearing cap	5 hrs.
2013	Remove and install center main bearing, requires same labor operation No. 2000	24 hrs.
2014	Tighten center main bearing, including removal and installation of oil pan and oil pump	2½ hrs.
2015	Tighten center main bearing after oil pan has been removed	1¾ hrs.
2016	Install new felt at rear main bearing, including removal and installation of oil pan	1½ hrs.
2017	Install in support and ream one front or rear main bearing. Customer brings parts in each	1 hr.
2000	Remove and install crankshaft, including removal and installation of power plant assembly, remove cylinder head and oil pan, timing gear cover, timing gears, front bearing cap, flywheel and rear bearing cap. Remove pistons and rods, fit bearings to new shaft, assemble and install	24 hrs.

EDITORIAL

Time Payments

THE clothing industry, which for a time complained of the competition of automobiles, has ecided to try to hold its own by adopting the weapon f the automotive industry. It has decided to dignify he installment plan of selling clothing to the consumer. One of the largest and best known exclusive nen's clothing stores in Chicago has announced a budget plan of selling men's suits for a reasonable lown payment and the remainder in 10 equal weekly payments. Prices are the same as when cash is paid nd no interest is charged.

This interesting adaptation of the time payment plan s said to have been taken up rather extensively in the clothing trade. It no doubt will serve as an important sales stimulus and if the plan of extending the payments over only 10 weeks is adhered to it should take ts place as a sound merchandising method. Although longer time for payment is naturally justified in the case of automobiles this industry can well afford to be proportionately conservative in limiting the period over which the extension of credit runs. Automobiles and clothing both wear out.

Famous last words: "We will give you a still larger allowance."

Rebuilding Used Cars

THE extremely low prices now prevailing for used automobiles have tempted a number of persons to consider going into the business of rebuilding old cars on a large scale. MOTOR AGE has had letters recently from men who sought advice on such projects. These believed they could buy up old vehicles practically for the price of the raw material in them and with a reasonable expenditure produce a rebuilt car that could be sold at a profit.

There is certainly a great future for the rebuilding of automobiles, but we doubt if the road to profit lies along the line of concentrating upon that work as an individual and exclusive business. Rather it lies in the service stations and shops of the car dealers of the country where used cars taken in trade will be reconditioned or rebuilt to make them more salable. Here the rebuilt or reconditioned car will be a by-product of an established institution and will not itself have to shoulder the enormous capital investment and overhead that would be necessary in the conduct of an exclusive rebuilding business.

The rebuilder of used cars must realize that he is in competition with low priced new cars which are sold on extremely liberal terms and that price reductions over which he has no control are likely at a moment's notice to sweepingly depreciate his product. To rebuild used cars from the ground up in order to compete with new cars at or near the price the used cars can be sold at, requires an extensive remanufacturing process that is costly. It requires a great investment not only in equipment but also in vehicles that are in process of being worked upon or being offered for sale. In addition to these factors the man who rebuilds used cars for competition with the new car field is likely to spend too much on the process, giving him a product so costly that he cannot sell it low enough to successfully compete.

On the other hand the dealer and the service station can afford to do much more reconditioning and rebuilding than they have been accustomed to do. The right sort of work done on used cars that are not too old adds more to the selling price than the cost of the work. It is necessary, however, to use discretion in determining what cars to recondition and how much work to put on them. The test is what the car can be sold for after it has been fixed up and repainted. If it is four or five years old it is not likely to be salable except on the basis of very low price and therefore cannot stand a great deal of expense.

Cars of newer models usually can be given the appearance and practically the mechanical condition of a new car and then can be sold at good advantage. It is necessary, however, to establish public confidence in this product, and to do this the dealer must guarantee it and stand behind it.

Private garages are a good thing but they can be overused. Boost good roads.

The Automotive Equipment Show

CHICAGO will be the scene next week of what probably will be the greatest display of automotive accessories and equipment ever assembled in the world. The great coliseum, together with the new north hall and the annex will be filled with the product of more than 200 manufacturers, many of whom will use greater space than ever before.

Advance information indicates that hundreds of new articles will be offered to the trade, and thousands of articles of standard automotive merchandise will be exhibited.

The business of supplying the country's motor vehicles and their owners with needed merchandise has developed into a tremendous one and holds promise of still greater growth. As a market place the Automotive Equipment Association's show is a world's fair of automotive merchandise.

A. E. A. Program Details Announced

Five General Sessions Are Listed in 1925 Convention

Addresses and Discussions and Election of Officers Included in Business of Meeting

CHICAGO, Nov. 5.—Details of the program for the annual convention and show of the Automotive Equipment Association in Chicago from November 9 to 14, have been announced by officials of the association.

On Monday, November 9, the morning session will be opened at the Coliseum Annex with a musical program by Ford's A. E. A. orchestra. Following the invocation will be the election of new members, initiation ceremonies, address by President W. T. Morris, address by Commissioner William M. Webster, reading of the minutes of the last meeting, formation of the house and the report of Commissioner Webster. There will be no afternoon session Monday.

The program for Tuesday morning will be divided into two sections The manufacturers' divisional meeting will be held in the Coliseum Annex, beginning at 10 a. m., with President Morris presiding. The jobbers' divisional meeting will open at the same hour in the Gold Room of the Congress Hotel with Commissioner Webster in charge. The programs of both sessions will include the following discussions:

What is a policy?—Interpretation and application in this line of business?; Is the handbook of any practical value; Is giving gratuities by manufacturers to jobber salesmen, even with the consent of the jobber, the proper or best method of merchandising or sales distribution?; Returned merchandise — A reasonable service charge is fair, and if so, why should it not be paid?;Method of issuing invitations to annual convention and show as recommended by mid-convention meeting that only non-member jobbers who have filed applications with the association or who have expressed interest be invited; discussions and addresses on other current topics of interest to the trade; Shall we issue the official catalog "D" next year?

Tuesday afternoon the official program is the attendance of the show under the coupon system from 2:30 to 5:30 p. m.

Wednesday will inaugurate the second general session when the car manufacturers, service men and Society of Automotive Engineers will be guests of the Automotive Equipment Association at the convention. Installation of officers, regular order of business and a general business session will conclude the morning's program. In the afternoon show attendance will be the rule.

Thursday morning, the regular order of business will be carried out at the Coliseum Annex, in the afternoon the delegates will attend the show and in the evening will be held the annual banquet of the association.

The banquet wil be held in the Gold Room of the Congress Hotel beginning at 6:30. It will be followed by an unusual entertainment and dancing. Tickets will be obtainable at the commissioner's office in the Coliseum only.

The fourth general session will open Friday at the Coliseum, featured by a merchandising department program and an address by William J. Woolley, former general manager of the National Trade Extension Bureau. If time permits such matters as were assigned to Saturday morning's session will be taken up Friday morning for disposition.

Friday afternoon will again be featured by show attendance, and the fifth and last general session will open Saturday morning at the Coliseum Annex. Following the regular order of business will be the reports of committees, open discussion pertaining to the welfare and interest of members, consideration of communications, remarks by international chairman of Automotive Boosters' Club, unfinished business, new business, and adjournment of the convention. The show continues through Saturday afternoon.

At the same time as the A. E. A. show and convention, will be held various other meetings by branches of the automotive industry.

Among these will be the service engineering meeting of the National Automobile Chamber of Commerce and the Society of Automotive Engineers. The programs will be given on Monday and Tuesday, November 9 and 10, at the Hotel La Salle.

The N. A. C. C. will open its session Monday morning with addresses by G. F. Lord, Durant Motor Car Co., and D. C. Hinckley of the Hinckley, Myers Co. In the afternoon the S. A. E. will hear Frank Jardine of the Aluminum Company of America speak on corrosion in internal combustion engines, and M. A. Thorne of Tidewater Oil Co., on new data on engine corrosion.

Tuesday morning the S. A. E. will discuss trouble diagnosis with addresses by C. L. Sheppy, J. C. Talcott and Charles Pleuthner, Pierce-Arrow Motor Car Co. and Carl Breer and John Squires, Chrysler Corp. In the afternoon the N. A. C. C. will have charge of the closing session and addresses will be given by Dr. T. A. Boyd of the General Motors Corp., research department, and Donald Blanchard, technical editor of Motor World Wholesale.

MONTZ GOES TO WISCONSIN

MILWAUKEE, Nov. 2.—C. M. Montz, for the last six years mid-west service manager at Chicago for the Eiseman Magneto Corporation, has been made general manager of the Wisconsin Magneto Co., succeeding Matt Kissinger, resigned.

Production of Cars Shows Slight Decline in October

Ford Output Jumps Ahead to Meet Some of Holdover Demand

PHILADELPHIA, Nov. 4—Production of passenger cars in October for all companies except Ford averaged 10 to 15 per cent lower than in September, although several of the large factories maintained output at capacity. Ford, during the month just past, made a large gain, so it is likely that the final figures for the industry as a whole will be well above the September total. Except for Ford, however, and two or three other producers, there is now no surplus of orders on the books.

During the early part of October production was running considerably ahead of sales, taking the industry as a whole. The declines registered later, however, are evidence that the brakes were being applied at the factories. It is likely that a fairly even course will be continued during the remainder of the year, with only a gradual decline in production. Dealers will go into the new year with substantial stocks on hand, but not with excessive surpluses unless there is a big drop in demand during the next two months which is not compensated by corresponding curtailment at the factories.

Third quarter earnings statements now being made public are revealing some astonishing facts. Despite the price cuts made by the companies during the summer, and effective on most of the cars produced during the third quarter, earnings were substantially as high as during the second quarter, and in one or two outstanding instances, profits per unit of output were actually higher. These represent production economies that were made apparently without damaging the appearance of the cars or weakening them mechanically. Costs of closed bodies have been brought down as a consequence of the much larger volume of demand for closed cars.

G. C. Davis, Indianapolis Stutz Factory Branch Manager Dies

INDIANAPOLIS, Oct. 31.—Grover C. Davis, manager of the Indianapolis factory branch of the Stutz Motor Car Company died here this week following an illness of several months. In his early work Mr. Davis was engaged in the real estate business and later in newspaper work. He entered the marine corps when war was declared and served overseas. While in France Mr. Davis was editor of the Marine Gazette, the official publication of the marine corps.

Tire Makers Plan Greatest Output in History in 1926

Building and Facility Expansion Being Pushed Forward Rapidly to Handle Volume

AKRON, O., Oct. 31.—With total world registration of motor cars now in excess of 20,000,000, tire manufacturers are preparing for the biggest in their history next year. Tire demand in 1926 is expected to eclipse that of any previous year.

All of the leading tire manufacturers, showing marked gains in sales totals and earnings this year, have drafted extensive plans to handle further increases in the future.

While production is now running between 75 and 80 per cent of capacity, an encouraging aspect of the present situation is the fact that stocks in the hands of both manufacturers and dealers are below normal, in most cases. Although some dealers have purchased more than their current requirements, as a result of the advancing tire prices, the repeated warnings of tire manufacturers not to overstock have been effective in checking this trend.

Building construction in the rubber industry this year will amount to something like $6,000,000. In the Akron district, alone, the rubber companies are spending nearly $5,000,000 on plant additions and other improvements.

Studebaker Net Profits Are $5,035,177 For Quarter

SOUTH BEND, Oct. 31.—The total net sales of the Studebaker Corporation and subsidiary companies for the quarter ending September 30 amounted to $46,430,492.32, an increase of 108 per cent over the same quarter last year.

Net profits derived from sales with other net income, after all charges, increased depreciation, and reserve for taxes, amounted to $5,035,177.28, an increase of 136 per cent over last year. These profits were at the rate of $2.61 per share on the outstanding common stock, as compared with $1.06 last year.

The book value of the common stock as of September 30, 1925, was $50.40 per share, excluding good will. Export sales for the first nine months this year exceeded last year by 87 per cent.

HOFF OPENS IN CHICAGO

CHICAGO, Nov. 2.—During A. E. A. show week the Hoff Metal Products Co., manufacturers of Hoff tire chains, will maintain headquarters at the Blackstone Hotel. In attendance will be Howard Wilcox, vice president; E. E. Arnold, sales manager, Fred W. Kohl, B. R. Englmann, Ashley H. Kilburn, E. L. Thompson and A. E. Joyce. Western sales offices, in charge of Fred W. Kohl, have been opened in the McCormick Bldg., 332 South Michigan Avenue.

Horse Is Forced Out Again

MILWAUKEE, Oct. 31.—One of the last strongholds of the horse in Milwaukee has finally yielded to the automobile when plans were announced for the dismantling and wrecking of the old Mock Livery Stable at 558-560 Jackson Street, which is to be replaced by a new modern garage and salesroom building for the Osmond-Jordan Co., Wisconsin distributor for Jordan cars.

The old stable, an unusually large one, is said to have been one of the first large stables in Milwaukee. In addition it is one of the very last of the old commercial livery company strongholds.

The new building will be a three-story brick and concrete structure, 60x120 feet, costing about $60,000. The showroom will be on the first floor with service room and other facilities above.

Nash Announces Reduced Prices in Both Series

KENOSHA, Wis., Nov. 2.—Reductions ranging from $20 to $300 on all Nash models in both the Advanced and Special Six series, with the exception of the Advanced roadster and the Special touring have been announced by officials of the Nash Motors Co. here. The reductions, as announced, are:

Advanced Six Series

Model	New Price	Old Price	Reduction
5-Pass. Touring	$1340	$1375	$35
7-Pass. Touring	1490	1525	35
5-Pass. Sedan	1425	1485	60
7-Pass. Sedan	2090	2290	200
Victoria	1790	2090	300
4-Door Coupe	1990	2190	200
Roadster	1375	1375	000

Special Six Series

5-Pass. Touring	$1135	$1135	000
Roadster	1115	1135	20
5-Pass. 2-door Sedan	1215	1265	50
5-Pass. 4-door Sedan	1445	1545	100

FORD RING REDUCED

BALTIMORE, Md., Nov. 2.—The American Hammered Piston Ring Co. has reduced the list price of its special ring for Fords to 25 cents. Large production has enabled this reduction to be made without change in the high grade quality of the product, officials said. Dealers are being protected by rebates on any rings still in stock.

STROMBERG WINS DECISION

CHICAGO, Oct. 26.—The appeal of the Stromberg Motor Devices Co. in their suit against the Beneke Manufacturing Co., makers of the Rayfield Carbureter, involving the Anderson and Goldberg patents, was denied by the United States Court of Appeals for the 7th District, sitting in Chicago. This decision sustained a previous decision made by Judge Wilkerson in the United States District Court in 1923.

Colorado Business Shows Improvement in October

Dealers Report Decreased Loss in Used Cars Through More Careful Selections

DENVER, Oct. 31.—The last six weeks has been marked by a decided improvement in new car business in Colorado. October shows a heavy increase in sales over the corresponding period in 1924. The pronounced cut made in prices of all new cars has reacted unfavorably on the used car market, as a matter of course, and open cars in particular have been affected, but dealers are more cautious in trade values and report less loss than usual through this source.

In north central Colorado, in the district known as the Horn, and embracing the cities of Boulder, Loveland, Longmont, Greeley and Fort Collins, the beet crop in particular has been short, but an exceptionally fine potato crop has done a great deal to hold this section up to its usual prosperous standard.

Conditions as reported by dealers in the above cities are a little below that of last year, but northeastern Colorado cities, such as Sterling, Fort Morgan and Julesburg are much above normal. The Arkansas and San Luis Valleys have the best crops in five years, and the automobile trade is reflecting this prosperity.

Southeastern Colorado is the best it has been for perhaps eight years. Dealers throughout the state anticipate a business much above normal between now and the holidays. Motor banks and acceptance corporations show considerable improvement in October collections.

Victor Rubber Sold by Receiver For $50,000

SPRINGFIELD, O., Oct. 31.—The preferred creditors of The Victor Rubber Company will get between 65 and 70 per cent on their claims. The plant as a result of its sale Wednesday to Springfield capitalists will continue operating the works upon a sound basis and mechanical rubber products will be added.

J. B. Cartmell, president of the First National Bank; Arthur R. Hill and George Cugley, officers of the Buckeye Incubator Company, purchased the Victor plant and equipment from Receiver H. H. Durr for $50,000 upon authority of Judge Frank M. Krapp, of common pleas court. The material on hand will be taken over by the purchasers at the inventory price.

PORTER LEAVES PEERLESS

CLEVELAND, O., Nov. 2.—John F. Porter, for the last three and a half years treasurer and director of the Peerless Motor Car Company here, has resigned effective yesterday. Porter goes to Wilmington, Del., to be associated with John J. Raskob, chairman of the finance committee of the General Motors Company and vice-president of the duPont Company.

Cincinnati Business Forges Ahead During Early Fall

Actual Deliveries Held Up Because of Inability to Obtain Shipments From Factories

CINCINNATI, Oct. 31.—Fall business in automobile and accessories lines appears to have taken a decided spurt, according to the reports from distributors in the Cincinnati territory for the month of October. Up to October 15 the new car sales actually recorded, that is, with cars delivered and licenses issued as recorded at the Hamilton County clerk's office, amounted to 989 cars.

Sales of used cars amounted to 1940 machines up to the same date. Dealers say that this record does not do justice to the business of the month, because practically all distributors were having difficulty in getting deliveries within 30 days of the close of the sale. Here and there a dealer could take a car out of stock and give immediate delivery but three weeks to 45 days was the average on practically all agencies.

Reports on deliveries made in September showed 1818 new cars and 4,016 used cars, which was a gain of 700 cars in new model sales over September, 1924. The sales of used cars in September, 1924, were 2,704 or a little less than 70 per cent of the sales of used cars in September, 1925. Sales of tires, parts and accessories in this territory also showed a good average increase in October over October, 1924, and dealers reports indicated that the month would go 40 per cent ahead of October, 1924, when all returns were received.

Chrysler Profits Reported $8,078,186 for Quarter

DETROIT, Oct. 31.—Chrysler Corp. and subsidiaries for the third quarter of 1925 report net profit of $8,078,186 after interest and depreciation but before federal taxes, equal after estimated federal taxes and 8 per cent preferred Series A dividends to $9.86 per share on 677,910 outstanding common no par. This compares with $4,689,000 in the preceding quarter or $5.40 per share on the present share basis.

In the third quarter last year Maxwell Corp., the predecessor company, reported net profit of $1,831,658 or $1.72 per share. Chrysler Corp. net income for the first nine months this year was $16,275,286 or $19.07 per share against $2,296,094 or $1.06 on the same share basis in the corresponding period last year.

Sales for the first nine months of 1925 were 180 per cent of the sales for the same period of 1924. Net current assets are $29,408,276 compared with $14,647,740 last year and surplus as of Sept. 30 was $11,389,185 against $6,070,667 as of June 25, 1925. The corporation has declared regular quarterly dividend of $2 on preferred payable Jan. 2 to stock of record Dec. 15.

ELDRIDGE IS PROMOTED

LANSING, Mich., Nov. 2.—After an absence of five years spent in Chicago during which time he was manager of the Chicago branch of the Reo Motor Car Company, Clarence E. Eldridge is returning to the home plant of the company here in the capacity of assistant manager of the company's sales division. Mr. Eldridge succeeds C. A. Triphagen who became sales manager following the resignation of R. E. Rueschaw. L. B. McEwing who has been actively associated with the Chicago branch for the last five years has been named to succeed Mr. Eldridge.

N. Y. Jobbers Meet to Push Winter Business Campaign

CHICAGO, Nov. 2.—More than 250 representatives of automotive jobbers and manufacturers participated in the three meetings held in New York State last week in behalf of the winter business campaign being sponsored by the jobbers outside the metropolitan district of New York City.

The speakers at all three meetings were Arthur R. Mogge, merchandising director of the Automotive Equipment Association, on keeping busy this winter; Ray Sherman, on Christmas merchandising; R. W. Proctor of Black & Decker Mfg. Co., on reconditioning and rebuilding, and George Fleming on winter necessities.

The first meeting at Albany Thursday night was under the auspices of Albany Hardware & Iron Co. and H. A. McCrae Co., Troy, jobbers.

The jobbers participating in the second meeting Friday night at Syracuse were: Onondaga Auto Supply Co., Olmsted Co., Perry & Sherman Co., Utica Cycle & Supply Co., Whipples', Barker, Rose & Clinton Co., Treman, King & Co. The attendance was 138.

The following jobbers took part in the meeting at Buffalo Saturday: United Accessories Corporation, Joseph Strauss Co., H. D. Taylor Co., Chapin, Owen Co., Rappole & Robbins, Inc., and Sidney B. Roby Co.

A special feature of the meeting at Syracuse was the talk by L. E. Patcheet, service manager of Over-Knight Motors, Inc., of Syracuse, who told how last year he succeeded in selling an average of $32.90 worth of accessories with each new car sold by his company.

MERGER RUMOR DENIED

NEW YORK, Nov. 2.—Rumors that Dodge Brothers, Inc., was to be merged with another automobile manufacturer were denied today by F. J. Haynes, president, on his return from Europe.

204,827 FORDS IN OCTOBER

DETROIT, Nov. 2.—Ford's production in October was 204,827 vehicles. The output of all domestic branches on Oct. 31 was 9,109 vehicles, the highest day's production in the history of the company.

New Car Sales Show Big Increases in Californi

Used Automobiles Fail to Mov Quickly Because of Lower Prices of Late Models

SAN FRANCISCO, Oct. 31.—Marke falling off in used-car sales and materia increase in sales of new cars priced a up to $1500 delivered here, are the out standing features of automotive mer chandising in central and northern Cali fornia for the first fifteen days of Oc tober. Consequent to these condition stocks of used cars have increased ma terially, while few dealers in new car within this price range are at all over stocked.

Deliveries of the new Ford models ar reported as slow, while a number o Ford dealers, particularly in the smalle cities and towns report that there ha been no great movement by presen Ford owners to turn in their old car on new ones. Probably the greater par of the large sales of these new For models has been to prospects who di not already own Fords.

Sales throughout the San Francisc and Oakland territory are more tha holding their own with the first tw weeks of September, and prospect are strong that October will prove on of the best months of the year in sale of new cars priced under $1500 here.

Fees paid for registrations of moto vehicles and trailers to the state a Sacramento on October 10 were $44,10 in excess of the total similarly paid fo all of 1924, according to a statemen issued on that date by the State Moto Vehicle Department. The total for 192 up to October 10 was $1,394,867, as com pared with $1,350,759 for all of last yea

Will H. Marsh, head of the departmen predicted that total registrations fo California for 1925 would be at leas 100,000 ahead of the 1924 total.

NEW CHEVOLET DEALER

INDIANAPOLIS, Oct. 31.—The Mario Chevrolet, a new organization, takes th place of the General Chevrolet Compan local Chevrolet dealer, according to a announcement made at a Indianapol zone meeting here this week at whic Charles E. Lee, sales manager for th Indianapolis zone of the Chevrolet Moto Company, presided. The heads of th new Marion company are S. L. Savidg and David H. Thomas, formerly connec ed with the Summit Chevrolet Compan of Akron, Ohio.

GORRELL MADE DIRECTOR

INDIANAPOLIS, Oct. 31.—At a mee ing of the board of directors of the Stut Motor Car Company of America, Inc Edgar S. Gorrell was elected a directo of the company. This action of th board of directors follows the electio of Mr. Gorrell as vice-president of th organization, which was made severa weeks ago at the time he became asso ciated with the company.

epresentatives Make Pleas For Removal of War Taxes

ambill Tells House Body Automobile Dealers Lose $6,000,000 Every Year

WASHINGTON, Oct. 31.—Automobile ealers are losing a total of $6,000,000 a ear through the operation of the motor ehicle tax, C. E. Gambill, president of ne National Automobile Dealers' Asso-iation, told members of the House Ways nd Means committee at the tax hearing his week. This sum represents tax sses on demonstration and call cars nd loss of interest on taxes paid by the ealers to the manufacturers and not ollected from the consumer for 30 days r more.

Mr. Gambill further estimated that ealers on the average always have in-ested $20,000 in excise taxes and that uring the eight years of operation of ne tax, dealers have collected nearly 900,000,000 for the government at a cost o them of about $40,000,000.

Besides Mr. Gambill, the association as represented by J. H. McAlman of oston, J. W. Tarbill and F. E. Santry f Cincinnati, C. E. Fisher and Claude olgate of Newark, C. W. Hunt of Cleve-nd, Sidney Bowman of New York, all ealers, and C. A. Vane, general mana-er, and W. B. Guy, general counsel.

Others who appeared before the com-ittee in behalf of the automotive in-ustry were Charles F. Bulte, represent-ng the Automobile Club of Rochester, . Y.; E. P. Chalfant, vice president, Gill anufacturing Co. of Chicago, represent-ng the Motor and Accessory Manufactur-rs' Association; David Widman, repre-enting the Automobile Body Builders' ssociation; F. C. Van Cleef, chairman f the tax committee of the Rubber Asso-iation of America; D. H. Kelly, presi-ent of the National Battery Manufac-urers' Association; S. Duncan Black, epresenting the Automotive Equipment ssociation of Chicago; and Congress-an Grant M. Hudson of Michigan.

CHRYSLER SEES BIG OUTPUT

NEW YORK, Oct. 31.—Returning from urope, Walter P. Chrysler predicted roduction and sale of at least 250,000 ars by the Chrysler Corp. next year nd exportation of at least 25,000. He aid Chrysler was now making 850 cars aily of which 60 per cent were fours nd 40 per cent sixes and the daily out-ut would soon be increased to 1,000. Orders were well ahead of output and the actory was about three months behind n sixes and four weeks behind on fours.

PLAN LONG TRUCK HAUL

NEW YORK, Oct. 31.—Among the first f the large Eastern firms to recognize he possibilities of the Dixie Highway is he Aquazone Corp. of New York, which lans to inaugurate this fall what is laimed to be the first long haul motor elivery service between New York and lorida.

Yellow Traffic Lights Hit

BALTIMORE, Oct. 31.—Yellow lights should have no place in a traffic signaling system, according to Dr. Knight Dunlap, professor of experimental psychology at the Johns Hopkins University. Dr. Dunlap bases his opinion on investigation which, he says, have shown that between 2 and 8 per cent of the male population is color-blind, according to the accepted interpretation of the term. Statistics relative to the number of color-blind women have not been completed.

CADILLAC PLANS RECORD

NEW YORK, Oct. 31.—Cadillac Motor Car Co. expects to produce about 14,000 cars in the first five months of its fiscal year, which runs from August to August, as against 17,000 for all of last year, according to Lawrence P. Fisher, president, who has just returned from Europe. He said the company planned to go on production of 3,500 cars a month soon but with all this production there would not be 1,000 cars in dealers' hands January 1 because of difficulty in keeping pace with orders. Fisher saw no abatement in the demand for all types of cars.

New Diana 7-Passenger Sedan Model Announced

ST. LOUIS, Oct 31.—Diana Motors has announced that deliveries are now being made on another new model, known as the Seven-Passenger Diana DeLuxe Sedan. The introduction of this model follows closely behind that of the five-passenger phaeton.

The addition of the two last named models brings the Diana light straight eight line to eight styles, the roadster, standard two-door sedan, standard four-door sedan, two-door brougham de luxe, cabriolet roadster, four-door sedan de luxe, five-passenger phaeton, and seven-passenger Diana de luxe sedan.

The phaeton model is known as the Diana Arrow-Head Phaeton, due to the arrow-head design raised panel.

The new seven passenger closed model has a 135-in. wheelbase, special springs, rich interior finishings including a smoking set and vanity case, gray broadcloth upholstery and is finished in Brewster green Duco below the belt, contrasted with black above.

MOOCK ADDRESSES DEALERS

ST. LOUIS, Oct. 31.—Harry G. Moock, sales manager of the Hudson Motor Car Co. of Detroit was in St. Louis last week on a visit to the Hudson-Frampton Motor Car Co., St. Louis distributors for Hudson and Essex cars. He addressed a meeting of the dealers and salesmen in this district. Moock came here from a trip through the south.

New Plan for Financing of Shop Equipment Announced

Atlas Securities Has Arrangement Whereby Garageman May Buy Tools on Time

INDIANAPOLIS, Oct. 31.—The Atlas Securities Company of this city is making public announcement of a credit and financing plan which it believes is a new extension of time payments on a national basis for the benefit of equipment wholesalers and jobbers and their garage customers by which garage equipment and shop tools may be financed by any jobber in any state without cost to himself.

Though the plan is just now being made public it has been in actual operation for several months and has been found to work smoothly in many points of the country.

Garage equipment and heavy tools, though they constitute a permanent investment, have generally been carried like other goods bought by the garage on thirty days billing. This has held back the extension of adequate quantity business, and kept the garage behind the times in tools and equipment. In some places wholesalers have instituted time payments and carried the paper.

Under the Atlas plan shop equipment is sold to the garageman who pays from one-fourth to one-third down. He executes a note and a contract which the wholesaler discounts with the Atlas Securities. Some wholesalers under the plan do their own collecting. Others inform the customer of the Atlas arrangement and have payments made to that concern. The whole transaction is completed by the wholesaler who mails the note and contract to the Atlas and receives a check to cover the full amount.

Another variation of the plan called the "sight draft plan" enables the wholesaler to deposit the properly made out papers with his own bank for credit and the bank fowards the papers to the Indianapolis bank of the Atlas company.

The success with which the plan has operated is said to be due to three factors. First, the cost to the wholesaler is nothing. The financing cost to the garage customer is said to be as low as sound finance can make it, and less than terms demanded in some sections. Further because of varying state laws which were investigated and proper form drawn up for operation in all states the Atlas is prepared to do business anywhere in proper legal forms with no delay.

FEDERAL HAS TAMPA BRANCH

ATLANTA, Oct. 31.—The Federal Motor Truck Co. announces the recent opening of a direct factory branch at Tampa, Fla., under the name of the Federal Truck Co. of Tampa, Inc., the branch located at 1811 Franklin St., and handling the company's South Florida trade. F. E. Young has been appointed manager of the new branch.

No Abnormal Decline Seen in Chicago Sales Volume

Downward Trend Not So Great As in Former Years Despite Severe Weather

CHICAGO, Oct. 31.—Despite extremely severe and unusual weather in October, sales of new and used cars in the Chicago territory have not suffered any abnormal decline. Combined reports from distributors and dealers indicate that although the bad weather affected sales to some extent, October as a whole was between 150 and 200 per cent better than the same month last year.

A normal downward trend to the sales curve of between 10 and 15 per cent below the September volume is general in this section.

In some cases deliveries still are a problem, while in other instances delayed deliveries have caused October to show a sales volume equal to March and June. Factories are putting forth efforts to catch up with the orders taken in the summer, with the result that in most cases deliveries at this time present no problem.

In the majority of instances, dealers and distributors report a definite downward trend during the early fall weeks, but this downward slide of the curve has not been so great nor so abrupt as in former years.

Rural business has been largely instrumental in holding the sales volume on a more nearly level line this season.

Automotive Men Pledge Aid to Owners Through A. A. A.

WASHINGTON, Oct. 31.—The formation of a gigantic co-operative unit in the automotive field is foreshadowed as the result of assurance given the American Automobile Association by car manufacturers, distributors and dealers to the effect that they will hereafter make common cause with motor clubs in the work of smoothening out the difficulties in the path of the automobile owners of the country.

This development, announcement of which came from the A. A. A. national headquarters, was characterized by Thomas P. Henry, president of the national motoring body, as one of the most important steps taken in recent years to unify the efforts of the various automotive and motoring bodies interested in the welfare of the motorists.

William E. Metzger, of Detroit, a member of the executive committee of the A. A. A. and also a director of the National Automobile Chamber of Commerce, was largely instrumental in securing action on the resolution and in having the views of the manufacturers broadcast to the automobile dealers of the country.

MARMON PROMOTES ROGERS

INDIANAPOLIS, Oct. 31.—Nordyke & Marmon Company announces the appointment of the well known A. "Jack" Rogers as head of a new department of "Quality and Style" and as the assistant to Vice-President Hal G. Purdy, one of the key men of the Nordyke & Marmon organization. Rogers, who for several years was advertising manager of the company and one of the executive staff for about ten years, except during the war period, became assistant sales manager some years ago and has continued in that capacity until the formation of the new department which is to be an important link between the factory production and the sales departments.

DURANT MAKES DENIAL

NEW YORK, Oct. 31.—W. C. Durant has issued a statement denying the rumor that he had been seeking to regain control of General Motors Corp. He said: "Because of the widespread publicity given the rumor, I wish to emphatically deny that I am planning or seeking control of General Motors, and have no desire or intention of again becoming active in its affairs, were such a thing possible. My interest in General Motors is purely that of an investor and my holdings have recently been increased because of the confidence I have in the future of that great corporation and of its commanding position in the industry."

Studebaker Pleased With Success of Pledge Plan

SOUTH BEND, Oct. 31.—So thoroughly have the terms of the Studebaker dealers' pledge to the public on the sale of used cars been carried out by the dealers subscribing to it that, after the sale of more than 30,000 used cars under this pledge during the last three months, only 43 complaints have been received by Studebaker, the company announces.

Further, of this number of complaints, only 11 indicated a fault on the part of the dealer.

The creditable showing of fidelity to the pledge, revealed by the negligible number of complaints, has strengthened the corporation in its policy of advertising its dealers to the public as responsible used car merchants.

MOON SURVEYS MEXICO

ST. LOUIS, Oct. 31.—Edmund H. Serrano, director of exports for the Moon Motor Car Co., has left on an extended trip through Mexico and Cuba in the interests of Moon and Diana dealers in those countries. Mr. Serrano said that the recent opening of the National Bank of Mexico, which is issuing for the first time in Mexico, paper money backed by a gold reserve, had stabilized business and improved to a marked degree and outlook for financing Moon and Diana sales.

North Carolina Service Men Organize 4 New Divisions

Tire, Battery and Wholesale and Retail Gasoline Dealers Form Bureaus

CHARLOTTE, N. C., Oct. 31.—Organization of automobile tire, battery and wholesale and retail gasoline dealers' divisions was perfected at the two-day semi-annual convention here of the North Carolina Automotive Service Association. Keeley A. Grice of Charlotte, president of the state association, presided at the general conference's sessions.

Victor Shaw, of Charlotte, was elected chairman of the tire dealers' division of the state association. W. L. Pope, of Statesville, was elected chairman of the battery dealers' division. A. O. Costner, of Lincolnton, was named chairman of the wholesale gasoline dealers' division, and the retail gasoline dealers elected J. Caldwell McDonald, of Charlotte, as chairman.

Approximately 50 dealers attended the conference, the second held by the association, which has made important advances in several lines of endeavor since it was organized last May at Charlotte.

The principal address of the convention was delivered by Tom McP. Glasgow, of Charlotte, president of the National Automotive Jobbers' Association. The importance of "fair play" toward retailer and consumer was emphasized by L. H. Martin, of Greensboro, speaking on the general subject of wholesalers' policies. J. T. Thompson, of Burlington, spoke as a wholesaler on the relation of the wholesalers to the retailer, and R. O. Holland, of Greensboro, discussed this subject from the viewpoint of the retailer, each emphasizing the necessity of co-operation.

Ford of Canada Reports Earnings of $6,132,327

FORD CITY, Ont., Oct. 31.—Seventy thousand eight hundred and sixteen passenger cars and 4.545 tractors were manufactured by the Ford Motor Company of Canada during the twelve months ending July 31, according to an announcement made public today by W. R. Campbell, vice-president and general manager.

Profits of the company during the last year amounted to $6,132,327.50 or $2,413,139.99 more than the preceding year. The total assets of the company are listed at $41,419,335.66.

During the year the company expanded its activities and established two Australian companies. The companies which were established under the supervision of P. W. Grandjean, secretary and assistant treasurer, were the Ford Manufacturing Company of Australia, (Pty) Ltd., and the Ford Motor Company (Pty) Ltd.

The first named concern will handle the manufacture of car bodies while the latter concern will handle the assembly and sales divisions of the combined firms.

rogram Is Announced for Second Finance Conference

epresentatives Will Present All Phases of Time-Payment Problems in Industry

CHICAGO, Oct. 29.—The program for second annual automotive financing nference has been announced by C. C. nch, general manager of the National sociation of Finance Companies, under ose auspices the conference is to be nducted.

The conference will open at the Hotel erman, November 16 and will be called order at 10 a. m. by A. E. Brooker St. Louis, president of the association. eakers will present various phases of automotive finance problem that rning. These speakers will include nry Ittleson, president Commercial Instment Trust, Inc., New York; A. W. wton, vice president First National nk of Chicago; C. E. Gambill, Chicago, esident National Automobile Dealers' sociation and A. R. Erskine of Studeker.

Monday afternoon Mr. Hanch will lead illustrated discussion of the subject d at 7 o'clock that evening will be held e annual banquet with Mr. Brooker esiding.

Tuesday morning A. J. Morris, presint of the Industrial Acceptance Corp., w York, will discuss recourse in conction with used car paper. E. S. Hare Hare & Chase will follow with address non-recourse paper.

Discussions on legislation and interange of service will be led by E. M. rris of South Bend, chairman of the gislation committee and J. T. Cronke, president Commonwealth Securities ., Wichita, Kas., respectively.

Mr. Hanch will explain organization rvices in the afternoon and Ernest N. ith, general manager of the American tomobile Association will tell of asciation benefits later in the day. The embership meeting with committee rerts, election of directors and organizan of new board will end the session at afternoon.

HUG OPENS IN TAMPA

ATLANTA, Oct. 31.—The Hug Co., of ghland, Ill., manufacturers of the g truck for road building use, anunces the recent opening of a direct ctory branch in Tampa, Fla., at 1506 anklin St., to handle the company's uth Florida trade. The Hug company now building a southern manufactur branch at Interocean City, near Kisnmee, Fla., for the manufacture of both e Hug truck and the Hug motorbus.

PHILADELPHIA SHOW

PHILADELPHIA, Oct. 31.—The 25th nual Automobile Show under the spices of the Philadelphia Automobile ade Association will be held Jan. 16-23, clusive, at the Commercial Museum, th Street below Spruce, it was anunced today by W. H. Metcalf, execue secretary of the association.

FRANKLIN DEALERS MEET

ATLANTA, Oct. 31.—Dealers and distributors handling the Franklin automobile line in the southeastern territory held a sales and merchandising conference at the Biltmore Hotel in Atlanta recently, S. E. Ackerman, sales manager for the company, presiding. In the Atlanta and Georgia district alone Mr. Ackerman told the dealers that an increase of 30 per cent in Franklin car sales has resulted so far this year as compared with the corresponding period in 1924. Sales in the state of Florida, he stated have been 196 per cent larger than the the corresponding period in 1924.

Stanley Zweibel Is Named Marmon Service Manager

INDIANAPOLIS, Oct. 31. — Stanley Zweibel, who has served as the service manager of the Marmon Automobile Company of New York, has been appointed service manager for the Nordyke & Marmon Company plant here it was announced by H. H. Brooks, general director of sales.

The new executive is well known to the automotive trade as a result of many years connection with Marmon factory and dealer organizations. He was appointed director of the Marmon educational department in charge of the sales school following the war and was later made director of service for the company, which position he relinquished to become manager of service at the New York Marmon branch.

Prior to his Marmon connection Mr. Zweibel was engaged in industrial educational work.

THOMAS F. MANVILLE

NEW YORK, Oct. 31.—Thomas Franklin Manville, chairman of the board of Johns-Manville, Inc., manufacturers of asbestos brake lining, has died here. Mr. Manville with his brother, H. E. Manville, has built up an organization in the last 25 years, capable of carrying out his plans and policies in the asbestos industry even without his directing hand.

H. E. Manville, who succeeded his brother as president of the company in 1924, will continue to direct the policies of the organization.

In addition to chairman of the board of directors of Johns-Manville, Inc., Mr. Manville was president of the Arizona Asbestos Company, treasurer and director of the Asbestos Wood & Shingle Company, president and director of the Canadian Johns-Manville Company, director of the Fibre Corporation, director of the Fifth Avenue Bank, trustee of the Franklin Savings Bank, president and director of the Manville Securities Company. He was a member of the Bankers' Metropolitan and Union League Clubs in New York City.

FORD, LTD., VOTES DIVIDEND

DETROIT, Oct. 31.—Cash dividend of 10 per cent, payable November 15 to stockholders as of record November 5 was voted by the directors of the Ford Motor Company of Canada. All the old officers and directors were re-elected.

7-Passenger Willys-Knight Six Announced in Two Styles

Touring and Sedan Bodies Make Up New Line—Engine Unchanged, Springs Longer

TOLEDO, Oct. 31.—Continuing its policy of bringing out new models only as demanded by automobile purchasers, Willys-Overland now announces production of a new seven-passenger Willys-Knight Six.

Because of the success of the Willys-Knight Six engine no changes have been made in it, while the chassis, remains unchanged with the exception of an increase in rear spring strength to care for additional passengers.

Conspicuous among changes in the new seven-passenger Willys-Knight Six is the mounting of the spare rim on the left hand side of the body forward of the left front door.

While two additional seats have been provided for additional passengers and comfortable leg room added, the increased weight of the car is but slightly more than the Model 66 five-passenger cars.

The new seven-passenger Willys-Knight Sixes are being built in both touring and sedan body types and completely round out the Willys-Knight lines of fours and sixes. With the wheelbase of the seven-passenger models and the overall length remaining at 126 and 175 inches respectively as in the five-passenger models, the body length from the engine hood to the rear of the body has been considerably increased to care for additional passengers.

Auxiliary seats of the disappearing type are employed which completely fold out of way into the backs of the front seat, the compartment into which they fold being utilized, when seven passengers are riding, for leg room of the two auxiliary seat occupants.

Approximately seven inches of additional space is provided from the front of the rear seat cushion to the backs of the auxiliary seats while the distance from the backs of the auxiliary seats to the back of the front seat has been established at 25½ inches, providing ample leg room for the two extra passengers. Height of the auxiliary seats from the floor of the car is 13 5/8 which, with the reclining angle of the seats provide the most comfort for the occupants.

List prices of the touring and sedan seven-passenger models of the Willys-Knight Sixes are $1,950 and $2,495 respectively f.o.b. Toledo.

MARTIN TO MAKE RADIOS

CLEVELAND, O., Oct. 31.—Extensive manufacture of radio equipment soon is to be started by the Glenn L. Martin Company, airplane makers here. Announcement to this effect was made today by Martin, president of the company, who pointed out manufacture of "B" battery eliminators for radios already had started.

Overland Shipments Surpass 1924 Output by 44,000

Production in First 20 Days of October Nearly 13,000 Cars, Factory Announces

TOLEDO, O., Oct. 31.—Some idea of how greatly this fall's motor business exceeds that of a year ago is seen in the sales and production figures of Willys-Overland, Inc., for October and for the period from January 1 to October 20, 1925.

For the year to October 20 Willys-Overland shipments totaled more than 174,840 cars as compared with 130,971 for the corresponding period of last year. In addition, company production for the first 20 days of October totalled approximately 13,000 cars, indicating that between 20,500 and 21,000 cars will be built during this month, a figure that will break all production records for October shipments and production in company history. This figure compares with the October production of 1924 which totaled approximately 10,000 cars.

Orders for more than 15,000 cars for November delivery are now on hand and, after a careful checkup with dealers and distributors, factory officials declared there will probably be produced and shipped between 17,000 and 18,000 cars during November, as compared with the 5,000 cars produced in November of 1924.

TRUCK FIRMS MERGE

BOSTON, Oct. 31.—The Noyes-G. M. C. Truck Company and the Stone Motors, Inc., both of Boston, have been merged into the Noyes Motor Truck & Coach Company here. The Noyes-G. M. C. Truck Company handled the commercial vehicles of General Motors and the Stone Motors, Inc., had the distribution of Yellow Cab products. When Yellow Cab was sold to General Motors, Stone Motors, Inc., had just leased a building and moved in on Commonwealth Avenue, while the Noyes-G. M. C. Truck Company was in a place directly across from the Noyes-Buick Company. Now the new company has leased the big structure vacated recently by the Leghorn Motors Company formerly New England distributors of the Gardner until the company was dissolved a month ago. The Stone Motors store has been vacated and Mr. Stone has become an officer of the new company with Harry K. Noyes.

PLANS CANADA BRANCH

SPOKANE, Wash., Oct. 31.—The Burrow's Manufacturing Company will open a branch factory at Winnipeg, Manitoba, at an early date to take care of western Canada demand for the Burrow tire boot. A branch is already in operation at Akron, Ohio, to take care of eastern business. The headquarters factory here supplies the demand as far south as Los Angeles and Phoenix and east as far as Minneapolis.

Frisco Claims Honor of First Car

SAN FRANCISCO, Oct. 31.—Honor of being the first city in which an automobile ride was made goes to San Francisco, rather than to Kokomo, according to Dr. David Starr Jordan, former president, and now chancellor emeritus, of Stanford University. Dr. Jordan claims that he rode, in 1892, two years before the Kokomo car made its brief trip, from the Southern Pacific station to the football field. "I was picked up," said Dr. Jordan, "by a man named Elliott, who was driving a self-propelled vehicle which he called by that infernal name, half Greek and half French, which still sticks to it—an 'automobile.' Elliott had built this from designs of a gas engine in a French technical journal. The thing went very well, as I recall, on the level, at a rate of between two and four miles an hour."

BIG CHRYSLER DRIVEAWAY

DETROIT, Oct. 31.—Three hundred Chrysler passenger cars formed the driveaway shipment of the R. H. Collins Automobile Company, Chicago Chrysler distributors, which left Detroit recently for the Illinois metropolis. The occasion was the annual visit of the Collins organization and dealers to the local plant. Stretched out on the road, the cars formed a line a mile long. They were escorted through the different Michigan and Illinois cities by motorcycle policemen. Arriving in Chicago the cars were delivered to customers who had placed orders for delivery.

DORRIS PROMOTES PURCELL

ST. LOUIS, Oct. 31.—Bernard A. Purcell has been appointed sales manager of Dorris Motors, Inc., successors to the Dorris Motor Car Co. H. H. Walker has been named advertising manager. Purcell has been with the Dorris company since 1908 except for a period during which he served in the army.

RICKENBACKER-TRIPPENSEE MERGE

DETROIT, Oct. 31.—Stockholders of the Rickenbacker Motor Co. have ratified the consolidation contract between that company and the Trippensee Closed Body Co. by more than a two-thirds vote. At the same meeting, stockholders approved the change in the par value of the stock from $10 to no par.

INDIA PICKS APPLEBY

AKRON, Oct. 31.—J. H. Appleby has joined the India Tire & Rubber Co., as district manager, and will have jurisdiction over Chicago and Milwaukee territories. Appleby was formerly sales manager of the Denman-Meyers Cord Tire Co.

Packard Report Reveals Greatest Year in History

Sales, Production and Earnings of Company All Are Far Ahead of Any Other Like Period

DETROIT, Oct. 31.—In the fiscal year ending August 31, the Packard Motor Car Company attained the greatest sales, production and earnings in its history, according to the annual report made public today.

Sales of cars, parts, marine and aviation engines totaled $60,475,989.89 or $14,472,310.63 greater than last year.

Production reached 24,246 passenger cars. Sales abroad were 50 per cent greater than a year ago. Net earnings were $12,191,081.21 after provision for federal income tax. Last year the net earnings were $4,805,174.54, after provisions had been made for the federal income tax. The income for the year just ended was a million a month.

The current assets aggregate $29,281,414.82 and are three and one-half times current liabilities. The total assets are four and one-half times total liabilities.

The report further says that the preferred dividend amounted to $686,993.04 and the common dividend to $4,476,046.00. The regular common dividend during the year amounted to 12 per cent to which extra dividends of 3 and 5 per cent were declared. Including the amount paid out for retiring the preferred stock, there was disbursed in cash during the year to common and preferred shareholders, $18,213,485.

The balance at the beginning of the last year was $9,488,442.71. Add to this the profit and the surplus is $21,679,523.92. A year ago it was $13,481.21.

WILLS STE. CLAIRE DEALERS

MARYSVILLE, Mich., Oct. 31.—Dealers who have recently taken on the Wills Sainte Claire line are as follows: Ayer and Ayer, Inc., Springfield, Mass; Geo. W. Stohler and Company, South Williamsport, Pa.; Edward A. Morris, Springfield, Ill.

DEALERS VISIT PEERLESS

CLEVELAND, Oct. 31.—The Peerless Motor Car Co. factory in this city was visited last week by 30 distributors and dealers, accompanied by C. R. Cuncliffe and H. S. Svevens, manager and wholesale manager respectively, of the Peerless Motor Car Co., Philadelphia, branch. They were addressed by Edward Ver Linden, president, L. R. German, vice-president and Charles A. Tucker, sales manager.

TOOL SERVICE ARRANGED

CINCINNATI, Oct. 31.—The United States Electrical Tool Company announces that U. S. portable electric tools will be serviced by and through Westinghouse service stations located in 28 cities in America.

kland Announces Larger and Roomier Landau Sedan

w Colors and Other Refinements Now Being Offered at Same Price as Former Model

PONTIAC, Mich., Oct. 31.—The Oakland tor Car Company now has in produc- n a new style Landau Sedan with ger body, wider rear seat, larger rear arter windows, new colors and many ier refinements. Price remains un- anged—$1295 f. o. b., Pontiac, Mich.

The lengthening of the body affords ded space in the tonneau of the car d easier entrance, while the widening the rear seat provides big car roomi- ss, desired for the complete relaxation occupants.

The rear quarter windows have been larged from the oval to a square ish, with upper rear corners rounded conform to the shapeliness of the rear e of the body.

The change in Duco finish to a pyra- d gray lower body, with black upper ucture and red striping on body, hood ivres and wheels adds to the attrac- eness of this car.

Automatic windshield cleaner, visor, nt snubbers, natural wood wheels, nt bumper, rear fender guards, gaso- e gauge on instrument board, heater, to-meter, Fisher VV one-piece wind- ield, roller shades and other appoint- nts are standard equipment, besides e many mechanical Oakland features ch as harmonic balancer, air cleaner, filter and mechanical four wheel akes.

MOHAWK CHANGES NAME

NEW YORK, Oct. 31.—To avoid confus- on with the Mohawk Electric Mfg. Co. Newark, N. J., the name of the Mo- wk Electric Corp. of Chicago has been anged to the Mohawk Corp. of Illinois. ne corporation has recently added these stributors: Marshall Field & Co., En- ewood Electrical Supply Co., Amber lectrical Supply Co., and Harry Alter Co., all of Chicago. Other distributors Mohawk radio receiving sets include orehouse & Wells Co., Decatur, Ill., and aac Walker Hardware Co., Peoria, Ill.

ax Appeal Board Upholds Deduction for Bad Debt

WASHINGTON, Oct. 31.—Appeal of ne Pacific Pipe and Supply Company California that it was within its rights hen it charged off a bad debt by the nited States Board of Tax Appeals.

The evidence showed that the taxpay- g company purchased, in 1918, $50,- 37.23 worth of tires from the Palmer ire and Rubber Company of Chicago; at the tires were unsatisfactory and at the tire company was adjudged ankrupt in 1920, failing to make prom- ed restitution.

"The action of the taxpayer is charg- g off the debt on its books upon learn- ing of the bankruptcy," said the opinion of the tax board, "knowing as it did that the merchandise sold by the debtor had proven unsatisfactory, and after having unsuccessfully attempted for several months to collect the account, was in accordance with sound business practice.

"We do not mean to say that, in the case of every bankruptcy, debts due may be charged off as worthless. Each account must stand upon its special circumstances."

Bargain Basement for Used Cars

CLEVELAND, Oct. 31.—The Walter F. Wright Co., Chrysler distributer, has carried into the retailing of used cars one of the features that have been adopted with success by merchants in other lines of products. This is the basement store. He has made extensive alterations in his used car sales room at 4624 Euclid avenue, and by utilizing the vacant space beneath the ground floor he has doubled the floor space of his salesroom. In other words, Wright has doubled his floor space without adding one cent to his rent. A new entrance ramp constructed at the rear of the store makes the entire basement available for display purposes, and provides room for an additional 40 cars. The increased floor space has permitted the company to arrange cars without crowding so that customers may inspect them under the best possible conditions.

CHEVROLET OUTPUT HEAVY

FLINT, Mich., Oct. 31.—Chevrolet came within 378 passenger cars and trucks of equaling its highest production month when it turned out 55,865 passenger cars and trucks for September, it was announced at the factory today. The number bettered the revised estimate by 2,000. October's output has been put at 54,500. This may be changed later to a higher figure, according to factory officials to permit taking care of the orders on hand. Deliveries to dealers during the past month amounted to 44,500 making the month second to April and May. According to Charles F. Barth, vice-president in charge of production, the condition is an indication of the industry becoming more stabilized.

FISHER TO EXPAND

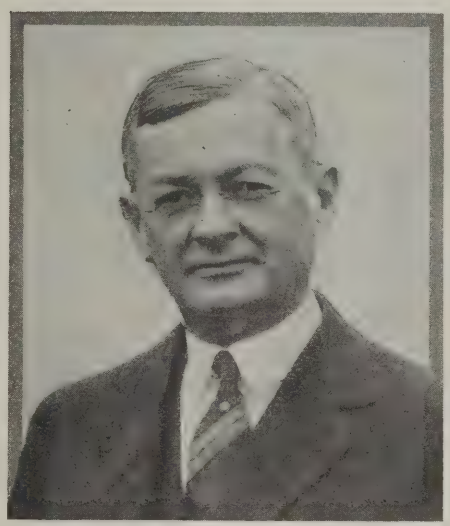
DETROIT, Oct. 31.—Two million dollars will be expended in doubling the capacity of the Fisher Body plant at Memphis, William A. Fisher, president of the company, said yesterday. The working force of 1,000 men will be doubled. Since the acquisition of the plant two years ago upwards of $1,000,000 has been spent in conditioning the plant. The present enlargement was decided upon to take care of the increased orders that the Fisher Company has received.

R. C. Rueschaw Retires As Sales Manager for Reo

Veteran Executive Will Retain Seat on Board of Directors—Triphagen Is Successor

LANSING, Mich., Oct. 31.—R. C. Rueschaw, sales manager of the Reo Motor Car Company has retired from active duties, according to an announcement made early this week. The veteran executive in turning over the actual direction of sales retains his seat with the board of directors. He will also continue to make his home in Lansing.

A recent serious illness, from which he is now completely recovered, together with a long-postponed desire to gain more leisure for travel, recreation and the administration of personal affairs were deciding factors in bringing about his retirement from the executive position which he has held so long.



R. C. Rueschaw

Mr. Rueschaw, like the other six executives of Reo, started with the company from its inception, and he has been closely allied with the Reo Motor Car Company since 1904. He has been an active worker in the National Automobile Chamber of Commerce and is, at the time of his retirement, a member of several committees of that organization.

Mr. Rueschaw turns over the reins to C. A. Triphagen, assistant sales manager for the Reo Motor Car Company during the last three years and manager of Reo's Detroit branch for a number of years prior.

NEW AUBURN DEALERS

AUBURN, Ind., Oct. 31.—New dealers added to the organization of the Auburn Automobile Co. include:

Reising Auto Sales, Cincinnati; J. E. Molloy Motor Co., Norwood, O.; Heinss Motor Car Co., Cincinnati; Curwin Enscoe, Dayton, O.; Midway Garage, Decatur, Ill.; Fred Emerson, Angola, Ind.; Auburn Motors, Huntington, W. Va.; Basha Motor Co., Masontown, Pa.; Johns Motor Sales Co., Brooklyn, N. Y.

Along Automobile Row

DENVER.—The South Denver Motor Company, dealers in Overland and Willys-Knight cars, is moving into new quarters at 171 Broadway. This move has been necessitated by increasing volume of business.

ST. LOUIS.—De Luxe Automobile Company, Oldsmobile distributor in the St. Louis district has announced appointment of M. C. Ingram of Carbondale, Illinois, as an Oldsmobile dealer.

CHICAGO. — The Smith-Sauer Motor Company, Marmon distributor, has moved from the former location at 2436 South Michigan Avenue to 2349 South Michigan, the building which formerly housed the Stevens Duryea Motors, Inc., and the O'Brien Motor Company, Stanley Steamer dealers. The old home of the Marmon has been purchased by the Stewart Warner Speedometer Corp., and that company will move its offices to the new location.

BOSTON.—Cooms & McBeath, Inc., Ford and Lincoln dealer, has moved into the new building formerly occupied by the Autocar Sales & Service Company.

DETROIT.—The Grosse Pointe Motor Company, Jefferson and Wayburn, is the latest Hudson-Essex dealer in Detroit. The owner, Gilbert Michel, was formerly a salesman for the Aaron DeRoy Motor Car Company, Hudson-Essex distributors for this territory.

SIOUX CITY, Iowa.—The Ryal Miller Chevrolet Company, which has conducted a used car store, exclusively, at 518 Sixth Street, has opened a second used car exchange. Lee Mylan directs the store, but the old one is in charge of J. H. Christie.

MEMPHIS.—The Gerber, Hudson-Essex Company, John D. Gerber, president and general manager, has been launched as an additional sales department for Hudson and Essex.

VANCOUVER, B. C.—A new company has been formed to take over the retail selling and servicing of McLaughlin-Buick cars in the territory of Greater Vancouver. The new firm, Clark-Parsons Buick, Ltd., will continue to carry on business at 1219 George Street.

DETROIT,—Four dealers for the Oakland six have been announced by G. A. Richards, president of the Richards-Oakland Company. The new appointments make 12 Oakland dealers in addition to two retail branches in the city. The new dealers are Shepard Motor Sales, the Grand Motors Inc., Linwood Auto Sales, and the Handloser Sales & Service.

FITCHBURG, Mass.—E. H. Page, who had the Reo agency for 15 years, is retiring from business and has sold out to Frank J. O'Reilly, for the last 14 years connected with the Linscott Motor Company of Boston, Reo distributor.

DANVILLE, Ill.—Rewert & Ehler have acquired the Hupmobile agency, formerly conducted by Milt Stewart and have taken over the former Holmes Garage Company building on North Hazel Street. The Rewert & Ehler agency also handles the Hupp in Decatur and Champaign.

SPRINGFIELD, Mass.—E. V. Warriner has been appointed distributor and retail dealer for the Flint. The business will be run under the name of the Springfield Flint Company. This arrangement involves the discontinuance of the factory branch of Flint Motors. Mr. Warriner will continue to run the Stanley agency. Donald MacDonald, for six years with the last named concern, has been appointed manager for both establishments.

MEMPHIS.—R. Price, president of the Memphis Automobile Dealers' Association and connected with the Southern Motor Car Company has returned from a trip through the Mississippi Delta. He expects to visit the Cadillac factory soon.

CLAREMORE, Okla.—A Buick agency has been established in Claremore at the Sequoyah Garage by the Forster-Davis Motor Company of Tulsa, which has been given the Claremore territory.

ST. LOUIS.—Southwest Nash Company, Nash distributor here, has opened another used car department at the northeast corner of Washington Boulevard and Jefferson Avenue. Al Ehrengart, assistant sales manager of the company is in charge.

LITTLE ROCK, Ark.—Grady C. Hopkins, for more than two years salesman for the Arkansas Motors Company, has been placed in charge of the company's used car department.

BROWNSVILLE, Tenn.—Pittman Auto Co., Ford and Lincoln dealer, is doubling the size of the plant to care for increased business.

ROCKFORD, Ill. — L. L. Lebkicher, Chrysler agent, has moved across the street from 317 South Church Street to 314 South Church. He will build an annex to the new store to handle his supply lines.

ATLANTA.—The Southern branch of the Stewart-Warner Products Co., advises that R. S. Bacon has recently joined the traveling sales forces of the company out of the Jacksonville, Fla., branch, and will handle the dealer trade in a part of the Florida territory, specializing in sales promotion work with the dealers.

CHICAGO.—The address of the Chicago office of the Brown-Lipe Gear Company has been changed from 1028 Standard Oil Building to 1015 Standard Oil Building, 910 S. Michigan Avenue.

MONTICELLO, Ill.—E. A. Johnson has purchased a brick building at 212 West Washington street, and is remodeling it and perparing to move his Hudson-Essex sales room and garage there.

NEW HAZELTON, B. C.—Cary & Stone are now operating the Hazelton garage, and have been appointed Ford service agents.

ST. LOUIS.—Star Square Auto Supply Co., automobile accessory dealer, will open its fifth store in St. Louis at 2300 South Grand Boulevard. Edwin Geil has been named manager of the new branch, the third opened by the concern this year.

TULSA, Okla.—The Bobst Motor Company of Tulsa, distributors of Hudson and Essex cars, has recently moved into a new building.

FAYETTE, Mo.—D. B. Denny has sold the Denny Motor Company, which includes the Ford agency, to a company which represents Ford at Palmyra, Mo. B. A. Dye, of Palmyra will be manager of the new concern which will be known as the Fayette Motor Company.

SHEBOYGAN, Wis.—R. H. Thieman Company, Ford and Lincoln dealer here, has purchased the property of the Jenkins Machine Co. and will start reconstruction of the building on January 1, when the Jenkins company moves to Sheboygan Falls to take over the plant of the Falls Motor Co.

TOLEDO.—The Marmon Toledo Co., has been chartered with an authorized capital of $20,000 to deal in motor vehicles, parts and accessories.

ROCHESTER, N. Y.—Robert J. McCarthy, of Smethport, Pa., has purchased the business of the Denny Motor Company, Ford dealer at Naples, near here. Mr. McCarthy, who has a wide experience in the automotive field, will conduct the business under the name of the Naples Motor Company.

CHICAGO.—Fred C. Wendell has been appointed to the newly created position of assistant sales manager by the Pierce-Arrow Sales Corp., 2420 South Michigan Avenue.

MOLINE, Ill.—I. E. Hoogner, veteran automobile man, has been appointed local agent for the Cleveland car and will establish headquarters and salesroom in the LeClaire garage.

PORTLAND, Ore.—G. B. Pendergrass has opened a new automobile sales room at Union Avenue and has been named as community dealer for Hudson and Essex cars.

ROCHESTER, N. Y.—James Hutton has joined the MacConnell Motor Corporation, Ford dealers, as service manager. He was formerly connected with the service departments of Swope Stanley Motors and Judge Motor Corporation of that city.

DULUTH, Minn.—The Chandler-Cleveland Agency, Inc., has moved to 1009 East Superior street, where complete service is to be given along with sales. Peter Doll is manager of the service with a crew of five men. The local sales for the agency have been put in charge of G. L. McLeod, who comes from San Diego, Calif., where he managed sales of the Peerless and Oldsmobile.

SPRINGFIELD, O. — The Brubaker-Saunders Co. has been incorporated with a capital stock of $25,000 to handle the Overland and the Willys-Knight cars in the Springfield territory. It takes the place of The Overland-Burnett Co.

DETROIT.—The Pennow Motor Sales, 6340 West Fort street, Paige and Jewett dealers, has opened a sales branch at 6520 Michigan avenue. Albert Pennow is head of the company.

CHICAGO.—Willard McAllister, for the last year retail sales manager of the Smith-Sauer Motor Co., Marmon representative, has taken the retail sales of the Marmon, while the Smith-Sauer company will confine its activities to the wholesale field.

OTTAWA.—A new company has been formed to handle the Chevrolet in Ottawa as associate dealer with temporary sales rooms at 301 Bank Street. A charter has been applied for in the name of the Superior Motor Sales, Ltd.

ST. LOUIS.—De Luxe Automobile Co., St. Louis Oldsmobile distributor, has opened a used car showroom at 3118 Locust Street.

SPOKANE, Wash. — The George H. Koester & Son tire shop and service station, distributors of Kelly tires, has added a complete battery service station with H. W. Brow, a veteran in the industry, in charge.

MILWAUKEE.—The Hathaway Buick Co. of Oshkosh, Wis., has plans for erection of a 50x50 one-story garage as an addition to its present plant at that location.

CHICAGO.—Burnstine Motor Sales, 2457 South Michigan Avenue, Chrysler dealer, has started construction of three new buildings in outlying districts to care for its increasing business. The new buildings are located at 3041 Lawrence Avenue, 1840 Ridge Avenue, Evanston, and 6335 Broadway.

ROCHESTER, N. Y.—Frank P. Conlon and Cornelius O'Leary, owners of the Mount Morris Studebaker Garage have erected a new showroom.

FORT DODGE, Iowa.—Hupmobile dealers from northwest Iowa were guests of the local Hupmobile agent, D. H. Kuhlman at a one-day factory demonstration and sales conference conducted by George A. Clark, Detroit.

HOUSTON, Tex.—Griff Vance, for years connected with the Jack Neal-Nash Motor company of San Antonio, and for the last two years sales manager of that concern, has been named manager of the Jack Neal-Nash Motor company here.

CHICAGO.—Allen W. Granger, formerly manager of the Chicago branch of the General Motors Truck Co., has been appointed supervisor of retail and fleet sales for the Reo Motor Car Co., 2412 South Michigan Avenue.

With the Associations

New Directors Chosen

KANSAS CITY, Oct. 31.—The annual election of directors for the Kansas City Motor Car Dealer's Association was held at the Kansas City Club. The following were elected:

W. J. Brace, president of the Hudson-Brace Motor Company; Robert C. Greenlease, president, Greenlease Motor Car Company; Nelson S. Riley, president, Studebaker Riley Company; Estel Scott, general manager, General Motors Truck Company; Edward F. Williams, president, Franklin-Williams Motor Company; Arthur Bunker, general manager, Bird-Sykes-Bunker Company; George H. Cox, branch manager, Reo Motor Car Company; W. P. Hemphill, secretary-treasurer, Hemphill Motor Company; Rollo W. Reid, president Reid-Ward Motor Company.

Would Standardize Service

ROCHESTER, N. Y., Oct. 31.—The Rochester Garage Owners' Association has been organized by garage men here to standardize garage service. One of the acts of the new association has been to launch a drive to have a city ordinance passed which shall provide for licensing of all garage proprietors.

The garage men feel, they say, that too many inexperienced "motor tinkers" are opening so called garages in their backyards, turning out interior work and thereby bringing the garage business as a whole into disrepute. Furthermore, this mushroom growth of the backyard garage, they declared, has been a big factor in the last year or two in reducing additional business which the legitimate garage man with his mounting overhead expenses has a right to expect.

Rochester garage men say they want to be licensed the same as plumbers, electricians or druggists. Since this latter group was licensed primarily to protect the physical welfare of the public, they point out that faulty repairs made by a novice garage man endanger the life of the car owner and the public as well.

The officers of the new association are Frank L. Sherwood, president; G. A. Dancey, vice-president; William Bauer, treasurer; F. E. Hill, recording secretary; Charles W. Punch, field secretary and organizer.

Mexican Club Formed

WASHINGTON, Oct. 31.—A meeting of business men in Tampico, Mexico, held under the auspices of the Tampico branch of the Mexican Chamber of Commerce resulted in the organization of the club known as El Automovil Club de Tampico, the Automotive Division of the Department of Commerce is informed. The purposes of this organization include the general popularizing of automobile traffic in this section, promotion of good roads, general protection to individuals and firms engaged in the sale of automotive products, etc.

Milwaukee to Celebrate

MILWAUKEE, Oct. 31.—An outstanding event in the history of the automobile industry in Wisconsin will be celebrated here Nov. 9, when the Milwaukee Automotive Dealers' Association in combination with the entire automotive industry in the state will celebrate the fifteenth birthday of the local dealers' organization.

F. W. B. Achen, president of the association and Cleveland and Chandler distributor in Wisconsin, and Bart J. Ruddle, executive secretary of the organization are preparing for the big banquet which will feature the celebration, and which will be attended by at least 300 of the leading dealers, wholesale parts and equipment men, distributors and factory representatives as well as representatives of the motor press and the National Automobile Dealer's Association.

Leaders of the industry, including manufacturers whose lines are represented in Wisconsin, and prominent trade association officials will be guests of the Milwaukee organization at the birthday party. Efforts are being made to bring Alfred Reeves, general manager of the National Automobile Chamber of Commerce, and C. A. Vane, general manager of the National Automobile Dealers' Association to Milwaukee, as the principal message bearers of the industry.

Gasoline Dealers Elect

ROCHESTER, N. Y., Oct. 31.—Ward L. Gerber was elected president of the Western New York Gasoline Dealers' Association at the annual meeting held here recently. Other officers elected are C. R. Hertzberg, vice-president; J. L. Hilton, secretary and treasurer. The board of directors is composed of William Bauer, F. W. Fincher, J. J. Dolman and A. D. Whittley.

Proposed Code Studied

SPOKANE, Wash., Oct. 31.—At a recent meeting of the eastern Washington branch of the Washington Automotive Trade Association the proposed new motor code was given a thorough airing. Jack Powers of the Eldridge-Buick company of Seattle presented the trade's arguments on the code, representatives from non-automotive interests also being present.

He characterized as one of the most important sections that which would provide that all cars carry under the front cushion a certificate of title which would be of special interest to repairmen and dealers handling used cars. It is also proposed to make a sales slip pasted on windshield serve in lieu of a license plate until the latter can be obtained.

Reduction of the license and personal property tax on cars and increase of the gas tax are also provided for.

Studies Flat Rates

PORTLAND, Ore., Oct. 31.—As one of its major activities for the coming year the Portland Automotive Trades Association has appointed a committee to gather and place in the hands of all members all available information of flat rates for repairs. Interest in flat rates was renewed by the MOTOR AGE flat rate chart, which was placed in the hands of the association by the Chilton Class Journal Co.

W. A. Gill, former president, is chairman of the committee, which includes Axel Kidahl, Henry Ward, Earl F. Heym, C. A. Bankhead, Al May and A. G. Anderson.

Even the smaller repair shops along the Pacific Coast are now becoming sold on the advantages of the flat rate, despite the fact that many of them formerly held that such a system could be advantageous only to the big shops or the one specializing in repairs on a few makes of cars.

Southwest Boosters Banquet

DALLAS, Tex., Oct. 31.—More than 200 automobile dealers, distributors, and accessory and parts jobbers attended the annual banquet of the Automotive Boosters Club here. The Dallas organization is part of the association representing Texas, Louisiana, Arkansas and Oklahoma.

At the close of a day's activities the club elected Frank Lynn president, A. D. Graham, vice-president, D. H. McFadden, secretary, and M. J. LaDue, treasurer. The officers elected are all of Dallas.

Speakers on the program included W. L. Martin, former president, Frank Lynn, new president, Ellis Boyd, president of the Automotive Dealers' Association of Texas, C. O. McCauley, president of the Texas Automotive Jobbers Association, F. A. Ferris, M. J. Norrell and F. F. Florence.

Portland Elects Crittenden

PORTLAND, Ore., Oct. 31.—The Automobile Dealers' Association of Portland passes into the coming year of its activity with one of its oldest workers at its head. J. A. Crittenden, sales manager of the Willys-Overland company, has been elected to the presidency.

In point of service to the association and his fellow dealers Jack Crittenden dates back to the organization of the association in 1916. From that time he has been an officer of the dealer group continuously and while offered the presidency before, did not finally accept until last election.

The other officers elected at the same time were H. C. Berg, vice-president, and the following directors: Ray Albee, L. E. Therkelsen, C. L. Boss, C. E. Francis, Chase Garfield, H. W. Roberts and Arnold Cohen. Ralph J. Staehli is secreary-treasurer.

Revenue Collections Show Gain Again in September

Total Received From Industry Is $4,220,828 More Than Same Period Last Year

WASHINGTON, Oct. 31.—Internal revenue collections from the automotive industry during September, 1925, were $4,220,828.32 greater than those for the period from July 1, 1925, to September 30, 1925, were $11,521,126.83 more than for the period from July 1, 1924, to September 30, 1924, the Bureau of Internal Revenue, Treasury Department, announces here.

The total collections from the automotive industry for September 1st is given at $15,932,884.16 as compared with $11,712,055.84 for September, 1924, while the total collection for the period July 1, 1925, to September 30, 1925, is given at $43,983,788.63 as compared with $32,462,-661.80 for the period July 1, 1924, to September 30, 1924.

Itemized, the collections give automobile trucks and automobile wagons $1,463,394.85 for September, 1925, as compared with $545,096.98 for September, 1925, as compared with $545,096.98 for September, 1924; other automobiles and motorcycles, $11,800,416.81 for September, 1925, as compared with $9,278,014.28 for September, 1924; and automobile parts and accessories, $2,669,072.50 for September, 1925, as compared with $1,882,944.62 for September, 1924.

The grand total of collections for September last is given at $448,340,453.84 or $24,890,759.87 greater than for September, 1924, while the grand total for for period from July 1, 1925 to September 30, 1925, is given at $691,701,061.88 or $69,082,237.64 greater than for the period from July 1, 1924, to September 30, 1924.

Los Angeles Dealers Report 10-20 Per Cent Sales Gain

LOS ANGELES, Oct. 31.—Stimulated by a highly successful closed car salon held in Los Angeles during the early part of the month, sales throughout Southern California in October are reported by virtually all dealers as holding up well, with every indication for a good winter business. Increases in sales ranging from 10 to 20 per cent are reported over October of last year, with only isolated instances of decreases.

The farming communities still continues a strong factor in Southern California sales, evidencing the exceptional prosperity of fruit growers and agriculturists.

The two year payment plan is now being featured by nearly all Los Angeles distributors, and the new low down payments and the long terms are causing a slowing up of used car sales. Dealers who feature guaranteed reconditioned used cars, however, declare that they are still having a satisfactory turnover, but the independent used car dealers are finding it increasingly difficult to locate buyers for their "as is" merchandise.

Although the outlook for new car sales is viewed as entirely satisfactory, Los Angeles distributors admit that used cars are likely to present a serious merchandising problem this winter in Southern California.

Coming Motor Events

Automobile Shows

Chicago ..... Nov. 9-14
Seventh annual exhibit of the Automotive Equipment Association at Coliseum, in connection with annual convention.

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Chicago ..... Nov. 16-17
Annual convention, National Association of Finance Companies, Hotel Sherman. C. C. Hanch, secretary-manager, 76 W. Monroe St., Chicago.

Chicago ..... Nov. 16-18
Convention and exhibition of the National Standard Parts Association, Hotel Sherman, C. B. Fraser, secretary, 310 Hofman Bldg., Detroit.

Detroit ..... Nov. 16-21
National Motorbus Show in Grindley Hall, C. E. Stone, chief engineer People's Motor Coach Co., in charge of committee.

New York ..... Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J. ..... Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Cleveland, O. ..... Jan. 23-30
1926 Automobile Show under auspices of Cleveland Automobile Manufacturers' and Dealers' Association, Herbert Buckman manager, in Public Auditorium.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Washington ..... Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

San Francisco ..... Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bdg., manager.

Denver ..... Feb. 2-6
Annual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Louisville, Ky. ..... Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Races

Charlotte, N. C. ..... Nov. 11
Los Angeles, Cal. ..... Nov. 26

Conventions

Des Moines, Ia. ..... Nov. 12-13
Automotive Merchants' Association Convention.

St. Louis ..... Nov. 17-19
Annual Convention of National Tire Dealers' Association.

New York ..... Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago ..... Feb. 9-10
American Drivurself Association Annual Convention.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

January 1—National Shows Number—Automobile Trade Journal.

January 7—Motor Age—National Shows Number.

January 14.—Motor World Wholesale—New York Show Report.

February 4—Motor Age—Chicago Show Number.

February 4—Motor World Wholesale—Chicago Show Report.

February 18—Automotive Industries—Statistical Issue.

STUDEBAKER SALES INCREASE

DETROIT, Oct. 31.—Sales of the Studebaker Corp. for the first nine months of this year amounted to 111,525 cars, as compared with 76.508 in the corresponding period in 1924. Sales for the period exceeded the total of any previous year, except 1923. Sales in 1924 were 110,240 cars and 145,167 in 1923. Earnings for the third quarter are estimated at more than double the $2,131,409 reported for the third quarter of 1924. On this basis the company is expected to show earnings for the first nine months of this year approximating $15,000,000, with a balance for the common shares equal to nearly double the $4 annual dividend.

NEW FLINT BRANCH

DENVER, Colo., Oct. 31.—The Flint Motor Company announces the opening of a Denver factory branch at 1248 Broadway, under the name of the Colorado Flint Motor Company. The new concern will be under the management of Joseph C. Hunt, who has been in the automobile business in this city for twelve years. Complete sales and service facilities will be maintained under the direction of factory experts, and a complete line of Flint parts will be on hand at all times.

FORD SETS RECORD

DETROIT, Oct. 31.—The Ford Motor Company's production record moved up to a higher peak than ever during the last week. Figures given out by the company Saturday afternoon showed that for the week of October 17-23 the domestic production totaled 49,004 cars and trucks, a record for any six-day period. The biggest day for the week, which reached a new record, was last Tuesday when 8,466 cars and trucks were produced.

September Sales and Profits Largest in History of G-M

Sloan Announces Earnings For First Nine Months Ahead of Any Other Entire Year

NEW YORK, Oct. 31.—Alfred P. Sloan, Jr., president, announces that General Motors Corp. earnings for the first nine months of 1925 exceeded those of any previous entire year in the corporation's history. Sales and earnings in September were the largest of any month and third quarter earnings were substantially the same as the second quarter this year, which were the largest of any quarter in the corporation's history.

Third quarter net earnings after depreciation and all charges were $28,161,730. After dividends on preferred and debenture stocks this was equivalent to $5.09 per share on the common. These figures include dividends from subsidiaries but not equities earned by subsidiaries in excess of dividends paid. If the corporation's equity in the undivided profits of all its subsidiaries were included the amount earned on each share of common for the quarter would be $5.55.

For the first nine months this year net earnings, after depreciation and all charges, were $74,243,966, or $13.27 per common share excluding and $14.57 including the equity of all subsidiaries.

As of September 30, current assets were $277,136,233 and liabilities were $79,865,530, leaving an excess of assets amounting to $197,270,703. This compares with $161,105,281, as of December 31, 1924, and with $188,614,557 as of June 30 this year. Cash in banks, government securities, temporary loans and marketable securities as of September 30 were $143,308,120, or $3,933,058 in excess of that reported as of June 30, 1925.

Retail deliveries of cars and trucks by dealers to users in the third quarter were $228,029 compared with $164,243 in the third quarter last year; in the first nine months this year they were $624,389 against $544,551 in the same period of 1924. General Motors Corporation's sales to dealers of cars and trucks in the third quarter this year were $222,158, against $141,132 in the same quarter last year; in the first nine months this year they were $611,367 compared with $494,231 in the first nine months of 1924.

Cleveland Co. Adopts Flat Rate System for Servicing

CLEVELAND, Oct. 31.—These days when an automobile owner finds it necessary to stop in a service station to have his car looked over, or some minor adjustment made, he wants to know just what that particular service operation is going to cost, before it is actually started, says J. T. Nicholson, service manager of the Cleveland Automobile Company.

"No longer does the average motorist want to put up with service costs which are excessive. He wants to be assured of a square deal. It must be remembered that without a flat rate system of charges in effect, it is absolutely impossible for all dealers to maintain a similar cost on service. Each has his own particular idea as to labor costs and what maintenance work is worth. This has proved to be so varying that many of the foremost motor car manufacturers have adopted what is known as a flat rate system of charge. The Cleveland Six has just introduced a system of this character to its distributing organization.

The complication of this flat rate system dates back over several years, inasmuch as it was necessary to record the time and cost of thousands of service operations in the shops of Cleveland Six distributors and dealers. This has enabled the factory to work out an equitable charge basis for each operation in connection with the Cleveland Six.

"Each Cleveland Six distributor or dealer adopting this system of service is supplied with a list of maintenance operations, the cost of each being definitely stated, consequently Cleveland Six costs in this respect will be uniform with each distributor and dealer who has adopted the flat rate system in conjunction with his business."

SQUEEKS and RATTLES

UNTIMELY



Truck Driver—Hey! This aint the place to be practicin' hurdlin', Buddy.
—Humorist.

She—What do you think of the new type of car that can be converted for sleeping?

He—It's the bunk.

—A. H. P.

Ability to stop a car is ten times as important as ability to start it.
—B-C-A News.

Good Morning, Judge

Comes up honkin'
To race your hack
Speeds past the stop sign
No lights in back
Most crowds you off the bridge
Into the river
Gee—that's an easy one
A police flivver.

—A. H. P.

The Difference

I don't go out with Ruth any more.

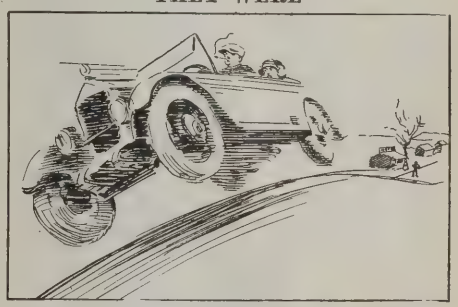
Last summer there was hardly a night went by that we weren't together. We showed up regularly at all social functions—and when there wasn't anything else to do we went riding in the moonlight. Sometimes we were denied this privilege and merely went riding. But always together—Ruth and I. Wherever the gang went we would be found. I would be driving, and Ruth would be at my side.

It was early in September that her Dad decided to sell the car,—but that made no difference. Ruth and I were always together. Last week he sold it. . . .

No, I don't go out with Ruth any more.

—Notre Dame Juggler.

THEY WERE



Driver—This is a swell little township.
Passenger—Yes, wasn't it?
—Sydney Bulletin.

NEW CHEVROLET DEALERS

DALLAS, Tex., Oct. 31.—New dealers recently added to the organization of the Chevrolet Motor Co., in this territory, include:

Waco Chevrolet Co., Waco, Tex., William L. Matthews, Greenville, Tex., Farrier & Parham, Omaha, Tex., Gregg Chevrolet Co., Longview, Tex., Winnsboro Chevrolet Co., Winnsboro, Tex., Webb Motor Co., Fabens, Tex., East Texas Motor Co., Atlanta, Tex., and the Moser Motor Co., Menard, Tex.

Two Important Figures in Rubber Industry Are Dead

AKRON, Oct. 31.—Two important figures in the automobile tire industry died recently.

Dr. L. E. Sisler, 65, director of the Firestone Tire & Rubber Co., and one of the founders of the company died suddenly from an attack of heart disease. Dr. Sisler was credited with "discovering" Harvey S. Firestone. The Swinehart in 1900 had a patent on sidewires to hold solid tires to carriages. Firestone became interested in the patent and a company was formed, Sisler, Firestone, the Swineharts and one or two others contributing the capital.

The death of Elmer S. Firestone, 61, brother of Harvey Firestone, occurred in Los Angeles, where he was branch manager for the company. He was buried in Columbiana O., his former home.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
.....	7-p	Sedan	1,995
		"8-88"	
.....	3-p	Sport Roadster	1,975
.....	6-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	7-p	Sedan	2,550
.....	.....	Wanderer	2,400
BUICK		**"Standard"**	
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
3350	2-p	Roadster	1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Brougham Sedan	1,925
3940	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line	
		(132 in. W. B.)	
4075	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
4155	7-p	Sedan	3,295
4240	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built (132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	.....	Phaeton	3,250
.....	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		**J. I. C.**	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2345	5-p	Touring	$895
2435	5-p	Touring DeLuxe	1,025
2470	3-p	Coupe	975
2600	5-p	Sedan	995
		"43"	
2750	5-p	Touring	1,095
2910	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2950	3-p	Coupe	1,175
3050	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
.....	7-p	Sedan (135 in. W. B.)	.....
DODGE BROTHERS			
2473	2-p	Roadster	$855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		**A-22**	
.....	2-p	Sp. Roadster	$900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$765
2395	5-p	Coach	795
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
		With Starter and Dem. Rims	
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER		**6A**	
.....	5-p	Brougham	$1,495
3070	5-p	Touring	1,395
.....	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	.....	DeLuxe Sedan	1,895
		8A	
.....	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3360	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		**D-1**	
3360	5-p	Sedan	$1,695
HUDSON		**"Super Six"**	
3400	7-p	Phaeton	$1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4 d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE "A"			
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195

SHIP. WT.	PASS.	BODY STYLE.	PRICE
JEWETT		**"23-25"**	
3060	4-p	DeLuxe Road.	$1,500
3000	5-p	DeLuxe Touring	1,320
2990	5-p	Coach 2d.	1,245
3160	5-p	DeL. Coach 2d.	1,400
3325	5-p	DeLuxe Sedan	1,680
JORDAN		**"J"**	
.....	4-p	Playboy Road.	$1,695
.....	5-p	Sedan	1,845
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		**"55"**	
3130	2-p	Speedster	$1,795
.....	2-p	Sp'dster DeLuxe	2,085
.....	4-p	Speedster	1,895
.....	4-p	Sp'dster DeLuxe	2,185
3530	2-p	Enc. Speedster	2,085
.....	4-p	Enc. Speedster	2,185
.....	4-p	Enc. Spdstr. DeL.	2,685
.....	2-p	Enc. Spdstr. DeL.	2,585
3190	4-p	Tourster	1,795
.....	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
.....	7-p	Touring	1,685
.....	7-p	Touring De L.	1,885
3430	4-p	Coupe	2,085
.....	4-p	Coupe De Luxe	2,485
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,485
.....	5-p	Brougham 2 d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Berline Sed. DeL.	3,185
3530	5-p	Victoria	2,185
.....	5-p	Victoria DeLuxe	2,485
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster DeL.	2,585
.....	2-p	Enc. Speedster	2,485
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Enc. Speedster	2,585
.....	4-p	Enc. Sp'd'r DeL.	3,085
.....	4-p	Tourster DeL.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Duxe	2,885
.....	5-p	Brougham Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,095
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,885
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4460	2-p	Roadster	$4,000
4580	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	.....	Sport Touring	4,500
4750	4-p	Coupe	4,600
4885	4-p	Sedan	4,800
4960	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,300
LOCOMOBILE "48"			
5280	4-p	Sportif Tour	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Drive Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,795
3400	5-p	Sedan	2,285
3350	5-p	Brougham	2,285

MOTOR AGE

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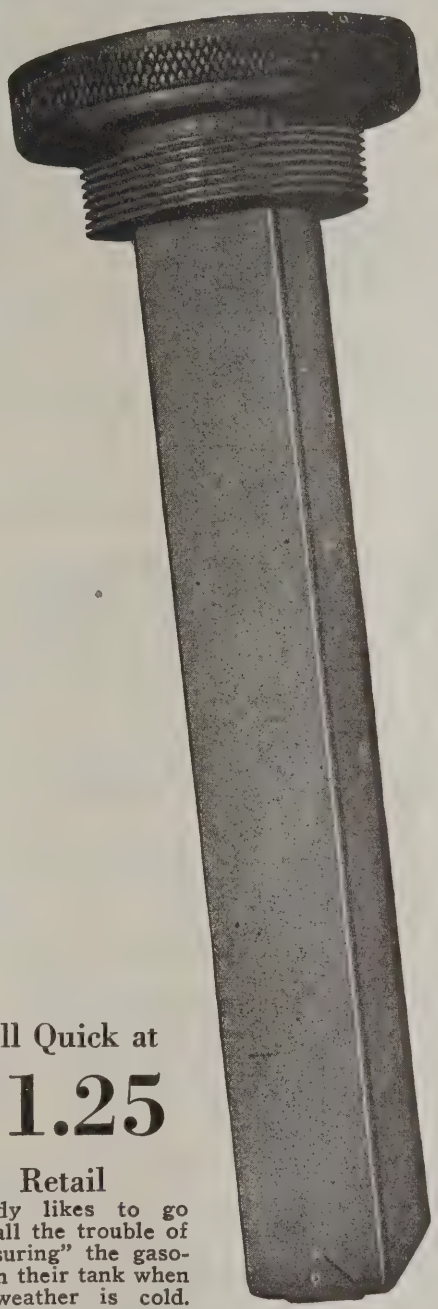
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MOTOR AGE

Vol. XLVIII | Chicago, November 12, 1925 | No. 20

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

EFFORTS by manufacturers to catch up with demand cause industry to set new record for production in October. Page 32.

Dr. Miller McClintock is placed in charge of Erskine Traffic Research Bureau. Page 33.

Standardization of truck chasses and parts will be studied at Washington meeting Nov. 11 and 12. Page 34.

Ajax production speeded up to meet demand while Nash and Seaman continue near peak. Page 34.

Lighting association adopts plan for uniform laws at Chicago convention. Page 35.

New distribution policy of Gill Manufacturing Co. results in financial betterment. Page 35.

Paige-Detroit earnings are $3,043,174 in nine months. Page 32.

New car sales show gains over last year in Buffalo territory. Page 32.

Firestone making plans to develop growing of crude rubber in Mexican districts. Page 39.

Bad weather causes new car sales to decline in Des Moines in October. Page 33.

Details are completed for next year's French Grand Prix with exception of certain date. Four heats and final with drivers starting in three groups is program. Page 43.

Texas dealers believe 1925 sales volume in their territory will set new record for all time. Page 39.

New Essex finance plan makes it possible for dealer to offer down payment lower than Ford. Page 36.

Rush of business in Cleveland continues as strong as during Spring and Summer months, dealers declare. Page 39.

Fifteen more companies register for space at National Motorbus Show in Detroit, Nov. 16-21. Page 36.

October is best month for automobile sales this year in Birmingham, dealers report. Page 42.

Vice-President Graham of Chandler heads taxation committee of U. S. Chamber of Commerce to fight automobile war taxes. Page 36.

Sales of new automobiles hold up well in Salt Lake City territory. Page 43.

A-1 Bonded Garages, Inc., operating first in Texas, plans to extend activities throughout the country. Page 37.

Dealers in southeast expect a new record in sales of tires in 1925. Page 43.

Oakland plant capacity being expended to care for production of new six-cylinder car which General Motors will introduce soon. Page 37.

Dodge Brothers sales total 203,546 passenger cars and trucks in last nine months. Page 37.

Canadian Ford production totals 9,200 in October, which, added to output of factories in United States, sets record for company. Page 38.

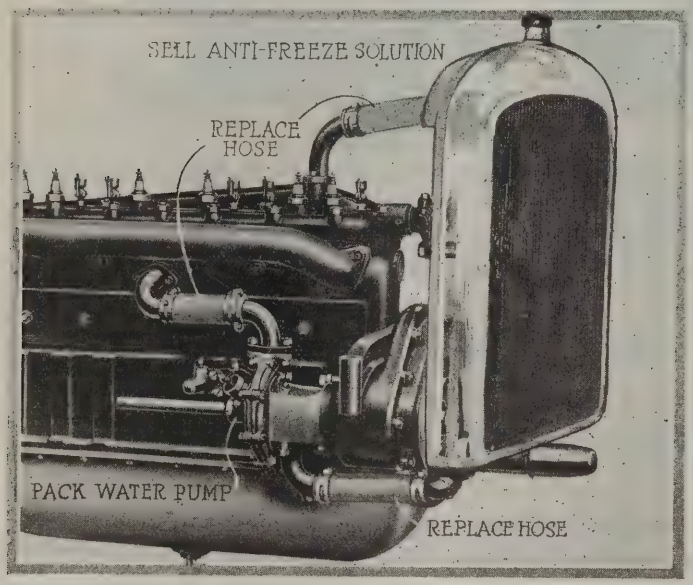
Fords are buying Hudson stock in open market for cash. Page 38.

Fort Worth and Waco, Tex., establish courses for automobile mechanics in public schools. Page 38.

Peerless Motor Car Company's new light six will be announced soon. Description in Nov. 19 issue of Motor Age.

In Next Week's Issue—The A. E. A. Convention and Show

SAVE THEM FROM FREEZING



Here are three evident chances for profit in the replacement of hose, repacking of pump and sale of anti-freeze. Other opportunities for profit are bound to follow a hard drive for anti-freeze business

COMES a time when the strong box that holds the north winds has broken. Across river and plain the breath of winter creeps with crafty subtlety or in violent gusts. Passengers huddle in the waiting room, then scurry to a wind swept platform as the train skids to a shivering stop.

But the streams of gasoline driven vehicles that fill the roads and highways of our broad country and throng the city streets, flow on with scarcely a pause.

Closed cars and adequate heaters defy the north wind's breath. Wise merchants of winter goods have sold supplies that give summer comfort to winter driving and wise automotive merchants will also look well to the winter requirements of the engine, as well as the needs of the driver of the car.

Change of temperature. What wonders by it are wrought. In the firing fuel it produces that expansive force which lifts tons up rugged slopes. Here it is a constructive force, but expansion and contraction are not always so kind.

Cars Must Be Kept Running

To the general rule that heat expands and cold contracts, we find an exception, that water contracts as it cools until within a few degrees of the freezing point. Then, due to some trick of nature, it begins to expand again. Perhaps fortunate for us that it does, or the first layers of ice would form at the bottom of our lakes, and a severe cold spell would freeze them solid.

In the radiators and engines of the millions of cars that constitute our modern system of transportation, the expansion is not so desirable, for with the first cold snap, many car owners are taken unawares. The outward thrust of the expanding ice is met by the contracting force of radiator tubes and cylinder water jackets common to the great majority of motor vehicles. Brass and iron have met a worthy foe and then fall before the onslaught of winter.

And Get a Share of a $50,000,000 Business

Protection of Millions of Motor Vehicles Against Damage From Cold Weather Provides Profitable Merchandising and Service Opportunity for the Dealer

By A. H. PACKER

Cars laid up, out of service with repairs that cost the owner much money, are not cars that bring in the most profits to the automotive dealer or most satisfaction to the owner. Cars that run bring in these profits, for they mean more tires, more supplies, more accessories sold. Much more profit in this than can be wrested from the repair of an occasional wrecked engine for an owner who wonders why someone did not warn him of the danger and sell him the necessary anti-freeze which would have saved all the trouble.

Car owners who are forehanded can find solutions to put in the radiator, but in most cases they must be sought; rarely are they *sold*. And when anti-freeze is sold, it is a product and not a service that is sold. Here, then is an opportunity to not only render a service, but to gain more work for the shop and profits for the business.

Inspection Job First Step

Rotten hose connections and leaking pump packing may not mean so much when the leakage can be replaced at any pump, faucet or filling station, but when dollars are slowly leaking away it means a money loss, in addition to the annoyance of repeatedly filling the cooling system. The first step in adequate anti-freeze service is, then, an inspection job on the cooling system, followed by more or less work in nearly every case.

Hose connections rot away; some sooner than others, but vibration and hot water take their toll of the best. Hose connections, moreover, are inexpensive, and few car operators would hesitate to authorize the replacement of these flexible connections in the cooling system, if it insures against trouble some time later when the mercury is hovering near the zero mark.

Not only do the hose connections usually need attention, and either replacement or tightening of the clamps, but the pump packing should be inspected to insure against leakage at this point. Here is another chance to get profitable business with an adequate anti-freeze campaign. Before starting a drive for this sort of business, however, the merits and qualities of the various anti-freeze materials should be thoroughly considered.

Alcohol in the cooling system of motor cars has been used for many years but its failings have been acknowledged by all. First in importance is its low boiling point and the consequent vaporization which takes place, the result being that a solution which affords protection today may be much too weak for safety a week from today. Hydrometer tests at frequent intervals make it possible to guard against running the car with insuffi-

cient alcohol, but car owners are not usually careful enough. They run the car by guess, hoping there is enough alcohol in the radiator, but the hopes are not always justified.

The use of alcohol, which boils at approximately 173 degrees Fahrenheit, means that the operating temperature of the engine is such that the greatest efficiency is not attained. Running cool, the engine is afflicted by crankcase dilution, which results in poor lubrication and unnecessary wear, while running hot, the alcohol is rapidly driven off.

Recently another charge has been brought against alcohol, that in cases where it boils over on the hood, it may prove detrimental to the finish of the car, particularly where pyroxylin finishes have been used. This opinion, however, does not seem to be unanimous, and makers of the better grades of pyroxylin finishes claim that no harm results unless inferior finishes have been used on a car, in which case there might be some slight action, due to the use of poor solvents in the lacquer:

When alcohol as an anti-freeze agent is sold and used the above factors must be considered carefully in order to get the best service.

When alcohol is sold and recommended, not only should the engine be checked to see that there are no leaks in the cooling system, but water should be poured in until it runs out the overflow pipe, to make sure that the pipe is clear. Then the radiator cap should be checked to see that it fits tightly, and the owner should be cautioned against removing the cap in case the radiator solution boils.

When the water in the radiator boils, the first temptation is to take the cap off. This causes a steam geyser to spout all over the car owner and the car. A little patience would obviate the danger to the individual and to the car. If solution does run out on the car finish, it should be promptly wiped off, to reduce to a minimum the chance of damage to the finish.

For years glycerine has also been known as a good anti-freeze constituent and recent developments have put on the market a glycerine product that is free from the faults of the commercial product. Commercial glycerine has been harmful to hose connections and prone to cause leakage all too easily. Due to its heavy body and slow flowing characteristics it has usually been used in connection with alcohol, its effect being to increase somewhat

Capacity of various cooling systems in quarts. Multiply by per cent obtained from curves of Fig. 1 to get quarts of anti-freeze needed.

Make & Model	Cooling System Capacity (Quarts)
American D-66	24
Anderson 41	19
Anderson 50	18
Apperson 6	32
Apperson V8	39
Auburn 43	20
Auburn 8-88	26
Buick Std.	13
Buick Master	18
Cadillac V-63	24
Case Y	18
Case X	14
Case JIC	18
Chandler SS	19
Chevrolet K	10
Chrysler 6	16
Cleveland 43	18
Cole Master	23
Cunningham V-6	40
Davis 90	16
Davis 91	16
Dodge Bros. 25	12
Dorris 6-80	20
Duesenberg Str. 8	21
Dupont D	16
Durant 4	15
Elcar 4-40	18
Elcar 6-50	17
Elcar 8-80	22
Essex 6	16
Flint 40	16
Flint 55	19
Ford Model T	14
Gardner 4	19
Gardner 8	24
Gray Model 0	15
Haynes 60	22
H. C. S. 6	24
Hudson 6	18
Hupmobile R-14	24
Hupmobile E	34
Jewett 23-25	16
Jordan A	18
Jordan K and L	20
Kissel 55	27
Kissel 75	30
Lexington Concord	18
Lexington MM	18
Lincoln S	30
Locomobile 48	32
Marmon 74	22
Maxwell 25	14
McFarlan SV	32
McFarlan TV	32
Mercer 6	28
Moon Newport	20
Moon Metro	22
Moon London	22
Moon Series A	22
Nash Advance	22
Nash Special	16
Oakland 6-54	12
Oldsmobile 30	14
Overland 91-92	14
Overland 93	12
Packard 6	19
Packard 8	24
Paige 21-24	23
Peerless 70	19
Peerless Equip. 8	28
Pierce Arrow 33	30
Pierce Arrow 80	21
Reo T-6	13
Revere M	28
Revere 25	28
Rickenbacker D	16
Rickenbacker 8	17
Rollin G	12
Rolls Royce 40-50	40
Star 4	8
Stearns Knight C	18
Stearns Knight B	22
Stearns Knight S	18
Stevens Duryea G	22
Studebaker Std. 6	17
Studebaker Spe.	18
Studebaker Big 6	19
Stutz 693-4-5	30
Velie 60	20
Westcott 44	19
Westcott 60	14
Wills Ste. Claire A & B 68	30
Wills Ste. Claire W-6	34
Willys Knight 65	22
Willys Knight 66	21

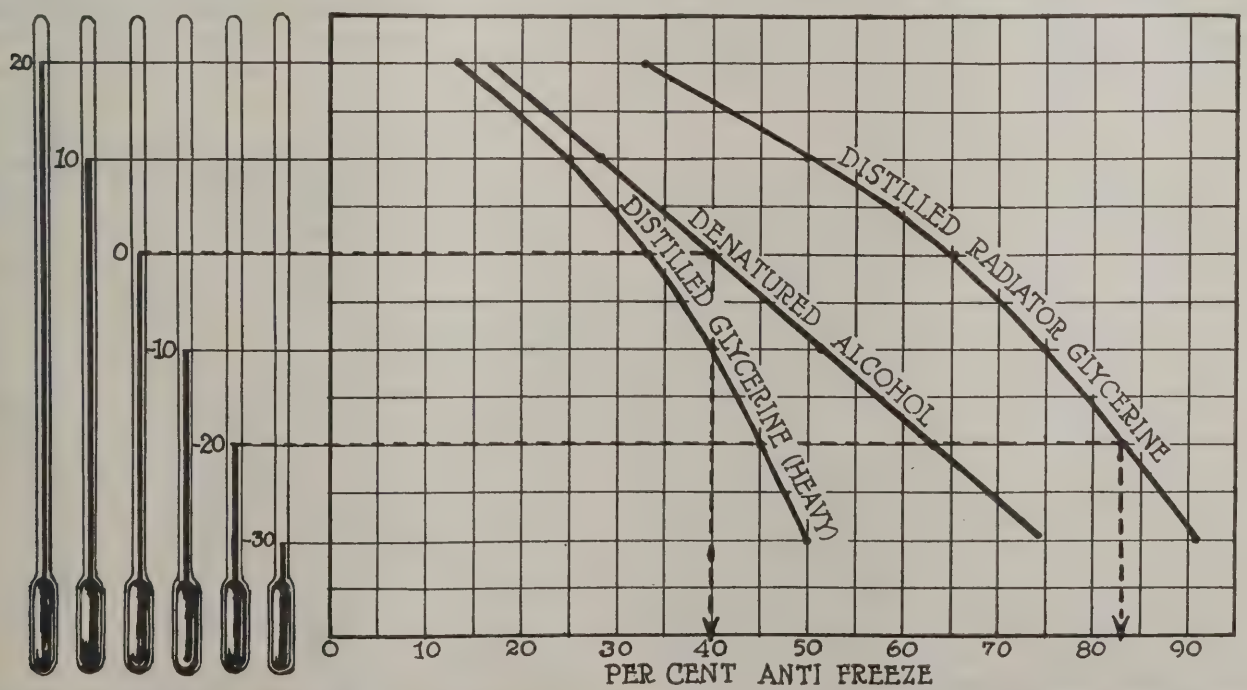


Fig. 1. Curves showing the percentage of alcohol and glycerine to use to provide protection against freezing at various temperatures

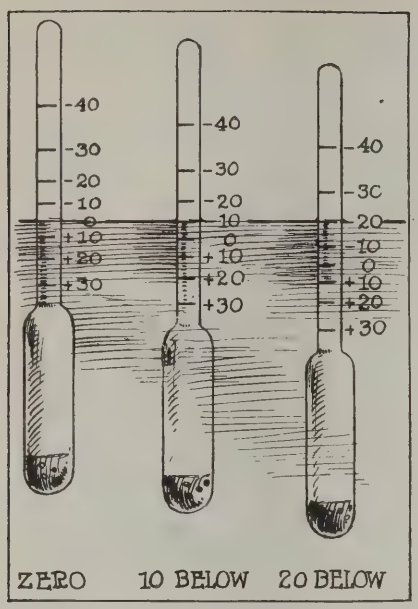


Fig. 2. When alcohol is used a hydrometer test should be frequently made to see that evaporation has not seriously affected the temperature at which the solution will freeze

the boiling point of the mixture and to give a solution not so readily vitiated by evaporation. At low temperatures glycerine, while not freezing solid, becomes thicker and thicker, which in thermo-syphon cooling systems is undesirable as it prevents proper circulation of the liquid through the radiator and cylinder jackets.

The disadvantages of glycerine as an anti-freeze have to a great extent been overcome in a new product known as distilled radiator glycerine put out by a number of the large soap makers. Glycerine is found in vegetable and animal fats, such as cocoanut, olive, palm, cottonseed, corn, sunflower seed and sesame oils, butter, lard and tallow, and is removed by the process of converting the fatty matter into soap, which releases the glycerine as a by-product. There is, however, nothing fatty or greasy about glycerine, it being a sirupy substance, similar in consistency to water, except that it is one and one quarter times heavier than water and mixes readily with water.

The distilled glycerine is claimed to be superior to commercial glycerine obtained in times past, in that it is practically free from harmful impurities. It is also said to have no destructive action on hose connections, one concern even stating that the new type of glycerine has less action on the hose than water at the temperatures normally found in the cooling system.

Superiority Is Claimed

The distilled glycerine, however, is also quite thick like the old commercial glycerine, and if used undiluted or poured directly into the radiator would have a tendency to retard the circulation, especially in thermo-syphon systems. If thinned out first with approximately 40 per cent water, it can be used satisfactorily. It is for this reason that soap concerns producing glycerine for radiator use are making a practice of selling it diluted under various trade names, such as "Low Temp," "Freeze-pruf," "Ivo," "NoVap" and "Zero-foe," about 40 per cent water being used in most cases.

In this form it is know as distilled *radiator* glycerine as distinguished from the heavy form known as distilled glycerine, and in this prepared form it may be used in the cooling system without any additional water. Under these circumstances it provides protection to thirty-five degrees below zero or better. Even if it congeals slightly as it might at extreme temperatures, there would be no bursting tendency, for the ice thus formed is mushy and never becomes hard enough to strain the cylinder jackets or radiator tubes or cells.

Running the engine a few minutes with the radiator covered would also generate enough heat to thin out the solution so that normal operation would be obtained. For less severe weather the distilled radiator glycerine can be used with additional water, the percentages of glycerine to use being shown on one of the curves of Fig. 1. Care should be used to pick out the correct curve. One curve is for distilled glycerine, one is for alcohol and the other for the distilled radiator glycerine, prepared for immediate use.

Glycerine has the advantages that it does not evaporate and that it raises, instead of lowering, the boiling point. This means that the first cost is the last cost, and while it may cost the car owner several dollars to properly protect his engine against cold weather, he has the assurance that no futher attention will be needed until spring, unless it is to occasionally add water to make up for what evaporates. The glycerine however will not need to be replaced unless leakage occurs.

Leakage, when glycerine is used, is often found to occur, where the system seemed tight before. This is due to the fact that glycerine has a cleansing action and loosens scale and rust which may have been stopping up places that would otherwise be leaking. It is not harmful, however, to good clean metal. This characteristic of glycerine means that hose connections may work loose due to removal of scale, but tightening again will correct this condition. If new hose connections are applied before anti-freeze solution is poured in, they should be put on with cup grease, not with shellac. Then if for any reason the connections must be taken off, they can be replaced without leaking, whereas shellaced hose connections will in many cases leak if applied the second time.

A 50 per cent solution of glycerine has a boiling point of 225 degrees, the boiling point of water being 212 degrees.

Besides alcohol and glycerine, there are also on the market preparations sold under various trade names. In adopting any of these it would be well to investigate the product and the concern sponsoring it, for at times preparations have been sold which have eaten the solder from the radiator and caused corrosion which has rapidly destroyed the core. Other preparations have been sold, which on evaporating deposited a film of conduct-

(Continued on Page 24)

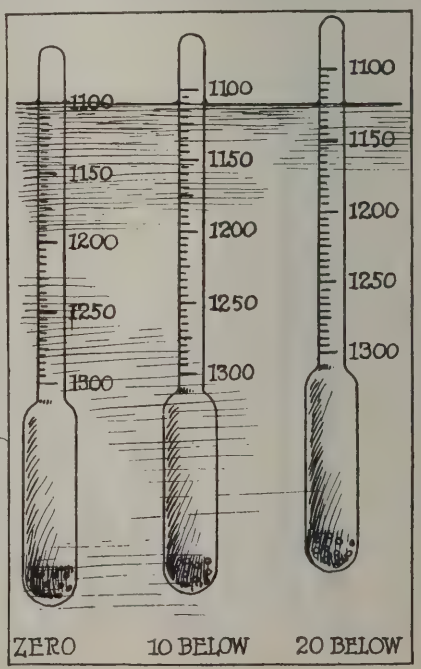
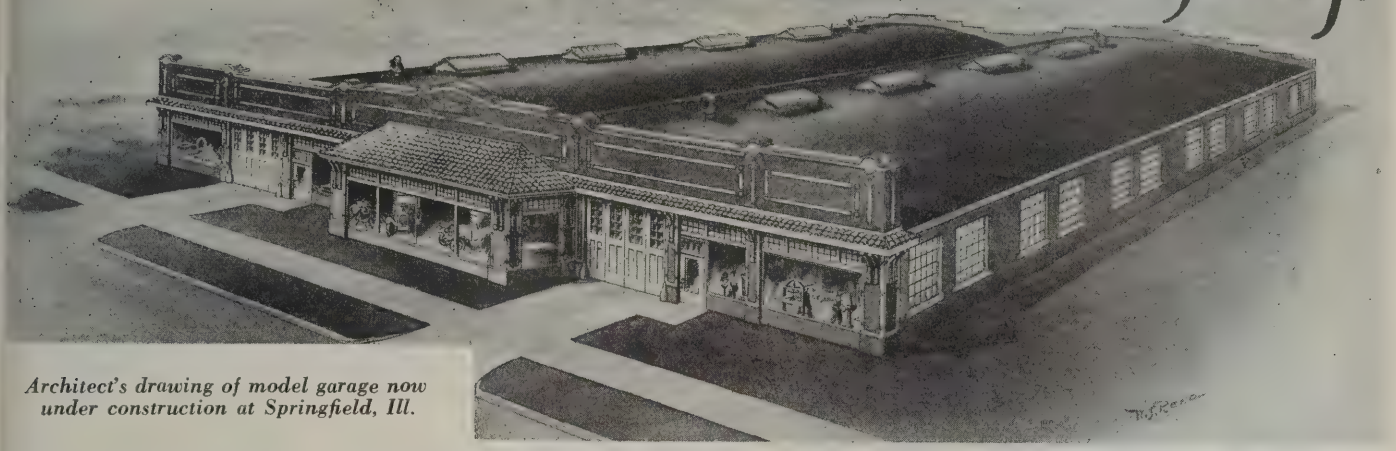


Fig. 3. Although glycerine does not evaporate, a rough check on the solution may be made with a battery hydrometer

SHOW-WINDOW SERVICE in This Model Garage



Architect's drawing of model garage now under construction at Springfield, Ill.

New Automotive Equipment Will Be Developed in Laboratory Behind Plate Glass

RECONDITIONING of automobiles with modern machine tools behind plate glass where all who pass may see and understand will be done in the model garage now under construction at Springfield, Ill., by the Weaver Manufacturing Co., makers of shop equipment.

The primary purpose of this model garage which will have a frontage of 125 feet, and an equal depth, across the street from the Weaver factory, is to provide a complete modern laboratory where the Weaver company can develop, under actual service conditions, new equipment in anticipation of future needs of the industry, as well as improve equipment now on the market.

This Weaver garage is to be a real business institution, rendering service of all kinds to the public, with every department expected to pay its own way. It is only in this way that the practical testing of the utility and efficiency of various machines and tools can be carried out.

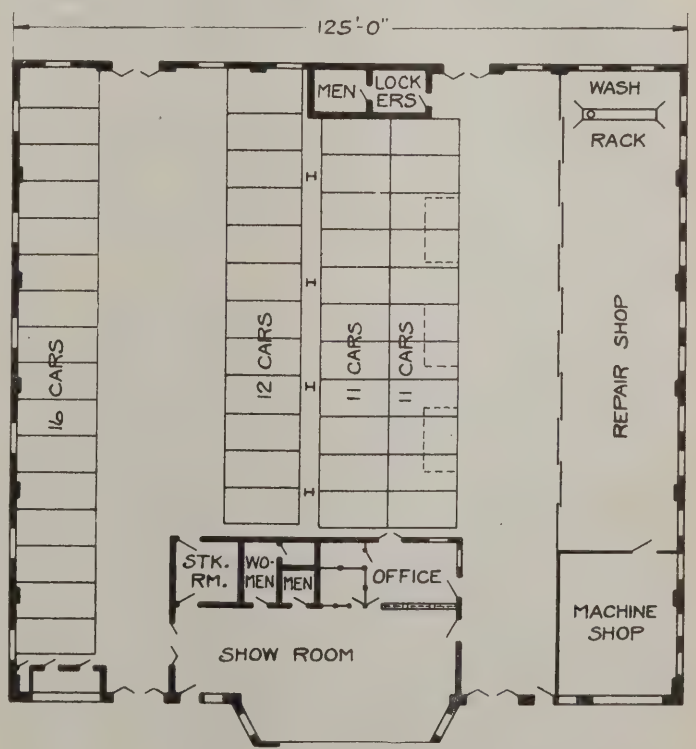
The building as shown by the architect's drawing is to be of attractive appearance. It will set back from the sidewalk and the intervening space will be filled with neat grass plots. The main show room where reconditioned cars may be displayed will have a large bay window topped with an attractive tile roof. The machine shop will occupy one corner of the building with a large display window at the front, and in the other front corner will be an accessory room, also with a large display window.

The design of the building, its floor arrangement and the complete equipment have been the subject of much study and research by Weaver engineers for years and it is believed that the finished enterprise will present to the automotive industry the best available ideas in the layout and equipment of a service garage or reconditioning shop.

Besides a full line of Weaver garage and shop equipment, every department will have a full assortment of hand tools and the lighter shop equipment, so that 100 per cent automotive service can be rendered throughout the establishment. A number of manufacturers of garage tools and equipment not competing with the Weaver line already have requested the privilege of placing their products in the garage.

Ideal lighting will be provided throughout the building. There will be ample window space on all four sides and numerous skylights. The walls of the one-story building will be of brick and the roof of steel.

It is expected that this model garage will be completed and in operation about Jan. 1 and the Weaver company will be glad to show visiting automotive men through it.



Floor plan of model garage of Weaver Manufacturing Co.

HOW TO ADJUST BRAKES



Fig. 4—How "bleeding" of the line is accomplished on a hydraulically operated brake. This bleeding is done to expel any air that might accumulate in the system

Steps to Follow in the Maintenance of Hydraulically Operated Four-Wheel Brakes. No Need for Equalization in This Type as This Is Automatically Accomplished. Proper Band Clearance Very Important With This Kind

BY B. M. IKERT

(This is the fourth of a series of articles dealing with conventional rear wheel, mechanical four wheel and hydraulic four wheel brakes)

WHEN it comes to adjusting four wheel hydraulically operated brakes it is well for the service man to know something about the basic principles or rather the laws of fluids governing the operation of such brakes.

Briefly hydraulically operated brakes are based on what is known as Pascal's law which is:

Pressure applied to any area of an enclosed fluid is transmitted in all directions and without diminution to every part of the fluid and of the interior of the containing vessel.

To better understand this law refer to Fig. 1. Here is shown a hollow glass sphere provided with several openings distributed over its surface. If the apparatus is filled with water and the piston A forced into the cylinder B the water will escape in a series of jets of apparently equal velocities, though only one of these jets is in direct line with the piston.

Now refer to Fig. 2. Here we have in effect the application of the above principle in a hydraulically operated braking system. Here the cylinder in Fig. 1 together with the piston is replaced by a foot pedal operating a piston in a cylinder which displaces the liquid in the line C into the cylinder D. In the latter cylinder are two pistons operating levers which as the pistons move outward pull the brake band against the drum. When the foot pressure is taken off of the pedal the piston in the cylinder comes back to its original position as do also the pistons in cylinder D by virtue of the spring tension returning the brake band in the off position.

Actually there is no pressure in the line when the brakes are in the release position. In fact the system operates simply by the displacement of the liquid, there being no air in the line whatsoever. From the fact that the pressure on the foot pedal displaces the liquid into the cylinders on the brakes with equal and undiminished force it will become readily apparent that the pressure is exerted on the bands with equal force. A thorough understanding of the diagram in Fig. 1 will make this clear and that is also why hydraulically operated brakes require no adjustment for equalization. Adjustment is necessary only to take care of the wear in the lining on the bands. If the brakes appear to be unequally applied it should not be corrected by adjustment of the bands as the trouble will almost always be found in the lining.

To adjust the bands of the Lockheed hydraulic brakes the procedure is very much the same as in any external contracting band brake, but it is very necessary that the adjustment be carefully made owing to the danger of locking the wheel if too little clearance is used.

We have found cases where some mechanics have trouble after relining the brakes of a hydraulic system with the brakes locking. In checking up such cases it almost invariably turns out that the mechanic did not use a

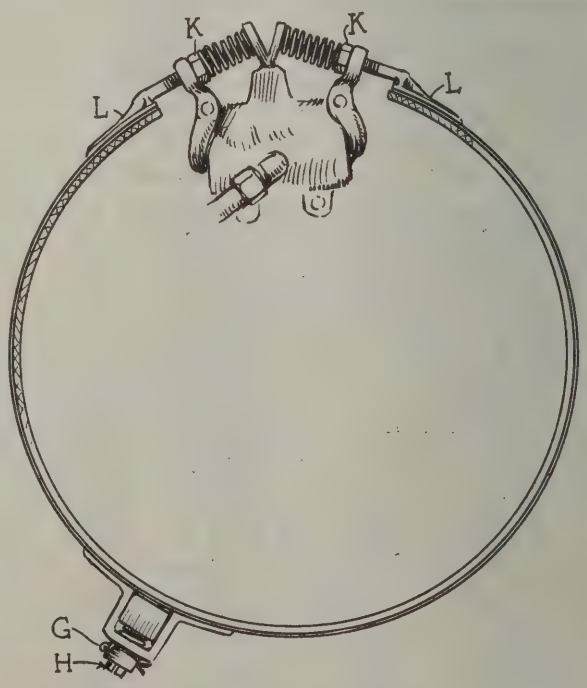


Fig. 3—This shows where the adjustments are made on the bands of a hydraulically operated system using an external contracting band against the drum.

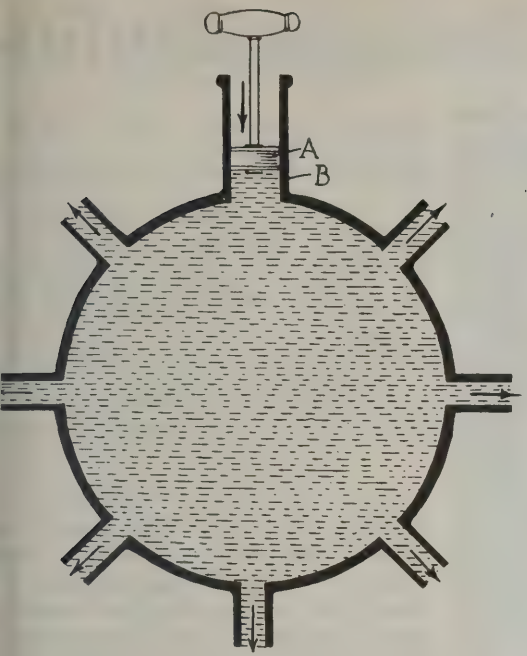


Fig. 1—Diagram to show the basic principle upon which hydraulically operated brakes work. When pressure is applied to the piston in the cylinder the liquid is forced equally and with undimished force from all the openings even though one of these openings is in direct line with the cylinder A

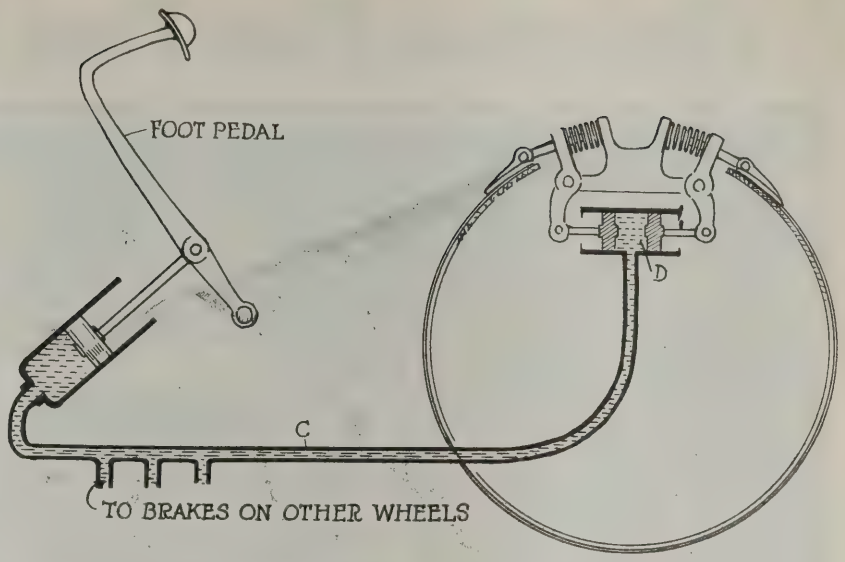


Fig. 2—Schematic diagram to show the operation of a hydraulically operated brake. A clear understanding of what takes place in Fig. 1 will help to grasp this diagram.

feeler gage between the lining and drum with the result that the clearance is too small. Some car manufacturers using the hydraulically operated brakes state that the clearance should be .015 but other authorities claim this should be .025 at all points. One prominent brake lining manufacturer states that if less clearance is used than .025 the expansion of the brake drum at about 500 deg. F. will lock the wheel.

There is also something to be said about the expansion of the fluid on very hot days. When pressure is applied to the fluid its expansion naturally causes the clearance between the lining and drum to decrease slightly and if it is found that the travel of the pedal is noticeably smaller on a hot day pressure on the fluid should be reduced until the pedal travels 2½ in. before the brakes are set.

Anchor Bracket Must Be Free

When inspection of the lining shows that it is extensively worn and adjustment is necessary this can be done as follows: The wheel should be jacked up until it is entirely free after which the cotter pin G, Fig. 3 is removed from the anchor bracket screw H. The latter is then turned until the clearance between the lining and drum will admit the feeler gage showing a clearance of .025. Then replace the cotter pin.

It is very important that the anchor bracket be free to move up and down and if this condition does not exist the band will release slowly causing the brakes to drag and a resultant heating of the drum.

The next step is to take up or back off on the nut K, on the brake band ends L, Fig. 3 until the lining clears the drum to admit the .025 feeler gage. If it is found that this gage does not readily slip between the lining and drum at all points it is an indication that the brake band is not round. To reshape the band put a piece of thin metal between the drum and the band at the point of least clearance and with a ball peen hammer reshape the band to fit the drum, tapping the band at each side of the strip of metal. When the clearance is the same all the way around the drum the adjustment is complete.

In order to remove the backlash in the brake pedal release the bands by snapping the brake band ends L against the levers with a screwdriver and with the pressure released from the pedal loosen the handle of the pump on the supply tank located on the engine side of the dash by turning the handle to the left until it is free to move up and down. A few strokes of the handle will then force more liquid into the system, after which the handle should be pushed all the way down and turned to the right until it is firmly locked. This is important because there must be assurance that no liquid will return to the tank under the pedal pressure.

When to Bleed the Lines

Should it be found that this does not take up the backlash in the pedal it is a pretty safe indication that there is air somewhere in the line and it becomes necessary to "bleed" the lines of the system to remove the air.

To do this unscrew the handle of the supply pump on the dash and remove it entirely by taking off the cap of the tank. The latter is then filled with liquid which should be allowed to stand for several minutes in order to give the air a chance to rise to the surface. Then remove the dust screw from the end of the bleeder connection S, Fig 4 and screw the bleeder tube in place and slip the wrench over it until the screw is engaged. The end of the hose which is slipped over the end of the bleeder connection should be allowed to hang in a clean container and with the wrench the connection S should be given about a 3/4 in. turn.

Let the liquid drain out until all bubbles cease to appear or when the stream is a solid fluid mass. Then close the bleeder connection S, open it slightly again for a moment to allow a very small amount of the fluid to drain after which it can be locked. The drained liquid should then be poured back into the tank allowing several minutes for it to stand after which the bleeding operation is repeated for each wheel. Normally about half a pint will expel most of the air.

After all of the wheels have been taken care of force the foot pedal to the floor board slowly with the hand. This allows all of the liquid from the master cylinder to travel into the supply tank carrying with it any air that might have lodged in the master cylinder operated by the brake pedal. After filling the supply tank re-

(Continued on page 34)

A Christmas Plan That Brought Profits



Mr. Howard's Christmas window last year. With this invitation he found it easy to bring men, women and children into his store to select Christmas gifts

Maine Dealer Tells How He Cashed in on Holiday Trade by Following Suggestions He Got From the A. E. A. and Trade Papers

By NORMAN W. HOWARD
Proprietor Acme Service & Supply Shop
Bath, Maine

CHRISTMAS at our store three years ago meant nothing more than a holiday that broke up the regular routine until the trade papers suggested selling automobiles and supplies as ideal Christmas gifts.

At this time of the year, the automotive supply business is quite slack, giving plenty of time to clean up, decorate the store, dress windows and showcases, think up ads and talk "Buying Something for the Car for Christmas."

As we are located in Maine, it did not take long to find a Christmas tree suitable for the show window and plenty of bright trimmings at Woolworth's. Next an imitation chimney was built from rough boards and covered with red brick tissue furnished by our kind jobber. When completed and dressed, it was the most attractive window display in town. Besides creating public interest in the store and bringing in many Christmas buyers, the local paper gave a good write up. For an automotive supply store to be advertising Christmas presents seemed out of the ordinary.

Inside the store we moved the spring rack, tin rack, etc., to make room for a long L-shaped table, which was decorated and sectioned into price departments starting with 5 cents, 10 cents, 25 cents, 50 cents, etc., and everything that was not where the Christmas eye could readily see, was brought out and placed in its proper price section. We found hundreds of articles throughout the shelves, drawers and cabinets that filled to capacity the table, with a dandy variety for shoppers to pick from. They could see the different things we offered for $1, $2, etc., for a supply store's prices seem high sometimes. Here, for instance, the customer buying a mirror was allowed a chance to compare it in the different sections 75 cents, $1, $1.25, $2, $3.50, etc.

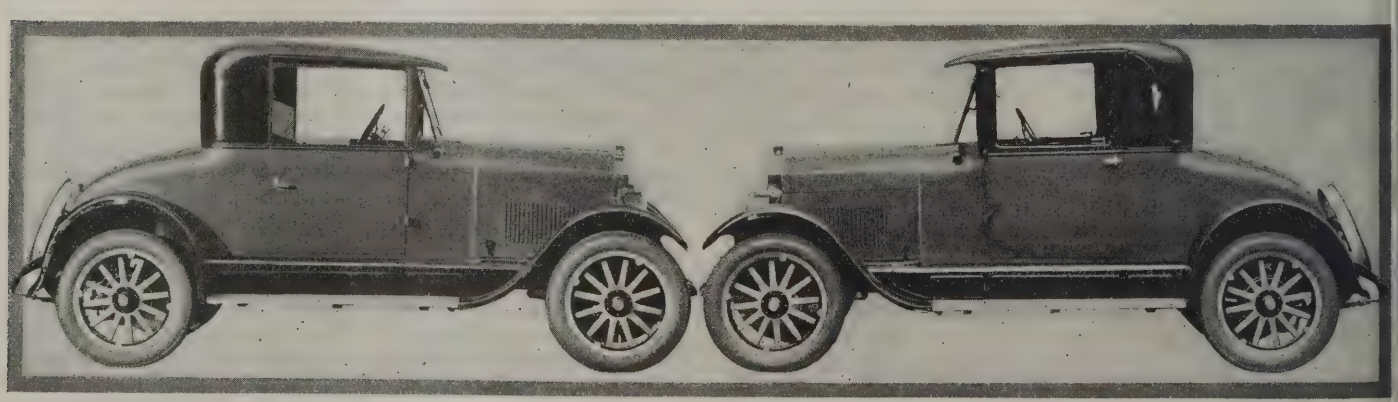
We placed slow-moving stock in a price section below its ordinary selling price. This actually sold a large percentage of our order stock.

We started advertising just before the other stores about Christmas presents, stating that all packages would be wrapped in holly paper ready for the tree, also that we were to give away paper airplanes, telephone directories, blotters, road maps and gasoline sticks, being open every evening the week before Christmas to accommodate shoppers to a "House of a Thousand Gifts that fit your car and pocket book."

School boys and girls had no trouble finding something for their Dad's car. Wives and sweethearts had no difficulty, while the men found variety with extra value, good service and an unhurried courteous treatment that is sometimes lacking during the busy season.

We were very gratified with the results of our efforts and were obliged to re-order many times on items that ordinarily move slowly. Besides the profit and turnover which were extra, we are now permanently on the Christmas buyer's list every year.

(The foregoing article was submitted in this year's Automotive Equipment Association contest for the best letters telling how dealers profited from the Christmas merchandising campaign. It is published here through the courtesy of the A. E. A.)



Two of the body models included in the Star Six line. At the left is the coupster and the other is the coupe. The former is lacquered in Oasis green with a gold band around the body The other car is finished in the same manner its prinicpal difference is the addition of Landau irons. The price of the coupster is $745 F.O.B. Lansing and the coupe $820.

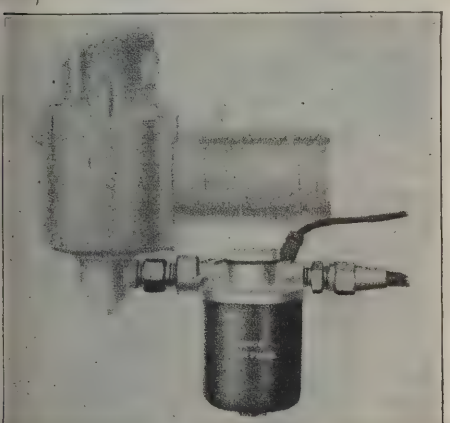
Some New Products at A. E. A. Show

On this and the following pages MOTOR AGE presents more descriptions and illustrations of new products displayed at the Automotive Equipment Association's seventh annual show. The show, held concurrently with the association's annual convention, opened Monday, Nov. 9th, to hold forth through the week. Descriptions and illustrations of many new products displayed at the show were presented in last week's edition of this publication. Still other descriptons and illustrations will be printed in the issue of Nov. 19th.

IMCO AUTOPULSE

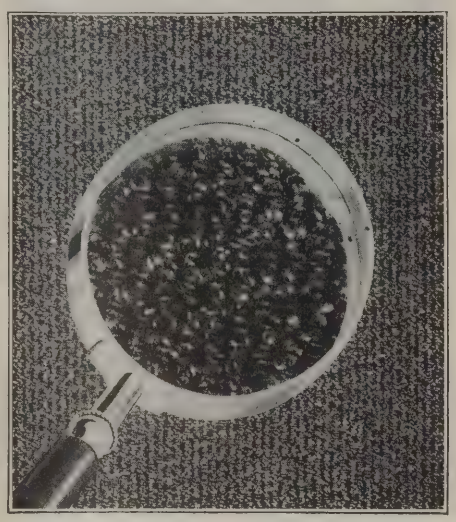
Cut Shown Below

IMCO Autopulse, described as "the safe automatic fuel feed system." Made by Freland & Matthews Mfg. Co., 1500 Beard Avenue, Detroit, Mich. This is a device designed both for automobile and marine motors. Its chief advantages as pointed out by the manufacturers are as follows: Maintains even pressure of gasoline at carbureter under all conditions, assuring maximum motor efficiency. Attains full gasoline pressure at carbureter before engine is cranked. Self-priming. No storage of gasoline close to motor, thereby eliminating fire hazard. Flow of gasoline controlled by ignition switch, enabling operator to cut off immediately in emergency. Installation does not require any change in design of engine. Can be installed on any job with carbureter which has a float and which has battery current or its equivalent.



VENTILATED SUPEROYL RING

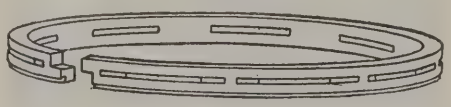
McQUAY-NORRIS ventilated Superoyl ring. McQuay-Norris Mfg. Co., St. Louis, Missouri. Combines the oil scraping principle of the Superoyl ring in addition to ventilating slots through the face of the ring to further reduce oil pumping. The rings are made of electric iron to close limits. Each ring is sealed in a parchment container and the rings are packed 12 in a box with a distinctive label. As heretofore the new ring is made with a step joint. Price 50 cents each in all sizes from 2 3/8 in. to 4 15/16 in. diameter.



TACONY PILE FABRIC

Cut Shown Above

TACONY Pile Fabric. A new upholstery material for automobiles put on the market by the L. H. Gilmer Co., Tacony, Philadelphia, Pa. Based upon a new kind of pile yarn made from fiber-dyed cotton this fabric's surface is covered with nibs of yarn that project and take the wear and at the same time give depth and beauty to the texture of the material. The nibs are too small to be readily discerned with the eye but show clearly under a magnifying glass. Among advantages claimed for this material is that it is extremely durable and when partly worn does not become threadbare. It is said that its construction is of such a kind that it makes a comfortable upholstering in all seasons. Easily cleaned; does not hold dirt; colors are fast.

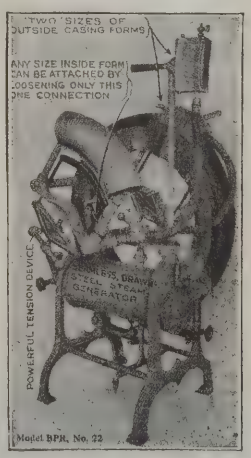


Ventilated Superoyl Ring

SHALER BALLOON VULCANIZER

Cut Shown Below

SHALER Balloon Tire Vulcanizer. C. A. Shaler Company, Waupun, Wis. The Wrapped Tread Method of repairing casings by heating from the inside and outside at the same time which has long been a feature of Shaler vulcanizers is used also in the Shaler Balloon Tire Vulcanizer. Shaler vulcanizers for balloons are only slightly different from the company's earlier models. Change in the shape of the mandrels was necessary because the cross-section of the balloon tire is circular instead of pear shaped. This new shape and the large sizes that are required brought on the problem of designing a tape tension device with great power and capable of exerting heavy pressure on the side walls. In the new design the tape, where it crosses the tension bar, can be placed practically horizontal so the pull of the tension bar applies pressure on the side walls as well as on other parts of the tire. No part of the tire escapes full pressure. Model BPR No. 22 including



boiler with city gas burner, two outside heaters, two inside mandrels and other items lists at $135. Model PR No. 22, same as above with boiler omitted, lists at $100.

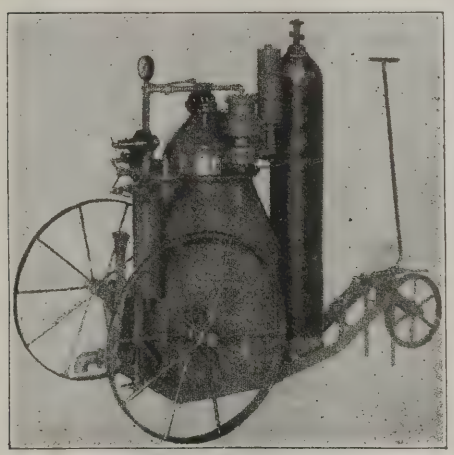
Some New Products at A. E. A. Show

(Continued)

PORTABLE ACETYLENE GENERATOR

Cut Shown Below

REGO portable acetylene generator. Bastian Blessing Company, Chicago, Ill. These are made in 30 lb. and 60 lb. carbide capacity, delivering approximately 140 and 280 cu. ft. of acetylene per charge, at the normal rate of 30 and 60 cu. ft. per hour. The carbide hopper is a single casting on which is mounted the entire feed and feed locking mechanism. The water and gas generating chamber is of welded steel, galvanized. Each generator is equipped with two blow off valves having a capacity of 1200 cu. ft. per hour at 15 lb. pressure. The trucks are of all welded steel construction with very large rear wheels. Prices on the 30 lb. carbide capacity without interlocking levers and truck are $210. With interlocking levers and without truck $250. The 60 lb. capacity without interlocking levers and truck is $255 and with interlocking levers and without truck $275. The price of the trucks is $60 for the smaller size and $6 for the larger.

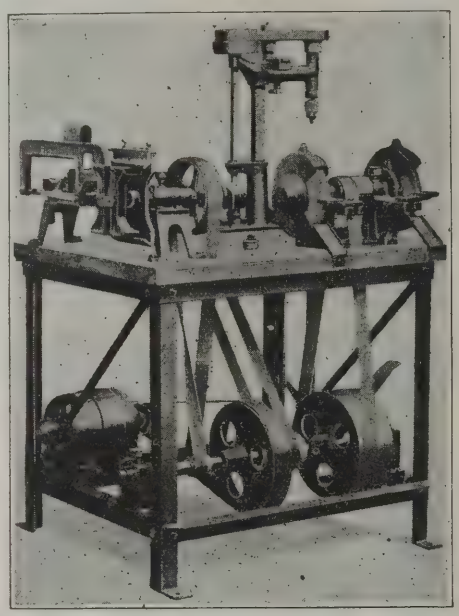


IMCO ALL-STEEL TRUNKS

IMCO All-Steel Automobile Trunks. Made by Ireland & Matthews Mfg. Co., 1500 Beard Ave., Detroit, Mich. Strongly made trunk designed for durability and attractiveness. Oval top contributes to appearance and ruggedness. Piano hinges securely riveted, easily operated. Has rubber strip across ends and along front to make trunk dust and waterproof. Two nickel finished toggle locks. Enamel finished body. Rumble eliminated by rear end construction. List from $25 to $60.



Imco All-Steel Trunk



Manley Machine Shop Unit

DOUBLE HINDVIEW MIRROR

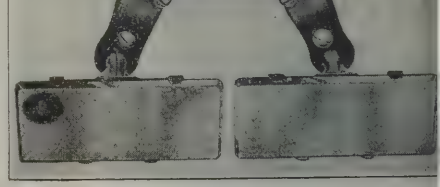
KALES Double Hindview Mirror. Kales Stamping Co., Detroit, Mich. May be installed on either open or closed cars. One of the two mirrors is for driver. The other is for the front seat passenger. Adjustability makes it possible for driver to utilize both glasses if he wants special check on situation behind him. There also is an adjustment feature permitting 4-inch raising or lowering of glass after installation. Price $3.

SUPER-SERVICE TEST BENCH

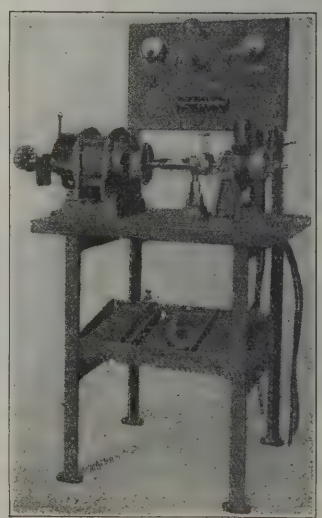
WEIDENHOFF Super-Service test bench. Joseph Weidenhoff, 4352, W. Roosevelt Road, Chicago. Made with a self aligning flexible drive, in which the chuck remains square with the driving motor shaft in all positions. This eliminates all torsional strains on bearings of the driving motor as well as the unit being tested. There is no noise or vibration at 3600 R.P.M. when the chuck is clamped on the bent shaft or when the unit is 1¼ in. off center. All generators are held without removing the coil, cutout or distributer. Starting motors with projecting shafts of any length or diameter can be tested. An adjustable V bracket supports magnetos and square type generators. Complete distributer assemblies are held in a vise with a special fixture and are driven with standard socket wrenches which fit the nut on the end of the shaft. An extra torque arm is furnished for testing starting motors through Bendix enclosed and open types.

MANLEY MACHINE SHOP UNIT

THE Manley Machine Shop Unit. Made by the Manley Mfg. Co., York, Pa. This unit is a combination of three highly essential garage tools, hack saw, grinder and drill press. The three tools are mounted on a wood table, having thoroughly braced steel legs. The motor is mounted on the lower tie members of the bench. The shafting is supported by two self-centering bearings on the angle cross members. The pulleys are pinned to this shaft. Driving belts pass through slots in the table. Each machine is individually controlled. Motor is controlled by snap switch on top of table. The advantages pointed out for the combination unit are that it eliminates necessity for installation of line shafting, counter shafting, motor brackets, etc., which would be required by the installation of individual machines, as the unit comes completely assembled. No. 43 with 110V AC motor ¾ h.p. lists at $28 and weighs 550 lbs. No. 436 with 11 DC motor, ¾ h.p. lists at $295. Same weight.



Kales Double Hindview Mirror



Super Service Test Bench

Some New Products at A. E. A. Show

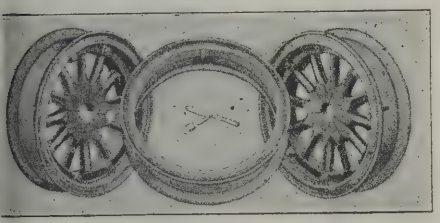
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MANLEY TIRE INSPECTOR

MANLEY Pneumatic Tire Inspector. Manley Mfg. Co., York, Pa. Operated by air and works automatically. By opening the right hand valve the plunger rises, forcing the inside tire upward. At the same time the arms pull the side walls outward and downward so the inside of the tire is completely exposed. Handles large tire with same ease as small tire. Special rollers make it easy to revolve tire. Designed to save time in locating trouble. Price $44.

FORD TRUCK OVERSIZE WHEELS

OVERSIZE Pneumatic Wheels for Ford Trucks. Mutual Wheel Company, Moline, Ill. For 30 by 5 DT rims, for 30 by 5 B. rims and for 32 by 6 B rims. Also offer wheels for Dodge Brothers, Reo and all light trucks—for 30 by 5 B rims and for 32 by 6 B rims.



Ford Truck Oversize Wheels

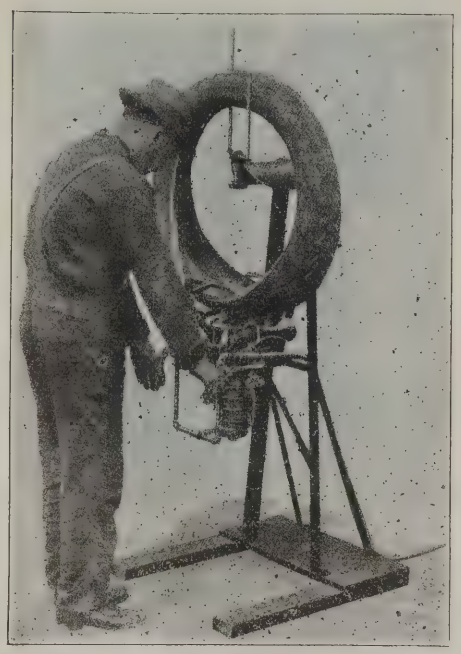
BALLOON REPLACEMENT WHEELS

STANDARD Type Balloon Replacement Wheels for Ford Cars. Mutual Wheel Co., Moline, Ill. These are 28 by 3½ single balloon wheels in three types, viz.: Firestone "A" Type with detachable clamps; Jaxon Type with detachable clamps; Lug Attached Rim Wheel, same as Hayes. Black or natural wood finish. Eight wheels packed to crate. This company now also offers Balloon Wheel Sets for Ford, Chevrolet, Star and all light cars. A 21 in. wheel with 28 by 3½ rim, taking 29 by 4.40 tire. Set consists of 4 wheels less hubs, 5 straight side demountable rims, with necessary rim bolts, nuts, wedges and wrench.



KALES TIE ROD FOR NEW FORD

KALES Tie Rod for Late Model Fords. Made by Kales Stamping Company, Detroit. This tie rod is easily and quickly installed by removing and replacing one bolt of headlamp bracket on each side. Made of enameled pressed steel. Has bracket for license plate. List $1.

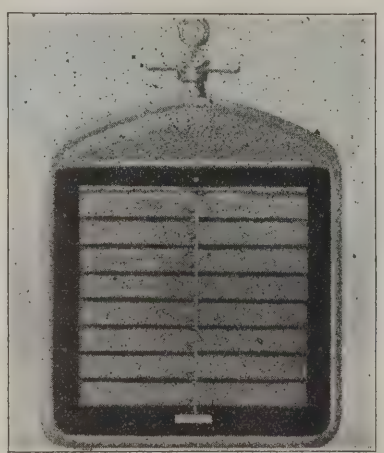


Manley Tire Inspector

U-AUTO-SHUTTER

Cut Shown Below

U-AUTO-SHUTTER. Made by Haines Mfg. Corp., Rochester, N. Y. This shutter is for Fords. Makers say it cannot rattle and will outlast the car. It is hand-controlled. Can be opened from the seat. Action is said to be smooth and positive while installation can be quickly made without alterations. List $5.



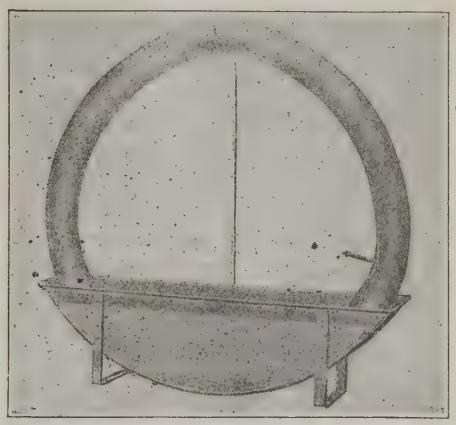


Kales Tie Rod

BALLOON TIRE TEST TANK

Cut Shown Below

BALLOON Tire Tester Tank. Dover Stamping and Mfg. Co., Cambridge, Mass. A tank for use in the shop in testing balloon tires. Adjustable rod is used to support tube in upright position while it is being examined. Tank made of sheet steel and galvanized after formation. List price $5.



NEW FORD FENDER GUARDS

FENDER Guards for 1926 Ford Rear. Made by New Era Spring & Specialty Co., Grand Rapids, Mich. Said to be designed for long service and to add to appearance of car. Quick installation. List $15 per pair.

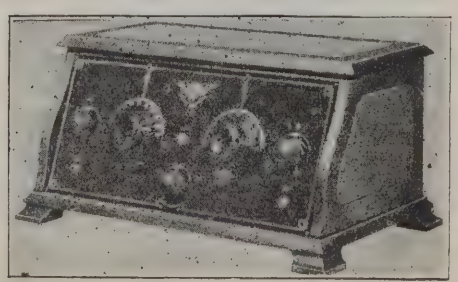


New Era Fender Guard for Fords Rear

SENSIBLE E RADIO SET

Cut Shown Below

STILES Sensible E Radio Set. Made by Stiles Manufacturing Co., 125 East Quincy St., St. Louis Mo. This is a five tube set. Two dial control. Straight line frequency condensers. Gets stations 200 to 600 meters. Said to permit absolute logging of stations and give volume without distortion. Simple on-and-off lock switch controls battery current and can be used as key to lock set. Price $97.50 without accessories. Pacific coast prices slightly higher. Canadian prices 40 per cent higher.

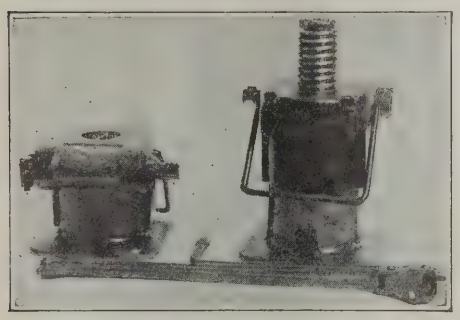


Some New Products at A. E. A. Show

(Continued)

TURNING AND GRINDING MACHINE

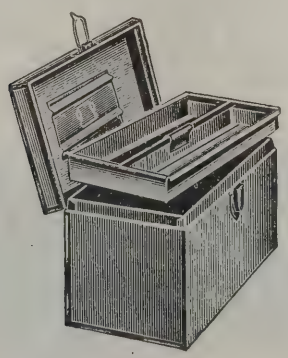
VAN NORMAN No. 96 turning and grinding machine. Van Norman Machine Tool Co., Springfield, Mass. Although designed primarily to meet the demands of the piston distributer and service station for a production machine with automatic feeds to be used in turning and grinding semi-finished pistons, it will readily handle other kinds of work. The No. 96 is a wet grinder equipped with water pump, tank and piping. Worn armatures may be made like new by either grinding or turning them on this machine. In addition straight and spiral reamers can be ground and many types of shafts, etc., can be handled between the head and tail stock centers. It occupies 64 in. by 40 in. floor space. A special auto-feed throwout is attached to the cable and both turning and grinding depths can be located definitely by this stop. The company is also bringing out an auto service machine, model B universal valve grinder and super-valve grinder.



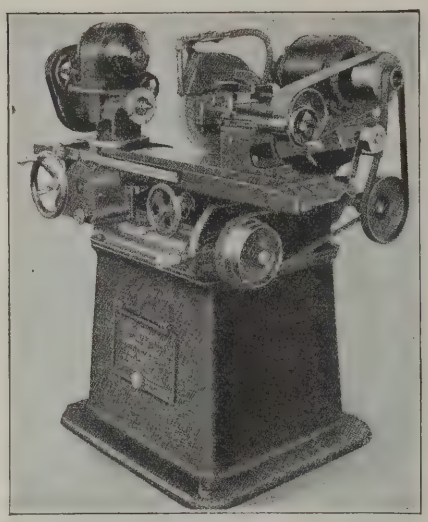
REES BUS JACK

Cut Shown Above

REES Bus Jack. Made by Rees Mfg. Co., Pittsburgh, Pa. A special purpose jack, designed to carry on motor bus for emergency use. Compact, strong, easily operated. Begins at 5 in. and raises to 10½ in. Operates with long, folding handle. Weight 25 lbs.



"K" Line Tool Kit



Turning and Grinding Machine

TAXITRUX BRAKE LINING

MULTIBESTOS Taxitrux Brake Lining. Multibestos Company, Walpole, Mass. This is a brake lining that the makers recommend for heavy duty service such as in operation of commercial vehicles, taxicabs and buses. The material is constructed from high content long fibre asbestos yarn and high annealed brass wire twisted together and interwoven in a compact fabric. A special treatment renders the lining oil, heat and water resisting. The lining's response in duty is said to be instantaneous regardless of load.



Taxitrux Brake Lining

"K" LINE TOOL KITS

THE "K" Line of Tool Kits. Made by Kennedy Manufacturing Co., Van Wert, O. All steel tool containers for mechanics and repairmen. Snug fitting trays divided into compartments for small tools and parts. Kits are finished in brown enamel, have good locks and leather handles. Prices, according to size, from $3.60 to $3.90.

CHAIN HOIST TRESTLE

Cut Shown Below

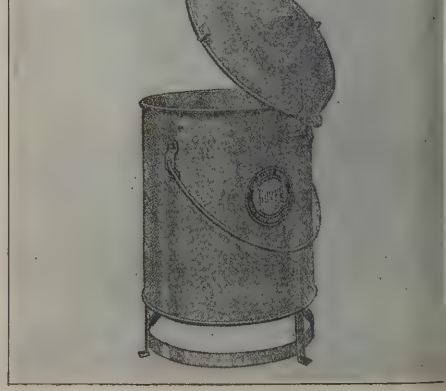
MANLEY Chain Hoist Trestle. Manley Mfg. Co., York, Pa. Another piece of equipment for service work. Move it from place to place in garage and fasten chain hoist to it. Can reach spots in shop with trestle that could not be reached with overhead trolley. Swiveling wheels on legs. Easily moved with or without load. Price for No. 85 trestle without chain hoist, cap. 4,000 lbs., height 8 ft., $53. No. 86 without chain hoist, 4,000 lbs. capacity, height 9 ft., wgt. 313 lbs. Price $55.



SAFETY OILY WASTE CANS

Cut Shown Below

NEW Dover Safety Oily Waste Cans Dover Stamping & Mfg. Co., Cambridge, Mass. Name of item tells its purpose. Made of heavy black steel sheets and galvanized after formation. Oil tight. All parts strongly riveted, no solder used in construction. Made to stand fire. Capacity ranges from 8 to 19 gals

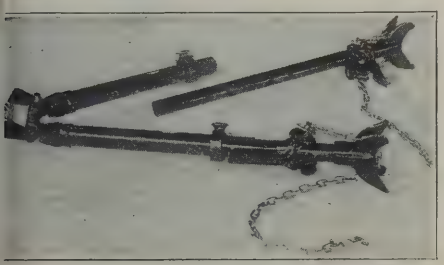


Some New Products at A. E. A. Show

(Continued)

QUICK CHANGE BANDS

MULTIBESTOS Quick Change Transmission Bands for Ford cars and ·ucks. Multibestos Company, Walpole, lass. These bands are for "while you ·ait" installation. Once installed they an be changed in 15 minutes. Not necssary to dismantle transmission and tarter when first putting them on, only ıspection plate on top of transmission ase being removed. A slight opening f the band and removal of detachable ar is sufficient to permit band to be inerted into the transmission and slip round the speed drum into position. Three bands to the set. List price, not ıstalled, $6 per set. List price, installd, $8.50 per set.



IMPROVED "V" TOW BARS

Cut Shown Above

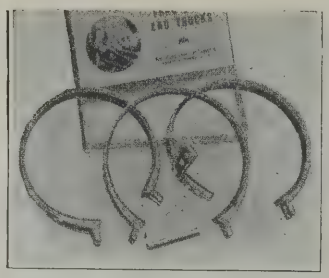
HOLMES Improved "V" Tow bars. Ernest Holmes Company, Chattanooga, Tenn. These bars are designed to give a wider range of adjustment, more flexibility and increased strength. The telescoping members have been reversed, the small inside tube being replaced with a larger tube and becoming the outside member. The standard bar has a range from 3 to 4 ft., and the extra long 4 to 5 ft., prices respectively being $20 and $22.

NEW FORD FRONT BUMPERS

Cut Shown Below

CHALLENGE Bumpers for 1926 Ford Front. Made by New Era Spring & Specialty Company, Grand Rapids, Mich. Offered as serviceable, durable and attractive equipment for the new Fords. List $12.50 each.

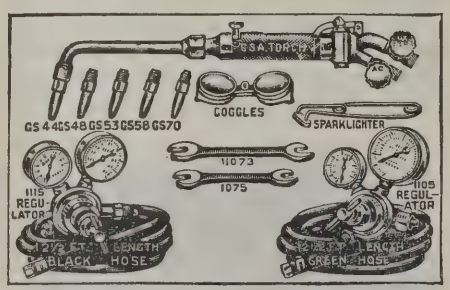




Quick Change Transmission Bands

AUTOMATIC SHUT-OFF TORCHES

REGO automatic shut-off torches. Bastian Blessing Company, Chicago, Ill. This torch has a pure copper tip and is made so the gases do not mix in the handle. When ready to weld it is only necessary for the operator to press a button, snap a lighter and the torch is lit. One adjustment only is necessary in the morning and the flame is said to be good for all day. Prices range from $35 to $45.



Rego Automatic Shut-Off Torch



STANDARD LO-LIFT JACK

Cut Shown Above

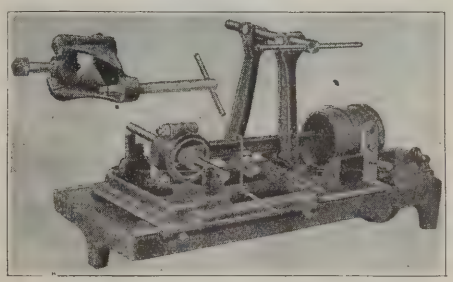
STANDARD Lo-Lift Dolly Jack No. 67 for balloon tires. National Standard Co., Niles, Mich. Has unusual range of lift, from 5 in. to 16 in. from ground, making it desirable for use with large balloon tires and low-hung axles. There are no springs or chains in carrying the load, eliminating a frequent cause of breakage. Hardened roller bearings in front and rear wheels.

Additional descriptions of products will appear in next week's issue.

STORM ALIGNERS

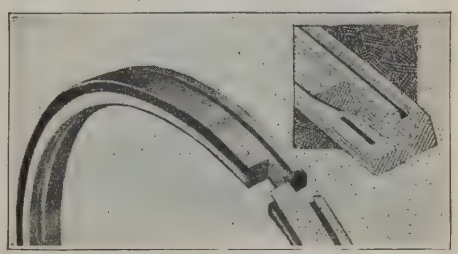
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STORM Riteway connecting rod and piston aligner. Storm Mfg. Co., Inc., Minneapolis, Minn. This tool performs all the operations necessary to correct errors in connecting rod alignment without removing the piston from the rod. It shows all of the inaccuracies of the connecting rod and the gage attached to the aligning part of the fixture shows where the corrections are to be made. Special tools are provided more quickly and more easily to bend or twist the rod into alignment while the assembly is attached to the jig. The strain of straightening a rod is not applied to the jig itself, but instead is applied to these special tools, thus eliminating chances of springing the fixture. Price $39.



ECONOMY OIL RING

ECONOMY oil ring. Gill Mfg. Co., 8300 South Chicago Avenue, Chicago. Made of special grey iron castings individually cast out of round, lathe turned and machined. This ring on the down stroke of the piston gathers the excess oil from the cylinder wall into the collector groove, cut in the bottom of the ring. The force of the stroke drives it through the "gates" and in back of the ring. The vacuum on the up stroke of the piston draws this excess oil from the ring and groove through bleeder holes in the piston. The oil then returns to the crankcase.



Gill Economy Oil Ring

Some New Products at A. E. A. Show

(Continued)

ALLEN MAGNETO CHARGER

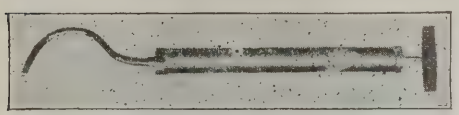
ALLEN Ford Magneto charger A-90. Allen Electric Mfg. Co., Detroit, Mich. Operates on either 110 or 220 volt AC or DC. A large meter with zero adjustment registers the amount of current used in charging a magneto and shows whether or not all connections are right. It is also used for testing the output of the magneto before and after charging. 25 foot cables are provided and all switches and contacts are protected by the metal panel board. The outer case is of heavy metal with a large compartment to hold the extension leads. Price complete $45.



Allen Magneto Charger

DIFFERENTIAL OIL PUMP

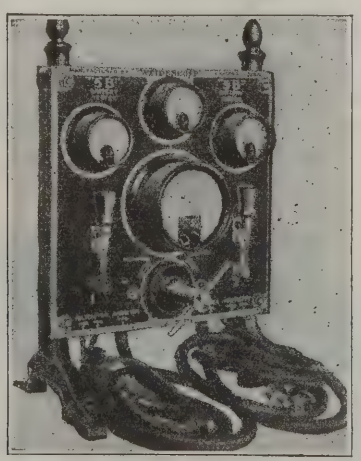
DIFFERENTIAL oil pump. Judd & Leland Mfg. Co., Clifton Springs, New York. Designed especially to remove the old oil and sediment from the differential housing and to replenish with



fresh lubricant. The cylinder is 1½ by 15 in. made of steel and enameled red. It is made with a goose neck terminal to fit the small opening in the rear axle housing. The price is $2.50.

SPARTAN FAN BELTS

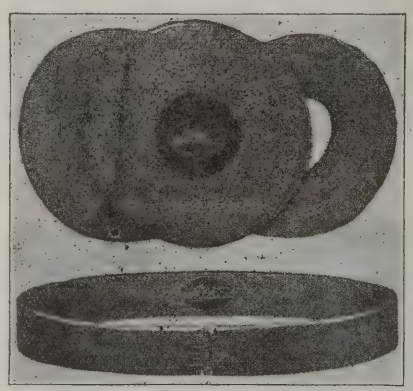
EXTRA Heavy Spartan Fan Belts. Graton and Knight Mfg. Co., Worcester, Mass. Makers claim this belting will not crack or rot under oil or steam conditions. Furnish it in rolls or endless flat fan belts 5/32 in. to 3/16 in. thick. In measuring from roll garageman duplicates measurement of old belt or finds size in booklet furnished by company.



5B Battery Tester

STANDARD SPEED-LIFT JACK

STANDARD Speed-Lift Service Jack No. 61. National Standard Co., Niles, Mich. Has wide range of lift making it adaptable for balloon tires. Can be used under rear differential of car, lifting the entire axle. Efficient low foot lift permits front or rear of car to be lifted without danger of tipping jack forward. Operated with short stroke of the handle under the lowest hung car with overhanging tank tire carrier and bumper.



Spartan Fan Belts

5B BATTERY TESTER

WEIDENHOFF 5B battery tester, Joseph Weidenhoff, 4352 W. Roosevelt Road, Chicago. For testing 60 volt radio B batteries, checking starting motor in car, generator and battery. It will also check the complete ignition system together with the lighting system. Voltmeters read neg. 2-0-2½ for cadmium and open voltage cell tests; 0-60 for testing automobile and radio B batteries and ignition and lighting systems. Ammeter reads 30-0-30 for testing generator charging rate and 600-0-600 for starter and battery tests. Panel of Ebonite asbestos material. Carrying handle is mounted on the back of the panel. Price $69.50.

BENDIX DRIVE SCREW TOOL

KWICKWAY Bendix Drive Screw Tool. Made by Haines Mfg. Corp., Rochester, N. Y. A tool for mechanic replacing Bendix Drive cover which



facilitates starting and turning in screws that are very difficult to manage with ordinary screw driver. This device holds the screw securely so it can be started instantly. List $1 each.



Standard Speed-Lift Jack

TYPHOON KAR KLEENER

GLOBE Typhoon Kar Kleener. Globe Mfg. Company, Battle Creek, Michigan. This combines air and water under pressure in such a manner that dried, caked and even frozen mud is removed from any car in four to ten minutes without marring the finish, it is stated. It is said to be extremely rapid and is efficiently operated with any water pressure above 20 pounds. A 1/2 horse power compressor operates the cleaner. It requires no water tank since connection can be made directly to the pipe line.



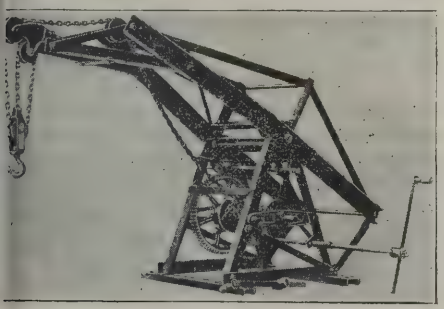
Typhoon Kar Kleener

Some New Products at A. E. A. Show

(Continued)

HOLMES GARAGE PRESS

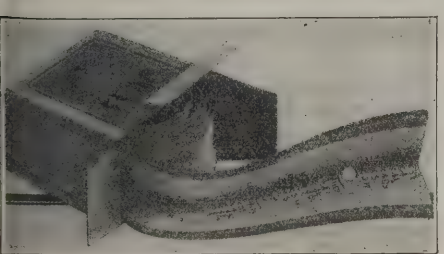
HOLMES Garage press. Ernest Holmes Company, Chattanooga, Tenn. A niversal two speed 4 to 30 ton press. he main feature is a one-piece frame : channel construction reinforced at the op with two large steel tension rods. he high speed consists of a 30 to 1 ver delivering pressure through two eel rods to the top of the thrust bear- ig, and on opposite sides of the screw. his gives 1¼ in. movement to each roke of the lever. The maximum lever- ge, 30 tons, is obtained by bevelled ears and a four spoke wheel. The table adjusted by a double cable, drum and rank arrangement. The press is readily ortable.



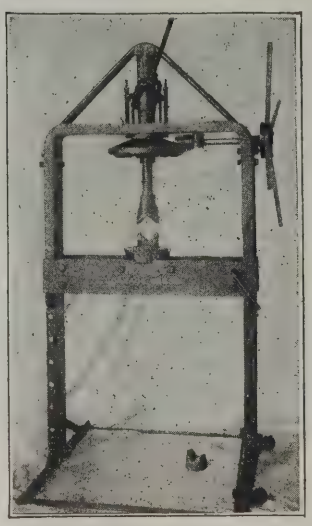
NEW MANLEY WRECKING CRANE

Cut Shown Above

NEW Manley Wrecking Crane, Manley Mfg. Co., York, Pa. Features of this rane are said to give device highly fficient operation, speed, great pulling apacity on especially heavy work. Tilt- ng beam is adjustable. Triple chain lift o swiveling nose. Special saddle absorbs train and prevents crane from buckling ervice car chassis. Long beam gives leep overhang and allows crippled car o be swung under the beam. Hoisting drum may be disengaged and may be used as a winch. Crane can be operated rom ground from either side; also from ervice car platform from either side. Capacity 3½ tons. Catalog No. 107. Price, $135.



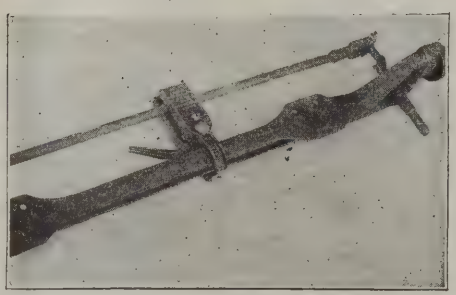
Gates Fitsall Tire Flap



Holmes Garage Press

STEERING GEAR CLAMP

HOLMES Steering Gear Clamp. Ernest Holmes Company, Chattanooga, Tenn. A simple universal device for clamping the tie rod rigidly to the front axle, locking the front wheels in a straight ahead position. The purpose of the clamp is for holding the front wheels of a disabled car while the latter is being towed, with the rear of the car suspended from the service car.



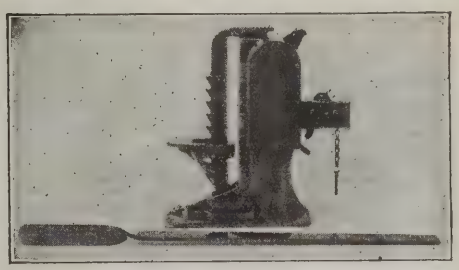
Holmes Steering Gear Clamp

GATES FITSALL TIRE FLAP

GATES Fitsall Tire Flap. Gates Rubber Company, Denver, Colo. The name of this product is descriptive. It fits any size of tire whether balloon or standard. Said to always take its proper position in the casing, never buckling or wrinkling. Reinforced center prevents pinching of the tube by the beads. Withstands wear from contact with the metal rim Snug fit possible through tapered sides which are finished to a feather edge. This feature also prevents chafing of the tube. Dealer prices 1 to 10 order 75 cents each. Lower figure on larger orders. List $1 each.

PACKARD CABLE ASSORTMENT

PACKARD Dealer Assortment of Automotive Cables and "Merchandiser." The "Merchandiser" is a display board for the cables. On the board are ten spools of cable, each spool having 100 feet. The spools of Assortment A are as follows: 16 ga. 1 conductor lighting; 14 ga. 1 conductor lighting; 16 ga. 1 conductor armored; 14 ga. braided low tension; 14 ga. plain low tension; 7mm braided high tension; 7 mm plain high tension; 10 ga. 1 conductor lighting; 18 ga. 2 conductor spotlight; 9 mm plain high tension. Company will supply price.



Standard Work Horse No. 32

STANDARD WORK HORSE

STANDARD Work Horse No. 32. A truck jack of three-ton capacity made by National Standard Co., Niles, Mich. Heavy adjustable lifting step enables jack to reach lowest axles. Range of lift sufficient for largest balloon tires. Long detachable handle permits its use under deep, overhanging truck bodies with convenience. Heavy pawls have double teeth engaging the rack bar at two points instead of one, adding longer life and security. Only one interior regulating part. Flat steel springs make for durability and ease of operation.

MONTREAL PLANS SHOW

MONTREAL, Nov. 7.—Theo Dorian, formerly city editor of La Tribune, Sherbrooke, Que., has been appointed active secretary of the Montreal Automobile Trade Association Ltd., and manager of the 1926 Motor Show, which will be held under the auspices of the association from January 23 to 30 inclusive.

CATALOG OF ELECTRICAL UNITS

The North East Electric Company announces the publication of catalog 100-E which illustrates and lists the North East units that are in current production. Readers of MOTOR AGE may obtain copies by addressing North East Electric Company, Rochester, New York.

Save Them From Freezing

(Continued From Page 12)

ing substances on the high tension wires of the ignition system which prevented the engine running.

The concern and its general reliability as evidenced by worthy products it has produced are doubtless better factors to judge by than the claims on the label. Some special solutions are frankly stated to be alcohol and glycerine with other ingredients used to reduce the tendency toward evaporation of the alcohol content.

Kerosene used in radiators often causes unpleasant odors which are especially noticeable in closed cars. It is also said to constitute a fire hazard, although this opinion may be considerably discounted. It should NEVER be used, however, in thermo-syphon systems, for it does not circulate by itself, for it expands but slightly when heated. Where a circulating pump is used it has been known to give satisfaction under some conditions. Hose connections, while attacked by kerosene usually last throughout the winter if in good condition at the beginning of cold weather.

Objections to Other Preventives

Glucose and honey have at times been tried as anti-freeze solutions and while they do not freeze hard, they start to thicken and flow with difficulty at approximately the freezing temperature of water, so that their use is not recommended. The protection afforded by compounds of this character is not due to the difference in freeze point, which is simliar to that of water, but to the fact that they do not freeze hard and cause bursting.

Mixtures of alcohol, water and glycerine have at times been used, but the difficulty with these solutions is that the alcohol evaporates, in spite of the glycerine and with glycerine present there is no dependable way to check the solution, as would be the case if alcohol alone were used, or if glycerine alone were used, where no evaporation takes place. Where such mixtures are employed, however, it is customary to mix equal parts of water and glycerine, then take various percentages of this mixture and use it with water, the proportions to use being as follows:

Freeze point	Per cent mixture gly. and alcohol
20 degrees F.	15
15	20
10	24
5	27
0	29
— 5	30
—15	32

The glycerine referred to in the above table is heavy glycerine, undiluted except by being mixed with the alcohol.

After you have decided on the kind of anti-freeze service you will render, the next thing to do is to go after the business. Some of it may drift in, but do not depend on the drifts or you will be frozen out by some more aggressive merchandizer. There are approximately 18,000,000 motor vehicles with cooling systems holding from ten to forty quarts, with a conservative average of sixteen quarts.

If we eliminate the vehicles which operate in sixteen of the southern and western states, we still find about 12,000,000 cars and trucks, each of which will need four or five dollars worth of anti-freeze solution or compound of some sort. From *forty-eight to sixty million dollars* worth of direct business to say nothing of the indirect business in the way of shop work and sales of other supplies and winter accessories.

No miraculous stunts are needed. Just tell the folks what you have and what you can do for them. Advertise. Put anti-freeze in your window. Put out a big sign advertising that your anti-freeze service saves repair bills. Offer to test radiator solutions free, if necessary to get them coming to you. The hydrometer readings in Fig. 2 show what to expect when alcohol is used while Fig. 3 shows a regular battery hydrometer used to check the solution when glycerine has been used.

In determining the requirements of each car the chart of cooling system capacities can be referred to. Take a Buick Master Six for example which requires a solution that will be safe to zero, and let us assume that alcohol will be used. Referring to the chart we find the capacity of the system is 18 quarts. Now referring to the alcohol curve in Fig. 1 we take the thermometer at the left which is reading zero and trace the line over to the right until it strikes the middle curve. We then trace downward and find that we hit 40 per cent on the horizontal line. Then we multiply 18 by 40 and point off two places to find the quarts of alcohol needed. This gives us 7.2 quarts, so the sale would be for seven or eight quarts, probably the latter, or an even two gallons, the rest of the solution being water to make enough to fill the system.

Take another case of a Cadillac V-63 needing protection to 20 below zero, and this time we will use distilled radiator glycerine, which does not evaporte. The chart shows that the cooling system holds 24 quarts. Taking Fig. 1 again we use the thermometer which is indicating —20 and trace to the right until we get to the third curve. Tracing down to the horizontal line we find that about 83 per cent glycerine is needed. Multiplying 24 by 83 and pointing off two places we get 19.92 quarts, so to make it even we would sell 20 quarts, or 5 gallons, which would give protection all winter without additional expense.

Concerns which cooperated with MOTOR AGE *in supplying information used in preparing this article, also the anti-freeze products they produce.*

Boyce and Veeder, Inc., Long Island City, N. Y.—"Permo."

Carbide and Carbon Chemicals Corp., 30 E. 42nd St., New York, N. Y.—"Prestone" (Ethylene Glycol).

Columbus Varnish Co., Columbus, O.—"Peerless" (a chlorate product, neutralized).

Cooper Mfg. Co., Marshalltown, Iowa—"Frigidene."

Davis Mfg. Co., 311 Burgess St., Pittsburgh, Pa.—"Davis Never Freeze."

The Hall-Thompson Co., Hartford, Conn.—"Alcorene" (alcohol and glycerine base).

Lever Bros. Co., Cambridge 39, Mass., "NoVap" radiator glycerine.

James S. Kirk Co., 1232 W. North Ave., Chicago, Ill.—"Eversafe" radiator glycerine.

The Frank Miller Co., Camden, N. J.—"None-Freeze" (alcohol and glycerine base).

Peet Bros. Co., Kansas City, Mo., "Low Temp" radiator glycerine.

Purfex Mfg. Co., 1306 Race St., Philadelphia, Pa.—"Purfex" (alcohol and glycerine base).

The Pyrene Mfg. Co., 560 Belmont Ave., Newark, N. J.—"Chromine."

Proctor and Gamble Co., Cincinnati, Ohio.—"Ivo" radiator glycerine.

St. Louis Rubber Cement Co., St. Louis, Mo.—"Rex X" solution.

Community Broadcasting to Boom City

CINCINNATI, O.—Nov. 6.—What is claimed to be a new departure in radio service is being arranged through public subscription in Cincinnati under the auspices of the Publicity and Convention Department of the Chamber of Commerce. It is a Community Radio broadcasting service which is to be sent from the WSAI station of the U. S. Playing Card Company but to be absolutely without advertising features. Artists in the musical world, such as singers, instrumentalists and speakers of national and international reputation will be engaged to give free concerts for the Community Radio, the idea being to attract attention to the city of Cincinnati. A fund of $10,000 is to be raised. This is the idea which has been conceived by Frederick Smith, formerly the announcer of WLW radio station of the Crosley Radio Corporation who resigned from the Crosley organization last month to promote the community radio service. Under the direction of Mr. Smith the programs will be arranged and for the 20 weeks commencing with November 1 it is expected there will be broadcasting twice a week, or more from the WSAI.

If the Community Radio idea gains the support which the Chamber of Commerce department predicts for it it is believed there will be no trouble in raising an additional $10,000 for the continuance of the Community Radio programs during the balance of the season. The Chamber of Commerce claims that Cincinnati is to be the first city in the world to undertake this Community Radio program.

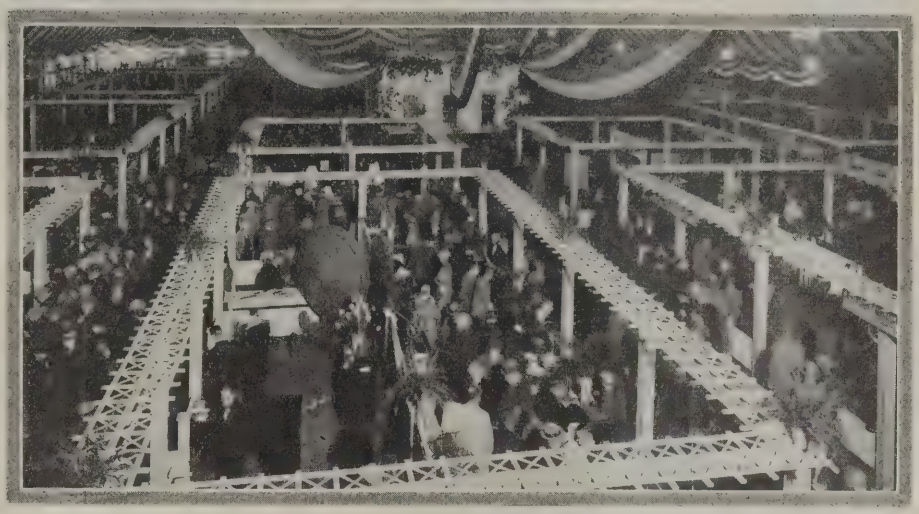
A Radio Text Book

"RADIO Sets that Jack and Dad Built —and How They Built Them" is the title of a forty-eight page booklet published by the Hard Rubber Manufacturers Division of The Rubber Association of America, Inc.

Written by M. B. Sleeper, editor of "Radio Engineering" and a recognized set building expert, the booklet describes and illustrates five standard "hook-ups." It tells how Jack inoculates his skeptical Dad with the "radio bug" by making a crystal set. Dad's interest aroused, he and Jack built first an Ambassador set, next an RX-1, then a Browning-Drake "Five" with a three-step resistance amplifier, and with their final 8-tube "Cotton" Superheterodyne win the prize in a radio set building contest.

Besides the wiring and schematic diagrams and step-by-step assembly instructions for each set, the booklet is profusely illustrated with photographs of the different sets and contains many helpful suggestions regarding antennas and grounds, installations, maintenance, and the care and use of dry cell and storage batteries and current tap devices. It is a useful text book for the dealer who wants to learn more about the principles of radio.

The booklet can be purchased for 25 cents a copy from The Rubber Association of America, Inc., 250 West 57th Street, New York City.



A view of the second annual radio show at Buffalo, N. Y. Note the immense loud speaker in the foreground

Radio Show Draws Crowds

FROM the radio wholesalers' viewpoint the second annual show of the Buffalo Radio Trades association, which closed Saturday evening, October 24, was highly successful. That the radio fans of Buffalo, Western New York, Northwestern Pennsylvania and Ontario found much in the exhibition to interest them was evident from the numbers in which they flocked daily to Broadway auditorium, Buffalo's largest assembly hall, where it was held.

The show was promoted by the Buffalo Courier and the Buffalo Star, morning and afternoon papers.

The show was under the management of George B. Bodenhoff. C. S. Bettinger was show chairman. Meyer Goldman, president of Radio trades, said on the concluding night the attendance surpassed greatly that of last year's show and that he and his associates felt that it had stimulated new interest in radio in the present fans and had arrested the attention of many potential enthusiasts. The interest created by the exhibition, he averred, is bound to reflect itself in increased sales during the fall and winter.

Southern Show at Atlanta

THE Auditorium at Atlanta, Ga., will be the scene of a national radio exposition to be held the week of Dec 7, 1925. The show will be given under the auspices of the combined radio trades in Atlanta, and will be the culmination of some months of promotion work by the trades there looking toward the holding of such an exposition.

Many of the leading manufacturers of radio merchandise have taken space for the exposition, which will be further augmented by displays arranged by the jobbers and retail radio dealers in Atlanta.

In addition to the merchandise exposition the broadcasting station of the Atlanta Journal has arranged for the appearance during the week of several nationally known radio stars.

Among the Atlanta automotive jobbers who have taken space at the exposition for their radio department are included the Hopkins Auto Equipment Co.; the Automotive Sales & Service Co.; Bailey & Co.; the Alexander-Seewald Co.; the Southern Bearings & Parts Co.; the Southern Auto Equipment Co.; and radio battery displays by the National Carbon Co. southern branch, and the French Battery Co.

The show will be known as the Atlanta Radio-Electrical Exposition, Lambdin Kay, official announcer for the Atlanta Journal, general chairman.

Bosch Wood-Cone Reproducer

THE American Bosch Magneto Corporation, Springfield, Mass., is building a loud speaker of the Cone type. It is known as the Ambotone reproducer. The entire cone diaphragm is of wood and is 18 in. across. The wood cone is finished in mahogany. The base and metal parts are finished in art bronze. This instrument is also being built in a Junior model which has a smaller cone.

New Station at Milwaukee

MILWAUKEE'S new and first superpower radio broadcasting station WKAF went on the air on Oct. 20. The new station is a 5,000 watt unit and will rank as the city's first commercial station, being available for rental. It is owned and operated by the Broadcasting Co. composed of H. G. Wood, president of the Hotel Antlers, L. M. Kesselman of the Kesselman O'Driscoll Co.; the Hotel Antlers and H. E. Ford, engineer in charge of the station.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING - ELECTRICAL - FLAT RATES
SHOP - LEGAL - PAINT & TRIM - ACCOUNTING

Missing Ferrule Makes Bearing Leak

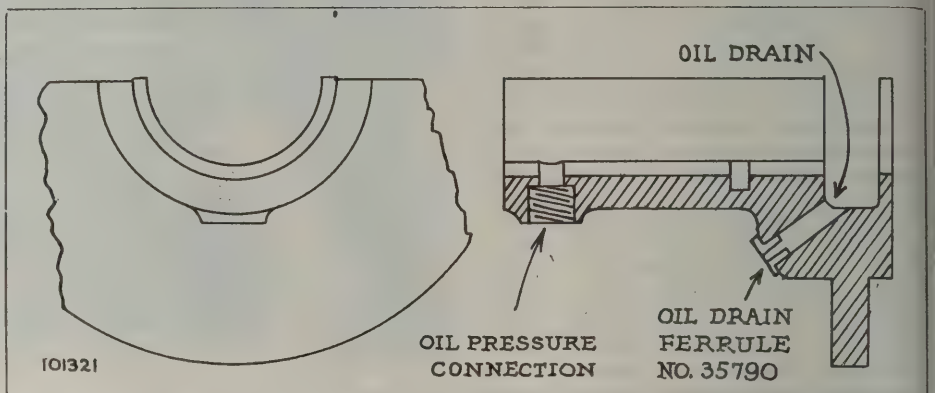
Q.—Here is a puzzle. It is a late 1923 Maxwell which leaks oil from the engine into the clutch housing so there was a constant drip of oil while the engine was running, but did not get on clutch disk. Oil pressure gage shows 16 to 18 pounds pressure which owner said was normal. The connecting rods were about .004 inches loose but this did not seem to affect the oil pressure. We removed the motor and adjusted the rear main bearing so it dragged. We put it .002 in. paper between bearing and cap. Tested it with hand pump air pressure. It did not show any leak past end of bearing.

Removed bearing and inspected and found no leak at any point around outer edge of bearing. Enlarged oil pressure hole twice its size. There is an oil return hole in an oil pocket at rear of bearing. Replaced motor and ran about ten minutes before it began to drip as before. There was a new gasket between the clutch housing and the engine—Willard S. Congdan's Garage, Dolgeville, N. Y.

We are showing a sketch which illustrates the proper construction for the oil drain hole at the rear of the rear main bearing. In the older type bearings there was a hole about⅛ in. in diameter. In later bearings this hole is ¼ in. in diameter approximately, but merely enlarging the hole does not make the oil drain satisfactory. When this is done it is found that the pressure in the crankcase blows the oil back into the bearing and causes it to leak into the clutch housing.

This condition is remedied, however, by using Maxwell part No. 35740 which is a ferrule used as indicated in the sketch. This permits pressure to get to the oil and at the same time allows oil to drain back into the crankcase. Another remedy which is used at some times is to replace the ferrule with a pipe connecting to the lower part of the crankcase so that oil from the drain pocket in the rear main bearing can run down under the oil in the crankcase. In this way capillary action seems to more than offset the effect of crankcase pressure.

You stated that you enlarged the oil pressure hole to twice its size. We did not get the idea or see the reason for doing this if you are already troubled with excessive oiling. The left hand portion of the sketch shows an end view of the bearing and shows the bearing itself extending above the flat surface of the bearing cap. In case this is done it will hold the surface of the cap away from the upper portion of the bearing and leave an opening through which oil can work into the crankcase. It is essential that the bearing metal be trimmed off the surface of the cap, so that an oil tight joint can be maintained.



View showing construction of oil drain hole at rear of rear main bearing on 1923 Maxwell

READER GIVES CAUSE OF OVERHEATING

Q.—In your article entitled "Eight Cylinder Engine Overheats" on page 26 of the September 17, 1925, issue of MOTOR AGE, you give some possible causes of this trouble. I would like to suggest that the screens in the bottom of the radiator are clogged. In the older type Cadillac radiator the screen screw is at the water outlet, but in the later models the screen can be taken out and cleaned by removing the splash pan and taking out the plugs in the front, in the bottom radiator tank. The screens put in from the front are not screwed in, but can be pulled out with the fingers. I would have written to K. S. S. direct, but there was no address.—S. G. Lininger, Heppner, Ore.

This is a very likely cause of the trouble experienced, as it was stated that the owner of the car in question had used crude oil in the cooling system. This incident also shows the disadvantage of withholding the actual name of the party asking the question. In this case an answer could have been sent much more readily from one subscriber to the other.

WHAT TORQUE IS

Q.—We noticed in one of your publications an article on the h.p. of the Star Car, and if I remember it said that the torque was increased. We would like to know what is meant by the torque of a car.—A Reader.

Briefly torque is the product of a twistinng or tangential force multiplied by the radius of the part it rotates. It is a calculation in which the time element is entirely eliminated. To get an idea of torque consider a long post driven into hard ground. Imagine that you have fastened a one foot lever to the top of this post which is driven in vertically and that you exert a push of one pound at the end of it. Your exertion of one pound on the one foot lever represents one pound foot of torque. Now imagine that you can with a force of one pound move the lever one foot around the circle When you have done this you have exerted one foot pound of work on the post. This is work done.

Now if you exert the one foot pound of work on the same object 33,000 times in a minute you have exerted one horse power.

Torque of a car represents its pulling power, and it is the greater pulling power which a horse exerts, which enables it to pull a car out of a hole, when a 40 h.p. engine with less torque or pulling power would be unable to accomplish the task. In like manner the torque of a commercial vehicle is increased by increasing the gear ratio. Considering torque at the rear wheel of a car if we have two similar engines and gear one of them at 5 to 1 in the rear axle and the other 10 to 1 the car with the 10 to 1 will have greater torque at the rear wheels, although it will have no greater power.

SHORTER MANIFOLD WORKS BETTER

Q.—I am writing you about some information on the intake manifold of a 1924 late model Chevrolet. This car has a G. G. vacuum tank and a Carter carbureter. Can the intake manifold be cut off so as to raise the carbureter for winter starting? Manifold at present is 10¾ in. long and I would like to cut off 10 in. of this. Have done this on a racer, but not on a touring car.—H. W. Wright, R. 2, Allen, Kansas.

This is perfectly possible and will give better results. It is also possible to install the new type Chevrolet intake manifold which is nearly a foot shorter than the old one. This would probably be the best procedure and would save time and possibly money.

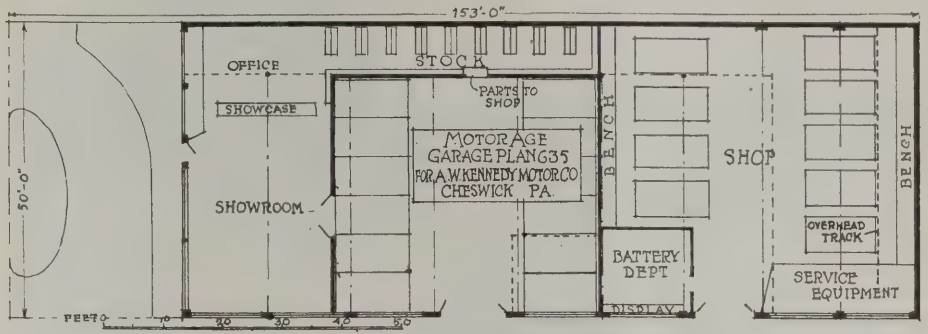
Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Enlarging and Rearranging Old Building

Q.—I am planning to remodel our present building to be more suitable for the Ford agency. Due to the narrowness of the building, the best plan, I imagine would be to close the front entrance and make a larger one on the side, for service and storage; making the showroom and whole width of the building with the stock room and offices behind it. But this is a disadvantage since we have a gas station in the front end and the gas man would have to walk across the showroom floor to the cashiers' window for change. In a few years we will likely discontinue the gas station as our business is Ford sales and service. It would also be necessary to extend the shop to the lot line and I would like to have a more suitable place with a show window for the battery department as Ford suggests. I am enclosing a sketch of the present building.—A. W. Kennedy Motor Company, Cheswick, Pa.



The dotted line shows the old wall; the narrow strip at the side is utilized as a stock room

We agree with the notation you have made on your sketch plan to the effect that it would be a good idea to widen the building making it cover the full width of the lot and we have shown how you can do this without very much extra expense.

On our plan the dotted line shows the outline of your old building where the back wall would be torn away. To support the trusses it would be necessary to put up some sort of columns at A and B providing we have guessed the location the trusses correctly. The long narrow place back of the wall between the showroom and the shop is reserved for stockroom purposes and need not be disturbed any more than by putting a roof over it. The roof could be extended over the narrow section without any trouble at all. The extension to the rear would be one or two trusses and these could be built the full width of the building.

The back part could be all in one room with cars stored crossways instead of extending fore and aft, but we believe the arrangement we have shown is better as it divides the shop from the garage and gives a safe place for your new car storage. If desired the parts window could be in the end of the room opening into the shop but this makes a rather long walk for the stock man if he is employed in the office.

If a large battery department is desired it could be extended into the garage as indicated by the dotted line. If this is done entrance from the shop to the garage can be had through the battery department, otherwise a doorway will have to be made somewhere. If you intend eventually to discontinue the filling station and add this space to the building, we believe it would be policy to do it now as a change would effect the whole building and it would be better to make all the changes at once. Possibly the space alloted to the stock room is more than is needed and if that is the case part of the space may be used for toilet room.

Legal Questions Answered—

By WELLINGTON GUSTIN of the Chicago Bar

MAY BE MISUNDERSTANDING

Q.—As a reader of your Motor Age and a dealer in automobiles we would like much to have the following answered:

On May 3, 1925, a gentleman of this locality had a car of which he was the owner and on the same day had an accident which necessitated some repairs. On May 5, 1925, same gentleman brought same car to our salesroom, and car was taken in on exchange for new car and we gave him an allowance of $500 for old car. And on this allowance he gave us the name and address of the man who ran into his car and damaged it, stating that whatever the cost of repairs for old car was to be paid us for same by the man whose name and address he gave us at the time of exchanging the car. The repairs were made which came to $55, and we forwarded the bill to man as stated before, only to have reply returned to us that on September 10 insurance company settled the claim with the man who formerly owned the old car for $35.

Would be pleased if you would inform us just what can be done in regard to this in order to collect on bill of $55, or can anything be done in regard to his collecting that $35 on a car that he did not own at the time?—New York Reader.

Regarding your repair bill, if you have correctly stated the facts and can prove the transaction to be as stated you may sue your customer for the full amount of your claim, regardless of the amount he settled the matter for with the insurance company. And further, if you gave the company notice of your claim, that is the assignment of the customers' rights to collect, then you may hold the insurance company jointly or singly. Perhaps your customer can show a misunderstanding as to the terms of the transaction?

SELLING A CAR IN CALIFORNIA

Q—I have a repair bill over a month old on a car and also possession of car and owner does not have the money. I want to make a sale of same—which I did two years ago on another job, but went to a lawyer which was an extra charge of $16, including advertising two times. I would like to know if I could make a legal sale without the lawyer's fee and if so how?—Waline Auto Repair Shop, Turlock, Calif.

You should recall the old saw about the man who is his own lawyer. However, the law in your state on liens is very simple. It is of possession as at common law, but you may also sell at public auction after 25 days from date the charges are due. But first you must give 10 days previous notice of such sale by advertising such sale in a newspaper published in the county where porperty is situated, or, if there is no newspaper published in the county then by posting notices of the sale in three of the most public places in the town where such property is to be sold, for ten days previous to the date of sale. The proceeds of the sale must be applied to the discharge of the lien and the cost of keeping and selling of the property; the balance goes to the owner. See Secs. 3051-3052 of Kerr's Civil Code of California.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Rayfield Model G Adjustment

Q.—What information can you give on the ignition timing and the adjustment of the Rayfied carbureter on a 1918 Chandler? —Paul E. Thayer, 8 Strathmore Road, Worcester, Mass.

A Bosch magneto was used and the timing was conventional. The interrupter contacts should just begin to separate with spark advance lever in the retard position when the piston comes up on firing dead center or has barely started down again being not more than 1/64 to 1/32 inch down. An illustration of the model G Rayfield carbureter used on this car is shown, there being two adjustments. After engine is warmed up bring both spark and throttle levers into position of full retard on steering wheel and close high speed adjusting nut by turning it as far to the left as it will go in the direction indicated by the arrow for less gas. The low speed adjusting nut should then be turned to the left in the direction indicated by the arrow for less gas until a point is reached where the engine idles evenly. Accelerate the motor quickly by opening the throttle. If the engine hesitates or back fires it will indicate an adjustment that is too lean. Then try the low speed adjustment one or two notches to the right until engine accelerates without popping back into carbureter.

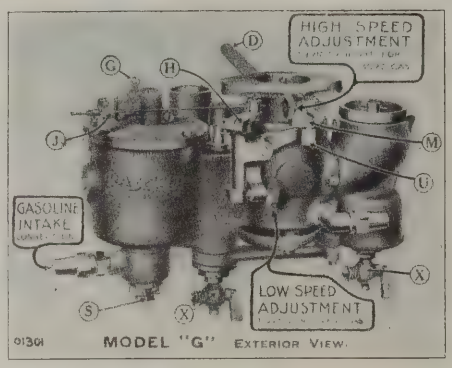
High Speed Adjustment

Turn high speed adjusting nut to the right 7 or 8 notches in the direction indicated by arrow for more gas. Advance spark lever on steering wheel to a point where ordinarily carried. Accelerate engine quickly by opening throttle. If engine picks up quickly without backfiring or without appearing sluggish it will indicate an adjustment about right.

TRUCK ENGINE IDLES UNEVENLY

Q.—We are having trouble with a Hall 3½ ton truck idling properly. This truck uses a Zenith carbureter model L-6 with jets 120-100-50. We have cleaned the jets, put in new gaskets, but cannot make it idle unless we hold the choke about one-half closed. Running on the road or pulling hard it seems o. k.—Charles Neider, Blackfoot, Idaho.

The proper jets are as follows: No. 24 choke, No. 110 main jet, No. 120 compensator, No. 50 idling well and No. 31 seat. You do not mention turning the adjusting screw which controls the idling. As this carbureter seems to be getting too much air the screw should be turned in. If it has to be turned in until it is less than three-quarters of a turn from the seat a larger idling jet should be used.



Rayfield carbureter used on 1918 Chandler

We are assuming of course, that there are no air leaks in the intake manifold. This can be checked by running the engine and squirting gasoline on the intake manifold gasket to see if this changes the way that the engine runs. If so, it shows the presence of air leaks. If you do not readily overcome the trouble it would be well to have the carbureter checked up at the nearest authorized Zenith service station.

100 Miles on a Gallon—Of Oil

Q.—We have a 1924 Dodge Brothers touring car in the shop with which we are having trouble due to excessive oil consumption. It uses one gallon of oil every hundred miles when driving at 35 or 40 miles per hour. The Dodge Brothers service station installed a set of rings when the car was driven 2,500 miles, but the car still uses an excessive amount of oil. The cylinder head was removed and the cylinder checked with gage which showed them to be worn about .003 in. What size holes should be in the oil line that feeds through and how deep should the connecting rods strike oil in troughs?

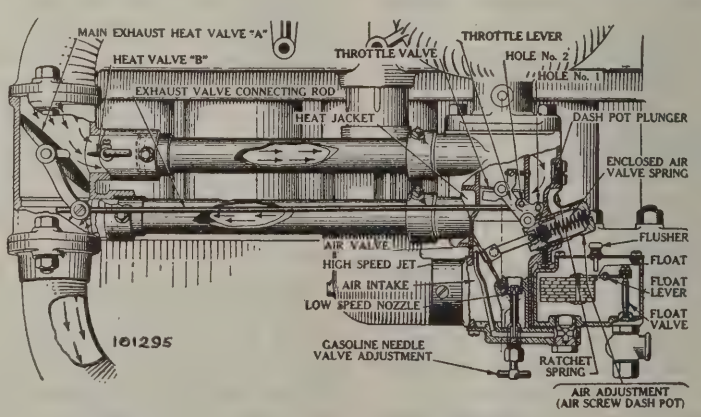
In the oil line which runs the length of the crankcase there are holes approximately 1/8 inch in diameter which should point directly downward. If the oil pipe is turned slightly so that the streams of oil are directed toward the connecting rods it may cause an excessive amount of oil to be splashed into the cylinders. It is better to have the streams of oil directed downward and slightly away from the center of the engine against the side of the crankcase rather than have the streams of oil sent in the direction of the revolving connecting rod.

The piston clearance is not such a factor in producing excessive oil consumption as poor fitting of the rings would be. The essential thing about a piston ring is to have it a good fit in the ring groove, for if it works up and down it will allow oil to work up into the combustion chamber. If the valve cover plates are removed, it will be found that there are two stand pipes which carry oil vapor from the crankcase into the valve compartment. In some cases at high speed too much oil vapor comes through and escapes past the valve covers. In this way oil is lost. If no other remedy is discovered you might try corking these stand pipes to see if this reduces the oil consumption.

AIR VALVE MAY BE HELD OPEN

Q.—We have a 1923 Buick six in our shop which will run idle on either the cold or hot setting of the carbureter. When we try to run it on the road it spits back through the carbureter. The owner says that this trouble developed after the carbureter was removed to replace the gasket at the bottom of the carbureter.—Boyson Garage, Fremont, Wis.

We are showing a sectional illustration of this carbureter and you will notice that there is an air valve controlled by a spring and that this air valve when opening takes additional fuel from the high speed jet. We suspect that the high speed jet was bent when the carbureter was taken apart, so that it holds the air valve partially open all the time. This would account for the trouble you are having.



Sectional view of carbureter on 1923 Buick Six

Clearing Up Electrical Troubles

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Rectifier and Rheostat Efficiency in Battery Charging

Q. I received the information about generator brushes several days ago and wish to express my thanks for the information. I should also be pleased to know whether a hot cathode rectifier using half the alternating current since wave, is necessarily only 50 per cent efficient. I've heard considerable discussion on this pro and con.—George Kissam, 223 W. Queen street, Inglewood, Calif.

In any electrical device there are certain fixed losses which take place regardless of the load. For this reason it is generally found that an electrical device will be most efficient when it is fully loaded. For this reason if a rectifier can be designed to use both halves of the A. C. wave we believe that the efficiency will be somewhat greater. As we understand it, however, the use of only one-half of the wave does not cut the efficiency in half. The current which you pay for is the current which comes through the meter and when no current comes through, the meter is not caused to rotate. In practically all rectifiers there is a transformer device of some sort and when you draw current from the low voltage side you draw a proportionate current from the high voltage side.

Conversely when you do not draw current from the low voltage side you do not draw from the high voltage side and the meter's reading will be reduced accordingly. The operation of a rectifier might be compared to that of a hand operated switch. If you could accurately turn the alternating current on and off by hand, 120 times a second, you would be drawing current at the instant that it is flowing in the right direction for charging the battery and turning it off when it is trying to flow in the wrong direction. When the current is turned off, we are not causing the meter to indicate and it would therefore appear as if we would incur no additional expense by employing this method. As previously stated, however, there are certain fixed losses which go on continuously so that the efficiency of this sort of a device is apparently somewhat less, although not in the ratio of 2 to 1.

Q. What type rectifier or rheostat is the most efficient for charging batteries? Should a rheostat have the preference if both currents are available?

The only data we have applies to the Tungar rectifier and the efficiency depends on the type of rectifier used and on the number of batteries being charged at one time. This efficiency is as follows:

12 Volt 6 Ampere Tungar

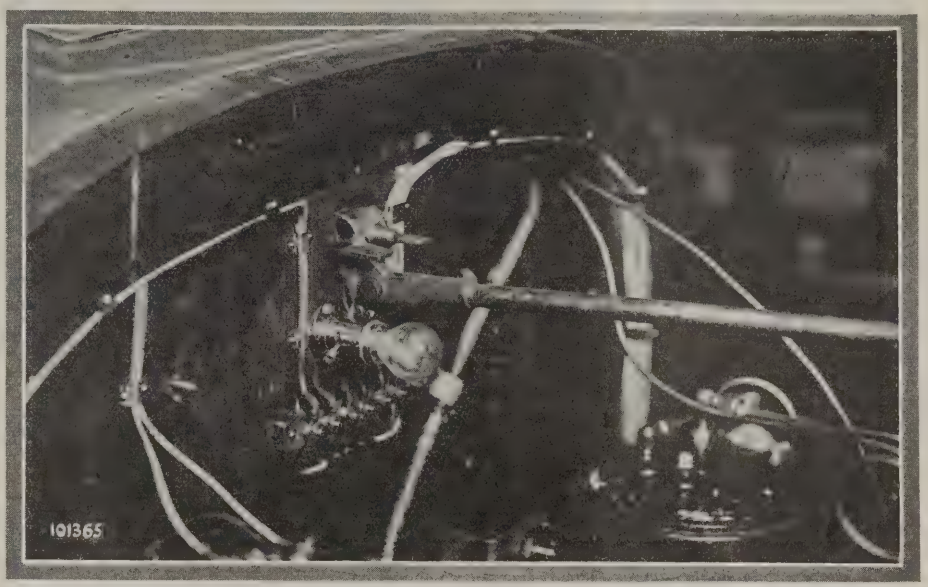
6 Volt Batteries	Efficiency
1	28
2	28
4 Battery Tungar	
4	55
10 Battery Tungar	
1	30
2	45
3	53
4	60

12 Volt 6 Ampere Tungar

6 Volt Batteries	Efficiency
5	63
6	66
7	70
8	72
9	74
10	75

The efficiency in the direct current method is in direct proportion to the number of batteries on charge. For example, if you are charging from 110 volt direct current circuit and have enough batteries on so that your battery voltage is 55, then your efficiency is one-half or 50 per cent. Accordingly, you can see that if there is only one battery on charge you are using only 6 volts out of the available 110 volts and the efficiency is approximately 5 per cent, which is so low that this method of charging is very expensive and undesirable if you only have one or two batteries to charge, but is quite efficient if 14 batteries are on at the same time.

Electrical Shop Should Sell This Idea



The illustration shown gives an idea of the front side of the dash of buses used by the Motor Transit Company of Los Angeles. The light placed under the hood is of great assistance at night when an emergency repair is necessary. Some passenger cars, usually in the higher priced class are also equipped in similar manner, but this is not the rule. It would seem as if electricians handling work on any car could readily sell this idea and install lights under the hood especially where the car owner has experienced trouble at night and has had difficulty in locating it. Successful operation of the electrical department implies knowing how and then selling your knowledge and shop facilities to your customer

WHAT IS MEANT BY IONIZATION?

Q—On page 20 of the April 16, 1925, issue of MOTOR AGE, 27 and 13 lines from the bottom of the first column, there is an explanation that I do not understand. Can you spare me a few minutes to break it up in little bits, so I can assimilate slowly.—Chicago Subscriber.

The article in question referred to a standardized spark gap in which a third needle is used at one side. One portion of the explanation said that when the engine was warmed up the hot gases from the previous explosion were partially ionized which reduced the gap resistance. As we understand the explanation on which this paragraph was based, it is due to the theory as to the nature of matter. Matter is supposed to be divided into small particles known as molecules which in turn are divided into smaller particles known as atoms. A still later theory is that the atoms are divided into smaller particles known as ions and that the atoms split up into ions under certain conditions. The passage of a spark from one point to another through air or some other gap is accomplished more easily when the gas is ionized, that is, when the atoms are split up. In the hot engine the gases as a result of the previous explosion are supposed to be partially in this condition which according to our theory provides a better path for the electrical current than if the gas was in its normal condition.

When we try to make an ignition test out in the air we do not at first have this ionized condition of the air. The theory is that a spark will jump to the third point, ionizing the air and making it easier for the main spark to jump.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Piece Work Often in Wake of Flat Rate

FLAT rate to the customer and piece work to the mechanics seems to be the ultimate development in shops which adopted the fixed price system of selling maintenance and repair operations.

The adoption of the flat rate system involves no special difficulty but putting the men on a piece work basis is not so easy. However, there is this to say in favor of piece work. Once the men get used to working that way they never want to go back to the old hourly rate basis, except under certain conditions.

Although there may be shops which have used the piece work plan of compensating mechanics and have abandoned it, we believe they are few and far between. The size of the shop and the amount of work that can be brought into the shop have a lot to do with it.

Sell Men on Plan

The principal problems involved in getting the mechanics to work on a piece work plan is to first of all get the men firmly sold on the proposition. Then there must be a division between the mechanics and the "house" that is fair to both sides. Again, there must be some provision to insure enough work coming into the shops so the men are busy all the time. There must always be a job waiting for a mechanic before he has finished with the one upon which he is working.

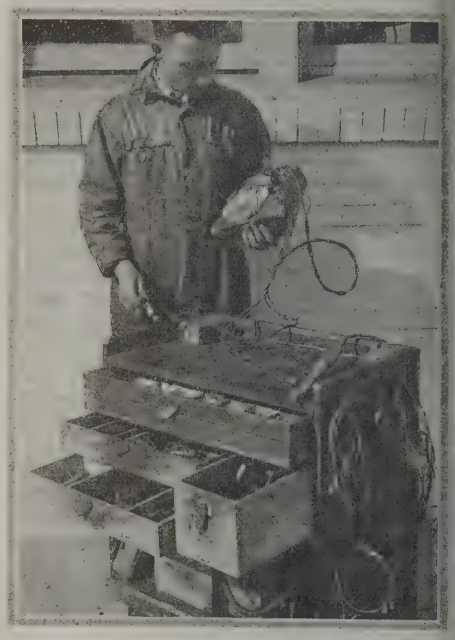
Now, the problem of selling the men is not so difficult if the boss of the institution or foreman shows them that they can make more money. A little arithmetic is all that is needed and they will become readily sold if the division of profits to the men and shop are fair.

In this connection it might be stated that usually 40 per cent of the repair job cost charged the customer goes to the mechanic and the remaining 60 per cent to the establishment. There are modifications of this, of course, depending upon the size of the personnel and the volume of work done. Some shops pay the men 30 per cent. The actual division is something each shop must work out to meet its own conditions.

It also must be remembered that a 40-60 basis is not always fair. This depends upon the nature of the repair job. It stands to reason that on those jobs which require machine tool equipment belonging to the shop that the shop is entitled to a fair return for the use of this equipment.

When it comes to getting enough work into the shop to keep the men busy all the time you will be surprised what the men do themselves in the way of advertising. Every one of them becomes a service salesman, a booster for the flat rate and other things that get business. They work better because they know any comeback jobs are charged against them.

Some shops paying the men on a piece work basis form a little competition among the men by organizing them into teams and the team which turns out the greatest amount of work during a certain period wins a small bonus. It often happens that one man on the same team with another pitches in to lend a hand when necessary because he wants his team to win. The teams are split up from time to time so they are composed of different members. The foreman deals out the jobs and naturally he must use discretion to properly divide the work.



THINGS THAT HELP FLAT RATE

Here is shown a mechanic with testing apparatus for shooting ignition trouble. This cart also contains every need for repair of the ignition system in the car, even to the battery for testing purpose, and electric soldering outfit. No time is wasted looking for tools

Flat Rates on Truck Work

Fall River, Mass.

To the Editor of MOTOR AGE:

Can you inform me if any flat rate schedules have been computed for truck work. Kindly advise where I can obtain such schedules if you cannot supply them.—Henry M. Shea.

Excepting for flat rate operations on such trucks as the Chevrolet, 1-ton Ford, Reo Speed Wagon and Graham Bros. trucks, we do not believe there are any other makes of trucks for which fixed priced operations or flat rate time schedules are available.

Many truck makers are now working on such operations for their respective make of trucks but it will probably be some time before a complete schedule of operations such as set forth in MOTOR AGE's Flat Rate Manual for passenger cars, is available.

Some of the parts makers have a flat rate system for their particular units. For instance, the Buda Company, Harvey, Ill., which makes the Buda engine used in various trucks, has a flat rate schedule covering this engine. But so far as we know flat rates covering trucks as a whole are still something to be desired.

MOTOR AGE'S FLAT RATE FORUM

No. 39

FLAT RATES FOR HUDSON-ESSEX SPRING OPERATIONS

Manufacturer's Official Designation		Time Hudson	Essex 4	Essex 6
J-1	Renew front spring. Install new shackles and spring bolts, if necessary, lubricate parts	1½ hrs.	1½ hrs.	1½ hrs.
J-2	Renew rear spring. Install new shackles and spring bolts, if necessary. Lubricate parts	2¼ hrs.	2¼ hrs.	2¼ hrs.
J-3	Renew right rear spring. (Essex 4 cyl. only.) Install new shackles and spring bolts, if necessary. Lubricate parts		3 hrs.	
J-4	Install new or extra lead on one front or rear spring. Includes rebushing and installing new shackle and belts, if necessary	2½ hrs.	2½ hrs.	2½ hrs.
J-5	Overhaul and rebush springs and replace all parts necessary. Oil all spring leaves, replace center bolts, clips, shackles and shackle bolts where necessary. Lubricate parts	7 hrs.	6½ hrs.	6 hrs.
J-6	Adjust all shackles to eliminate side play and lock in place	¾ hr.	¾ hr.	½ hr.
J-7	Replace or tighten spring "U" bolts	½ hr.	½ hr.	½ hr.
J-8	Install one shackle bolt. Remove broken or frozen shackle bolt and install one new bolt	½ hr.	½ hr.	½ hr.
J-9	Change oil to new style shackle bolts	3½ hrs.	3½ hrs.	

EDITORIAL

Accessories to the Front

A NEW thought worthy of close attention was put forward by W. T. Morris, president of the Automotive Equipment Association, in the article he wrote for the Nov. 5 issue of Motor Age, when he said that keen competition among motor car manufacturers next year probably would lead toward elimination of accessories as standard equipment. According to reports reaching Mr. Morris, which also are borne out by manufacturing preparations the producers are making, there probably will be more cars made next year than even this year's high figure of more than 4,000,000.

Mr. Morris believes it likely that 6,000,000 vehicles may be produced in 1926. The intensity of competition naturally will cause most manufacturers to seek ways of reducing prices to the lowest level and one of the most obvious ways to do this is to leave off accessories. Thus the manufacturer will be able to quote the lowest possible list price.

It does not follow, however, that the cars are to be sold without the accessories and items of equipment that most drivers now consider almost necessities. It will be up to the dealer to sell these items at the time he sells the car, or afterward. Most dealers, having obtained the customer's interest and decision on the basis of a low list price, will be able to then sell at least a fair complement of accessories to be on the car when it is delivered. At the same time there will be opened up to the independent garageman and accessory dealer a great field for the sale of replacement accessories and additional items of equipment that the buyer thought he did not need or could not pay for at the time he bought his car.

On the whole it looks like a big year ahead for the automotive equipment business.

There is too much stepping on the gas when what needs stepping on is the brake.

Tire Sizes Will Be Simplified

WHEN the members of the National Tire Dealers' Association meet in their annual convention at St. Louis this month they should heartily endorse the efforts of the United States Department of Commerce to bring about a reduction in the large number of tire sizes with which the automotive industry is now confused.

They should not only endorse the work being done by the Division of Simplified Practice of the Department of Commerce, but they should actively take up the burden of converting car and tire manufacturers to this program.

The multiplicity of tire sizes adds to the cost of manufacture, but it probably bears more heavily upon the dealer because it makes it necessary for him to carry so large an investment in a widely scattered variety of sizes and types of tires in order to supply the needs of motor car owners. This additional cost is, of course, passed on to the consumer and has no little part along with the British rubber restriction act in advancing the price of tires.

In the closing days of the world war the Department of Commerce was active in working for simplification of types and sizes of tires and the result was that by the beginning of 1922 only 11 sizes were required for all passenger cars in current production. Then came balloon tires and now the Department estimates that no fewer than 90 sizes and types are required for current car production and cars now in service. Many of these sizes are required for cars made before the introduction of balloon tires in order to permit of the adaptation of the balloon principle to the older vehicles. As these older vehicles wear out and disappear from service, however, there will be an automatic reduction in the number of necessary tire sizes, provided there does not come along some new design to supersede balloon tires.

In reality the current passenger car production today requires only 26 sizes of tires. Five of these are high pressure sizes and 21 are balloon sizes. It is evident that even this number of sizes is too large and that in the interest of economy still further standardization must be had. The tire dealers, as well as car dealers, should use all their influence toward bringing about this standardization in which the Department of Commerce is so ready to assist.

Save his car from freezing and you may save a good customer.

Take Discounts

THE successful merchant in any line of business, automotive or otherwise, should be first of all a good collector and a good payer. The merchant who pays his own bills promptly usually is one who gets the money that is coming to him from customers without undue delay. The latter is necessary to the former. The importance of keeping collections up to date and paying all bills promptly is greater than many merchants realize. The merchant who is habitually late in paying his bills and thus loses the ordinary trade discounts for prompt payment is burdening himself with an extra item of overhead that hinders him in the race with competition. It produces a definite waste in his own business that is an unfair burden for the business to carry. The habit of taking advantage of all cash discounts is a good one for the automotive retailer to acquire and is a stepping stone to success.

Ford Causes New Production Record

Some Manufacturers Rush Output to Meet Demands

Constantly Expanding Export Market Is Brightest Spot in Present Picture

PHILADELPHIA, Nov. 11.—The record production of last month of approximately 454,000 cars and trucks in the United States and Canada was made in the face of a declining volume of new orders. It therefore, represented to a great extent the effort of manufacturers such as Ford to catch up with a large surplus of orders already on the books. Furthermore the decline in new orders was not very great and still left the volume far ahead of normal for this time of the year.

At the present output rate, which is being slackened only very gradually, a surplus of roughly 500,000 cars will be carried over into the new year by distributors and dealers. This may sound like a large number but it actually represents only about ten cars per dealer—no more than sound business principles would indicate as the normal stock to be laid by during the slack season. On the other hand it will tie up about $400,000,000 in credit, an important sum should there be any period of serious credit strain.

A constantly expanding export market is perhaps the brightest spot in the automotive picture. Over 15 per cent of current production is going overseas and there are indications that the goal set by the automobile manufacturers—25 per cent of total output for export—may have been too conservative. Germany, with the abandonment of drastic restrictions on automotive imports, has become an important market, and cars are flowing into that country at an astonishing rate.

The total production of cars and trucks for 1925 will be from 4,200,000 to 4,400,000, or a new high record for the industry. Fourth quarter earnings should be little, if any, lower than those of the third quarter. The outlook for 1926 is favorable, with a fair prospect of a lowering or elimination of the automotive excise taxes, and with other economies to the purchaser in the form of a lower insurance and financing rates.

AMERICAN AUTOPARTS SOLD

DETROIT, Nov. 7.—Sale of the American Autoparts Company to the Eaton Axle and Spring Company was announced today by officials of the latter company. No purchase price was named. The American Autoparts Company, which is one of the largest manufacturers of leaf springs for standard equipment and the replacement trade, will be operated as a branch of the Eaton Axle and Spring Company.

SPEED RECORDS AWARDED

WASHINGTON, Nov. 7.—Two new speedway records have been allowed here by the contest board of the American Automobile Association as a result of the automobile race Saturday, October 31, on the newly opened board speedway at Salem, New Hampshire, it is announced here. These new speedway records, regardless of class for non-stock cars, go to Leon Duray, veteran driver, who set a new high mark for the 75 mile and for the 100 miles. Duray negotiated the 75 miles for a world record in 35 minutes, 00.48 seconds, that is at a rate of 128.60 miles an hour. He turned the 100 mile mark in 46 minutes, 41.39 seconds, or at a speed of 128.55 miles an hour. Duray drove a Miller Special.

Paige-Detroit Earnings Are $3,043,174 in 9 Months

DETROIT, Nov. 7.—With the single exception of 1923 the net earnings of the Paige-Detroit Motor Car Company for the first nine months of 1925 which are given as $3,043,174.32, are greater than for any previous full year in the history of the company. The above figures do not include provisions for federal income and profit taxes.

In 1923, the corresponding figures were $3,320,648.85.

The company's net earnings for the first nine months this year after deducting $114,962.75 paid in cash dividends on the 7 per cent cumulative preferred stock showed a balance equivalent to $4.33 a share on the 676,474 shares of common stock of no par value outstanding September 30. This compares with $2.37 a share for the common stock earned during 1924 and $4.50 a share earned in 1923.

For the nine monthe ending September 30, last, the company's revenue from sales less returns—of cars, parts and so forth, including inter-company sales, aggregated $54,164,574.69 showing gross profit of $6,554,671.70 after deducting $47,609,902.99, the cost of sales, including inter-company costs. Selling, administration and general expenses were $3,423.097.41, leaving net operating profit of $3,130,574.29 for the nine months.

After deduction of miscellaneous charges amounting to $88,399.87 there remained net earnings of $3,043,174.42 for the nine months before federal taxes, against $1,834,552.26 for the complete year 1924 and $2,885,737.33 in 1923.

N. Y. YELLOW CAB SALE

NEW YORK, Nov. 7.—William E. McGuirk, president, Yellow Taxi Corp. of New York, confirms reports that his company is negotiating with the Philadelphia Rapid Transit Co. for the sale of its Philadelphia taxicab properties.

New Car Sales Gain Over Last Year in Buffalo, N. Y.

Used Cars Lag and Rural Buying Declines on Short Crop Yields

BUFFALO, Nov. 2.—The sale of new cars in the Buffalo territory during October was about 10 per cent better than during the corresponding month of 1924. The outlook, according to representative dealers, for business during the remainder of the fall is encouraging.

Conditions industrially in Buffalo and in the other cities in the Buffalo territory are good. In Buffalo, with its diversified line of manufacturing and other industries, conditions are satisfactory and the outlook for a prosperous winter is pleasing. Grapes on which Chautauqua farmers largely depend have fallen short of the usual yield. Other crops are light.

The used car situation is lagging. There is some demand for closed used cars of popular makes, but dealers do not think there wil be much doing in the used car field before next March.

The tire business was 25 to 40 per cent better in October of this year than during the same month last year despite the higher prices tires are now bringing.

PIONEER RECEIVER ASKED

INDIANAPOLIS, Nov. 7.—Word has been received here that a petition was filed in Kokomo for the appointment of a receiver for the Pioneer Automobile Company of Kokomo which succeeded to the Apperson Brothers Automobile Company. The claim is filed by the National Lead Company and asks judgment for $1,000 represented by three notes alleging that the first note is past due without payment. The action further sets forth the claim that the concern owes other sums and that tax payments are also owed. The Pioneer Automobile Company took over the property and good will of the old Apperson concern under a lease arrangement.

MANY FARMS USE CARS

SPRINGFIELD, II., Nov. 7.—Automobiles and automotive equipment are utilized on 83.5 per cent of Illinois farms, according to a survey just finished by A. J. Surratt, federal agricultural statistician, who has found that 192,050 of the estimated 230,000 farms of the state have at least one car and many of them several. The distribution ranged from 96.7 per cent in the northeastern district, which included Cook county, to 57 per cent in the southeast. The old time walking plow is used on only 12.7 per cent of the farms now and in 10 central Illinois counties only 1.7 per cent of the farms have the implement.

Bad Weather Injures New Car Sales in Des Moines

Supplies, Accessories and Parts Move Well in October and Radio Business Booms

DES MOINES, Nov. 7.—Wet and disagreeable weather during almost the entire month of October did much to discourage buyers of new cars. As a result new car registrations for the month will probably be considerably below those of the same month last year. Ford dealers have enjoyed good business, much of which was held over from September, when dealers were unable to deliver cars. Many Ford dealers are still behind on deliveries.

Used car sales have slumped with the colder weather. Open air used car markets in particular have suffered from weather conditions and the turnover on used cars is far below what it would have been had October been a pleasant month. As a whole, used car stocks are very conservative. Few Iowa dealers will enter the winter months with heavy stocks of used cars.

Jobbers in supplies, accessories and replacement parts have found excellent business during October. Radio business has been booming. The cold weather during the latter part of the month, brought hurry-up calls for winter supplies and accessories. The sale of replacement parts has been better in the larger centers than in smaller towns.

Collections are characterized as good. Liquidation of many closed banks over the state has done much to relieve the financial condition. The outlook is for a good winter business in all lines.

GOODYEAR BRANCH MOVES

INDIANAPOLIS, Nov. 7.—The Indianapolis branch of the Goodyear Tire and Rubber Company which for many years has been located at Capitol Avenue and Walnut Streets will move next week into its new quarters in the Spink Building at 603 West Washington Street, it was announced here by H. G. Boyer, manager of Goodyear sales interests in Indianapolis territory. The company will occupy the first four floors and basement of the new wholesaling and distributing building which will increase the display, office and storage facilities of the company.

N. A. D. A. SPEAKERS IN SOUTH

ATLANTA, Nov. 7.—A large number of Georgia and Florida automobile dealers and jobbers attended the special congress of the National Automobile Dealers' Association, held at the Atlanta-Woman's Club Tuesday, Nov. 3. Management methods comprised the principal subject discussed, primary speakers on the program including C. A. Vane, general manager of the association; Charles E. Gambill, president of the N. A. D. A.; A. R. Kroh, Lynn Shaw and A. C. Faeh.

GLASS LEAVES OAKES CO.

INDIANAPOLIS, Nov. 7.—F. E. Glass has announced his resignation as vice president and sales manager of the Oakes Company, division of Martin-Parry Corporation, here. Mr. Glass became associated with the Oakes Company in early 1913, shortly after it was established. He was vice president and sales manager for the company when it was taken over by Martin-Parry interests early in 1924, and has been acting in that capacity since then.

Durant to Build New Light Six in Canada

TORONTO, Nov. 7.—Coupled with a financial report showing substantial improvement in the position of the Canadian Durant Company, is the statement that preparations are now being made to place on the market a light six cylinder motor car to compete in the low-priced six cylinder car class. The new car, it is stated, will be produced in 1926.

Important alterations are now being undertaken at the plant. Equipment for lacquer finishing is being installed to supersede the former paint process, while the body assembly plant is being enlarged. Provisions will also be made for the assembling of frames in addition to the present degree.

The report states that for the first six months of this year the production of cars exceeded figures for the same period of 1924 considerably, a total of 6,522 cars having been produced. The outlook of the company for the coming year is considered definitely favorable.

October Sets New High Mark in Car Production

NEW YORK, Nov. 7.—A new high production record for the automobile industry for all time was set in October, according to the preliminary estimate of the National Automobile Chamber of Commerce, which gives 454,327 as the total of car and truck output. This compares with 439,125 in April, 1925, the best previous month, and with 332,759 in September, 1925, and 293,356 in October, 1924.

The total production for the first ten months of the current year is thus brought to 3,620,468, or within about 20,000 of the total for the entire year 1924. There is now no doubt that the record for a year's production, set up in 1923 with a total of 4,086,997 cars and trucks, will be bettered by a wide margin this year.

WALSH GOES TO BUFFALO

BUFFALO, N. Y., Nov. 7.—H. J. Walsh, formerly manager of sales for the Chevrolet Motor Company in the Pittsburgh zone, has been transferred to Buffalo to act in the same capacity for the Buffalo zone. Mr. Walsh succeeds H. G. Semmons.

McClintock Placed at Head Of Erskine Traffic Bureau

Studebaker President Founds Research Department at University of California

LOS ANGELES, Nov. 7.—Dr. Miller McClintock, western traffic expert, formerly a member of the Los Angeles traffic commission, will have charge of the bureau for street traffic research, established at the southern branch of the University of California by Albert Russel Erskine, president of the Studebaker Corp., the university has announced.



A. R. Erskine

Mr. Erskine made an offer to the board of regents of the university to establish two fellowships of $1,000 a year each to graduate engineering students of the university, to encourage traffic control as an engineering profession and to influence extensive research.

Besides his practical experience, Dr. McClintock was connected with the government research bureau at Harvard University and is widely known as a traffic authority. He is the author of "Street Traffic Control" and "The Los Angeles Traffic Code."



Dr. Miller McClintock

The bureau plans to make intensive study of urban traffic difficulties and their correction. Investigation will be made of pedestrian control, conflict between street cars and automobiles, parking methods, street design, speeding, signalling devices and all the other phases of the city highway problem.

Mr. Erskine, in offering the grant to the university, pointed out that traffic is an engineering problem and can be satisfactorily controlled only by engineering methods. It is his belief that the failure of large American cities to deal comprehensively with the traffic situation is largely due to the lack of any technical information.

TO PROVIDE JUNIOR EIGHT COUPE

The Locomobile Company of America, Inc., announces the addition of a coupe to the Junior Eight line of Locomobiles. This new model will be in production during the latter part of November. It will have an extra wide, straight seat inside and a rumble seat in the rear deck for two passengers. It will be finished in gray and black.

Standardization of Truck Chassis Will Be Studied

Executives Will Gather Nov. 11 and 12 at Washington to Consider Simplification of Design

WASHINGTON, Nov. 7.—Standardization of the wide range of motor truck chassis sizes into four specific classes ranging from one to five tons will be the principal topic under discussion here next week when more than 150 executives of motor truck companies and the leading parts manufacturers of the country comprising the membership of Motor Truck Industries, Inc., will gather at the Department of Commerce to consider further progress in a standardization program which the organization began work on some months ago. Announcement of the meeting, November 11 and 12 is made by the Division of Simplified Practice of the Commerce Department.

The four sizes contemplated for motor truck chassis are: Fast freight class, 1 ton and 1½ and 2 tons; heavy duty class, 2½, 3, 4 and 5 tons. This, together with allied subjects, will represent an effort on the part of a number of motor truck leaders to bring about a simplification of parts and the development of standards which will permit a reduction in the cost, as well as the service and maintenance, and the improvement of values to the users of this important mode of transportation.

Seven group committees have been at work surveying the opportunities for standardizing and simplifying various elements of motor trucks. Their reports will be presented at this meeting. They include ratings, motors and accessories, steering gear, axles, wheels and springs, transmission clutches, control, transmission brakes, power takeoffs, etc.; propeller shaft, joints and bearings, frames, cross members and brackets, bodies, dashes, cowls, seats and cabs.

Velie to Build Own Front And Rear Axles at Moline

MOLINE, Ill., Nov. 7.—The Velie Motors Corporation is placing contracts and installing equipment for the manufacture of its own front and rear axles for use in Velie automobiles. These axles will be equipped with Lockheed Hydraulic four-wheel brakes, which has been standard equipment on Velie automobiles for some time past.

The company has recently installed a complete plant for finishing bodies for Velie cars in the popular lacquer with high luster finish. All products of the Velie shops now carry the lacquer finish.

These moves are all in line with the definite policy to make the Velie plant at Moline a self-contained unit with the consequent saving in cost, transportation and handling. The company has an extensive plant at Moline with about 1,000,000 square feet of floor space.

TALKS TAX REPEAL

BUFFALO, N. Y., Nov. 7.—Edward F. Loomis, secretary of the National Motor Truck Association, recently called on executives of the Atterbury Motor Car Company, the Pierce-Arrow Motor Car Company, and the Stewart Motor Corporation, and discussed various problems of the industry. The subject of prize importance was the possibility of reduction or elimination of the Federal tax on motor trucks and motor truck parts.

How to Adjust Brakes

(Continued from page 15)

place the cap and pump handle and with a few strokes return the brake pedal to its normal position after which the pump handle is locked. Do not tigthen the handle with a wrench as this can be properly done with the hands, only. See that the brake pedal has about 1/4 in. play and if it is found that more is present give the pump handle a few more strokes.

At this particular season of the year and especially in the section of the country where snow and ice abound guard against the brake anchor bracket becoming frozen into the anchor pin. It is very important that this anchor bracket function properly at all times and one of the first things the mechanic should check up when the car comes in for brake work is to see that this anchor point works freely.

Western Roads to Request Increase in Freight Rates

NEW YOFK, Nov. 7.—J. S. Marvin of the N. A. C. C. has warned members that western railroads plan to ask a 10 per cent increase in freight rates on automobiles. At a meeting of the railroad Classification Committee in Chicago this week, during a discussion of items affecting freight charges on automobile parts, Chairman Fyfe of the Western Classification Committee announced to N. A. C. C. representatives present that the proposal to increase the classification rating on automobiles in carloads to 110 per cent of first class rates in Western territory would be docketed for discussion at the next meeting of the committee in January. Chairman Fyfe was instructed by the Western railroad executives to take this action. Chairman Dulaney of the Southern Classification Committee was present but not prepared to say whether the Southern lines would take the same action. Present classification rating of automobiles in carloads on western and southern lines is first class while on eastern roads the rating is 110 per cent of first class. The proposed change would not affect shipments to California and the Pacific Coast, which are covered by special commodity rates not subject to classification grouping.

Ajax Production Speeds Up Nash Near Summer Peak

Operations of Seaman Body Plant Continue Higher Than Ever Before in History

MILWAUKEE, Nov. 7.—With the approach of the winter season, the Nash Motors Co. and the Seaman Body Corporation which supplies bodies for Nash cars, are slackening production slightly at both Milwaukee and Kenosha, Wis., plants. Operations at these plants, however, are far more active for this time of year than at any time in their history, and although Nash production is tapering off, output at the Ajax plant at Racine is being pushed to catch up with the heavy demand for cars.

The Nash Motors Co. has laid off between five and six hundred employes, while machinery is being shifted and other arrangements made for taking inventory, at which time practically the entire force of about 5,000 men will remain away from work for about a week, according to W. H. Alford, vice-president and controller of the company. Practically all of these men will be back on the job when that work has been completed or shortly thereafter.

It has not yet been definitely decided when actual taking of inventory will get underway. The yearly checkup will be made simultaneously at the Milwaukee and Kenosha plants, with Milwaukee employes also temporarily laid off at that time.

Output of the Nash factories, exclusive of the Ajax subsidiary has been running about 500 cars a day against 595 during the peak in August. Slowing down of the turnout of Nash cars has enabled the Seaman Body Corporation to get back on a normal basis and night shifts have been discontinued. The force has thus been reduced from 3,900 to 3,500 men. Current output is about 8,000 bodies a month against 11,000 in September and 6,400 in August, the biggest production before erection of the new plant addition.

A BOOK ABOUT BELTS

A BOOKLET ON ENDLESS BELTS which has just been issued by the L. H. Gilmer Co., of Philadelphia, contains engineering data on small belt drives such as are used for automobile fans and small machine tools. Although numerous treatises on large belt drives are available, this is believed to be the first compilation of data specifically applying to small drives such as are used in automotive engineering. Subjects discussed include belt speeds, ratio of pulley diameter to belt thickness, pulley flanges, crowning, take-up, etc. Much of the information is now printed for the first time. The booklet is illustrated with numerous photographs showing the manner in which belts have been applied to drives of exceptional character.

Lighting Association Adopts Plan for Uniform Statutes

Hoover Committee's Pamphlet Approved—Collins of Cincinnati Elected President

CHICAGO, Nov. 7.—The subject of sensible and uniform legislation which was up before the second meeting of the Automotive Lighting Association at the Drake Hotel this week is one that at this time is vital to the industry as a whole.

Much constructive work to draft ideal laws which might be submitted to various state legislatures has been done by the Hoover Committee on Uniformity of Laws and Regulations, National Conference on Street and Highway Safety. A. P. Federline, secretary of this committee expressed the desire to have constructive proposals from those in position to give practical suggestions based on intimate knowledge of lamps and automotive lighting problems.

For this reason a legislative committee and a standardization committee were appointed at the first meeting of the Automotive Lighting Association held last April, and the work of these committees was presented at this session in the form of a pamphlet.

To illustrate the need of such a pamphlet it was stated that if this information had been available a short time ago it would have prevented the passage of a law in one state which makes the spotlight illegal. That spotlights have been improperly used is freely acknowledged, but they also serve a very valuable purpose, and subject to proper regulation, have their rightful place among useful motor car accessories.

The recommendation in this particular case is designed to make provision to overcome the objections to the spotlight without eliminating it, which would work a hardship to car owners, dealers and manufacturers alike.

The pamphlet also recommends the tilted beam principle in headlight control and suggests necessary specifications. It also covers regulations for auxiliary lights which provide for their safe use, without placing limitations on the development of new and useful improvement in motor car lighting.

After some revision, the pamphlet was unanimously approved and will be presented by the legislative committee at the next meeting of the Hoover committee in Washington, Nov. 19.

The meeting also adopted by-laws and elected the following officers: President, H. W. T. Collins of the Cincinnati Victor Co., Cincinnati, Ohio; vice-president, T. K. Quinn, General Electric Co., Clevelan, Ohio; secretary and treasurer, W. S. Murtfeldt, National Lamp Works, Cleveland, Ohio. The following directors were also elected: J. F. Brown, S. M. Lamp Co., Los Angeles; C. H. Blumenauer, Jefferson Glass Co., Follansbee, W. Virginia; J. H. Cattell, Warner Patterson Co., Chicago; W. F. Anklam, C. M. Hall Lamp Co., Detroit; C. C. Mortenson, Stover Signal Engineering Co., Racine, Wis.

A. A. A. Standings

1. DePaolo	3260
2. McDonogh	1430
3. Milton	1210
4. Hartz	1120
5. Cooper	885
6. Lewis	465
7. Hepburn	356
8. Elliott	330
9. Shafer	315
10. Comer	284
11. Duray	185
12. Batten	170
13. Kreis	117
14. Bennett Hill	75
15. Devore	56
16. James Hill	55
17. Bordino	54
18. DePalma	46
19. Shattuc	40
20. Wonderlich	15

Jewett Denies Any Plan To Merge His Company

DETROIT, Nov. 7.—Flat denial that there is a deal pending working toward a change of ownership or of management of the Paige-Detroit Motor Car Company making Paige and Jewett six cylinder cars, was made today by H. M. Jewett, president.

Mr. Jewett issued a brief statement in reply to a widely published rumor that control of the company had passed to a large local manufacturer of four cylinder cars. Mr. Jewett said:

"The Paige-Detroit Company not only has not changed hands, but there has and will be no negotiation. The company has been operating most successfully under the present management for many years and is planing to trust its present advantage in the six cylinder field by aggressive policies of manufacturing and merchandising."

Mexican Bank Reform Is Great Aid to Sale of Cars

DALLAS, Tex., Nov. 7.—The reform of the banking system in Mexico, together with the $40,000,000 good road plan now under way, has increased the sale of automobiles in the republic below the Rio Grande and will result in doubling the number of automobiles in Mexico within the next year, according to J. F. Roark, southwestern manager for the Durant Motor Company, who has just returned from an extended tour of the republic.

Mr. Roark planted agencies at Mexico City, Durango, Victoria, Monterey, San Louis Potisi and several other cities. These agencies are ordering cars in straight car or train lots and paying for them before they reach Mexican soil. The cars are shipped bills lading attached and the paper handled through banks at Laredo, across the Rio Grande from Neuva Laredo where a branch of the Bank of Mexico is located.

New Gill Policy Results In Financial Betterment

Products Now Being Distributed Through Jobbers and Parts Dealers Only

CHICAGO, Nov. 9.—Rapid improvement in the financial condition of the Gill Manufacturing Co. is reported by President Elmer J. Smith, following the change in the company's distribution policy put into effect during the last year. This company's products, including pistons, piston rings and piston pins, are now distributed exclusively through jobbers and replacement parts distributors, and the company's branches, of which there were at one time 39, have been discontinued.

Quick assets of the company are now four to one in proportion to liabilities and net assets are seven to one, according to President Smith and Don M. Compton, chairman of the board of directors. A large reduction in liabilities was accomplished through the sale of stocks formerly carried in the company's branches, resulting in a substanial decrease of inventory.

The company has just sold its oil burner division and will hereafter devote itself to automotive products. The oil burner business was purchased by the Gill Oil Burner Co. of Chicago, an Illinois Corporation.

Three lines of piston rings are now offered by the Gill company: the Gill with interlocking joint, the Service with step cut joint, and the Economy, an oil ring. E. E. Warfield is vice president in charge of sales.

TRACK PAYS WELL

SALEM, N. H., Nov. 7.—The directors of the new Rockingham Board Speedway have reported that the receipts from the race here last Saturday showed a total income of more than $100,000 proving that motor racing would be a success in New England. A total of $37,000 was taken in at the gate Saturday. The race had been postponed twice from Oct. 17 and it was run off at a temperature very close to freezing. Manager Jack Le Cain has applied for sanctions in 1926 for July 4 and September 25, and judging by the attendance last Saturday the speedway will pay off its entire indebtedness next year.

CROWLEY JOINS U. S. CHAIN

BRIDGEPORT, Conn., Nov. 7.—Guy F. Crowley, formerly in the development department of the Firestone Tire and Rubber Co., has joined the technical staff of the American Chain Co., Inc., as sales engineer of the tire bead wire division. Mr. Crowley was associated for several years with the U. S. Tire Co., Hartford plant, as chief draftsman, and with the Fish Rubber Co. of Chicopee Falls, Mass., as assistant chief engineer.

Essex Finance Plan Allows Entry Into Ford Territory

Low Down Payment with Long Time Extension Being Tried as Additional Sales Lever

DETROIT, Nov. 7.—Aaron DeRoy, head of the Aaron DeRoy Motor Car Company, Hudson-Essex distributors in the Detroit area, has announced a new financing plan which will enable purchasers to buy Hudson cars for a down payment of $290.00 and $195.00 for Essex. The remaining amount is divided into 16 equal monthly payments.

With the lowering of prices and the new financing plan, the Essex car goes directly into Ford territory, it being the theory of those behind the financing plan that any one in the market for a Ford car can for a little more money buy an Essex coach. The working out of the plan is being watched with considerable interest.

CHICAGO, Nov. 7.—The Hudson Motor Co. of Illinois, Hudson-Essex distributors for the Chicago territory, this week began advertising down payments of $195 for Essex and $295 for Hudson. It is understood here that the plan has the sanction of the Hudson Motor Car Co., Detroit, and that it is being tried in Detroit, Chicago and New York City.

Authorities on automobile finance in Chicago point out that although down payments of less than one-third and extensions over a period of more than a year, are not regarded as sound principles by the National Association of Finance Companies, that in the majority of cases, a used car is taken in as down payment and that the used car usually represents at least a third of the value of the new automobile.

For this reason, they explain, the advertising of low down payments and unusual time extensions will not materially affect the stability of automobile finance.

Cleveland Is Making Plans For Extensive 1926 Show

CLEVELAND, O., Nov. 7.—Cleveland distributors, dealers and manufacturers of passenger cars will be assigned space in the city's 1926 show Tuesday, November 3, it has just been announced by Herbert Buckman, manager of the Cleveland Automobile Manufacturers' and Dealers' Association, promoters of the exposition.

The annual show here has been set for January 23 to 30 in spacious public auditorium, maintaining its usual chronological position between the New York and Chicago exhibits.

Accessory space already is in process of assignment and commercial car space will be selected immediately following the passenger car drawing.

With the passenger car assignment still in the future, applications for space already are in the hands of the management for the following makes:

Ajax, Auburn, Buick, Chandler, Chrysler, Cleveland, Diana, Essex, Ford, Flint, Franklin, Hudson, Hupmobile, Jordan, Locomobile, Marmon, Moon, Nash, Oakland, Pierce-Arrow, Reo, Rolls-Royce, Stearns, Studebaker.

CLEVELAND DEALERS MEET

SAN FRANCISCO, Nov. 7.—Chandler and Cleveland dealers in central and northern California attended an all-day meeting and luncheon in San Francisco, at which Roy B. Alexander, president of the Chandler-Cleveland Motor Car Company, was the principal speaker. Other speakers were Charles Bowman, sales manager for the company here; Charles L. Hebrank, dealer, of Oakland; Bert Farnsworth, dealer, of Santa Rosa; A. A. Zolezzi, dealer, of San Jose, and J. Charles Nagel, sales manager of the Hebrank, Hunter and Peacock Company, of Oakland.

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15 More Firms Register For Space at Bus Show

DETROIT, Nov. 7.—With the applications of 15 additional firms for space, the number of firms that will exhibit at the First National Motor Bus Show to be held here November 16 to 21 inclusive has been increased to 46. This does not include those firms which have made tentative reservations.

The firms which made applications during the last week according to C. E. Stone, chairman of the executive committee are: E. I. DuPont de Numoers Co., Kysor Heater Co., Electric Service Supply Co., Gabriel Snubber Sales and Service Co., Eisemann Magneto Corp., United States Recording Instrument Co., Brown-Lipe Gear Co., C. G. Spring and Bumper Co., Miller Rubber Co., National Pneumatic Co., Willis Storage Battery Co., Yellow Truck and Coach Manufacturing Co., Fageol Co., Ruggles Motor Truck Co., and the Chevrolet Motor Co.

An additional feature will be the exhibition of a Stout all-metal monoplane by the Ford Motor Company. The ship is the second to be manufactured by the Stout Metal Airplane Division of the Ford Motor Company and is a replica of those used on the Ford air routes and also the one recently sold to the John Wanamaker Stores, Inc.

CLINICS TO CONTINUE

CHARLOTTE, N. C., Nov. 7.—The series of service clinics, held in North Carolina and South Carolina, under auspices of the Charlotte branch of the Ford Motor Company, completed yesterday at Asheville, N. C., will be followed by a similar series, directed by the company's branch at Jacksonville, Fla., according to an announcement by company officials. The Carolina schedule of clinics, each attended by approximately 50 dealers and mechancis, included Charlotte, Greenville, S. C., Columbia, S. C., Charleston, S. C., Florence, S. C., Fayetteville, N. C., Durham, N. C., and Winston-Salem, N. C.

Graham Active in Drive for Repeal of War Tax

Chandler Vice President Heads Committee Working with U. S. Chamber of Commerce

WASHINGTON, Nov. 7.—George M. Graham, vice-president, Chandler Motor Car Company of Cleveland and acting chairman of the National Automobile Chamber of Commerce taxation committee, is one of a group of leaders in the Chamber of Commerce of the United States who will present to Congress next month a program calling "for an immediate revision of Federal taxation on a peacetime basis and along lines that will encourage economic advancement."

Based on a survey of the entire field of federal, state and local taxation, recommendations to Congress will urge legislation in harmony with plans to coordinate and simplify taxation throughout the United States.

The study of taxation in all its phases is under the direction of a special committee of economists and business men who are working with the chamber's finance department.

"The war was ended seven years ago," says the announcement just made by the U. S. Chamber of Commerce, "and it would seem that the time is near, if it has not already arrived, when instead of accepting the scheme of wartime taxation and simply eliminating or reducing certain taxes from time to time in a haphazard manner, as has been the practice, that the whole scheme of excise should be examined from the viewpoint of a permanent plan of peacetime taxation."

New Models Said to Cut Old Fords' Value 10 Per Cent

BUFFALO, N. Y., Nov. 7.—Alfred S. Meldrum, head of Alfred S. Meldrum, Inc., 59 Franklin St., states that it is his experience that the new model Fords have depreciated the value of used Fords of the old models about 10 per cent. This company does a large used Ford business. However, Mr. Meldrum does not look upon this situation as an evil.

"The introduction of the new model Fords," said he, "has given used Ford dealers an opportunity to deal more conservatively on the old cars. Ford owners, because of the difference between the old and new models are content to accept less allowance on trade-ins than was the case before the new models came out."

LON SMITH JOINS M'KEE

INDIANAPOLIS, Nov. 7. — Lon R. Smith, for years identified with selling in the industry by his connection with Buda, Midwest, Columbia, etc., has become manager of the merchandise department, Homer McKee Company, advertising agency.

A-1 Bonded Garages, Inc., Expanding Its Activities

First Operative Section, Set up in Texas, Will Be Extended to Other Territories

CHICAGO, Nov. 7.—With its system in operation in the southwest the A-1 Bonded Garages, Inc., is going forward with extension of its organization to other sections, according to S. C. Levy, vice president of the corporation. It is the plan to build up its system section by section, solidifying newly organized regions with those already organized as promotional operations advance.

The object of this plan is that the value of the system rests altogether upon the availability at all times during travel by the tourist of A-1 bonded garages. The corporation, therefore, established the first operative section of its system in Texas and the southwest along popular tourist routes where many garages now bear its emblem and where highways display A-1 signs.

Under the system of A-1 Bonded Garages an appeal is made especially for the trade of tourists who want assurances of good mechanical work on their machines. The patron is given a bonded receipt following completion of mechanical work which entitles him to free rectification of the job in another A-1 bonded garage if the work falls down within a period of 24 hours and within a radius of 100 miles from the garage where the work was originally done.

The garage rectifying the work is paid by the central organization and an adjustment is made with the shop which fell down on the job. According to Mr. Levy the plan draws much work to the franchised garage and at the same time makes it more careful to turn out good work. Tires and general overhauls are not included in the bonded work. Before the franchise is granted to a garage Mr. Levy says inspectors pass on the shop's integrity and competency. Special attention is paid to its equipment. Only one shop is licensed in the smaller towns while larger places are zoned. Central headquarters of the corporation are at 11 S. La Salle St., Chicago, and its southwestern offices are in the Dundee building, Fort Worth, Tex.

Budd Builds Assembly Plant for Steel Bodies

PHILADELPHIA, Nov. 7.—The Edward G. Budd Manufacturing Company, of Philadelphia, is entering a new field. On the same plot with their steel wheel plant in Detroit, an assembly station for the one-piece All-Steel body is rapidly nearing completion.

The new facilities provide for complete finishing of the bodies, a task hitherto left to the car manufacturers. The units will be shipped in "the white" from the main factory in Philadelphia, thereby taking advantage of the low production costs, and will be assembled to the last minute detail at Detroit, ready to drop into place on the chassis.

Begun early in September, the new plant, a $2,200,000 structure, will be ready for production early in December.

NEW PAIGE-JEWETT DEALERS

DETROIT, Nov. 7.—The Paige-Detroit Motor Car Company has appointed new dealers as follows:

Callas Simon, Lawrence, Mass.; Toledo Paige-Jewett Co., Toledo, O.; Paige Sales Co., Solvay, N. Y.; Hysell Motor Co., Pomeroy, O.; A. L. Bacon, Frankfort, Ky.; Evans & Towers, Glendale, Cal.; Paige-Jewett Sales, Galion, O.; Edwards Motor Co., Grand Junction, Colo.; Luth Garage, Denver, Colo.; S. B. Hutton & Sons, Santa Paula, Cal.; Bateman Hardware Co., Salida, Colo.; George E. Disbrowe, St. Thomas, Ont.; Georgia-Florida Motors, Inc., Valdosta, Ga., Thomasville, Ga., and Tallahassee, Fla.

AJAX PRODUCTION UP

RACINE, Wis., Nov. 7.—A high record of 133 Ajax cars was reached on Oct. 22. Production is, however, averaging 115 per day and this will be stepped up to 299 per day by February 1. Additional machinery to give this additional capacity is being installed. Ajax cars are now being delivered through more than 500 dealers.

Dodge Brothers Sales Total 203,546 in Nine Months

DETROIT, Nov. 7.—In the nine months ending with Sptember 30, 1925, Dodge Brothers, Inc., sold 203,546 passenger cars, and trucks totaling $175,284,031 more than $20,000,000 better than the figures for the corresponding period last year. The figures for last year, according to company officials were $155,170,714.

The net income was $25,435,427 after depreciation but before interest, federal taxes and dividends. This compared with $14,642,955 for the same period in 1924. The third quarter income was $8,872,115.

After deducting all charges and dividends, the net was equal to $6.33 a share on the common stock including common shares issued against the recent conversion of $15,000,000 debenture bonds.

Oakland Expanding Plant To Produce New G. M. Six

More Than $3,000,000 Being Spent to Increase Facilities for Building the Cars

PONTIAC, Mich., Nov. 7.—The new General Motors car to be produced by the Oakland Motor Car Company as an addition to the line, and a companion to the Oakland Six will also be a six cylinder automobile and place this company among those now building two completely different lines of six cylinder cars.

How far the trend has gone in this direction may be gauged by the fact that a large majority of all motor car companies in this country produce one or more cars in the six cylinder field.

This trend has been particularly noticeable during the last year, when a number of prominent companies added a six to their line of fours and some companies changed from the four to the six. In the low-priced six-cylinder field the development has been particularly rapid.

For several months the new sixes have been undergoing every possible kind of test at the General Motors proving grounds at Milford, and pronounced O.K. and now more than $3,000,000 is being invested in new equipment for the expanding capacity of the Oakland factories, both to increase the production of the Oakland Six and prepare for the new car.

BUFFALO PLANS SHOW

BUFFALO, N. Y., Nov. 7.—Buffalo's 1926 automobile show will be held at the 174th Infantry's armory, January 16 to 23, inclusive, under the auspices of the Buffalo Automobile Dealers' Association. Carlton C. Proctor, executive secretary of the dealers' organization, will be show manager.

25 Years Ago In the Automobile Industry
As Recorded In Motor Age

(From Motor Age of November 15, 1900)

Close of New York Exhibition

NEW YORK, Nov. 10.—The Madison Square Garden automobile show closed tonight with a splendid attendance—the best of the week. * * * Whether or not much direct business was done by the exhibitors is a doubtful question, as most of their time was taken up in giving as many as could be accommodated rides on the testing track. Toward the close of the evening, however, several of the vehicles which had stood during the week in exhibits were run out onto the track for pratical demonstration.

The Manufacturers' Meeting.

At 11 o'clock Saturday morning the representatives of over 30 different manufacturers of automobiles and parts gathered in the press room at the Garden to discuss plans for effecting a permanent national organization of manufacturers. This meeting was due to a call issued by the few who attended a first meeting at the Hoffman House Thursday morning, on which occasion insufficient attendance prevented any action being taken.

A Dinner for Exhibitors

Friday evening the management of the Automobile Club of America gave a dinner to the manufacturers who exhibited at the show. About 250 were present. Vice-President Albert C. Bostwick of the club presided. The dinner was an informal affair and few speeches were made.

Canadian Ford Production Totals 9,200 in October

Combined with Number Built in U. S., Output Is Greatest in History of Company

FORD CITY, Ont., Nov. 27.—Production in the main plant of the Ford Motor Company of Canada located here, and in the eight assembly plants located throughout the Dominion totaled 9,200 for the month of October, the highest in the history of the company, Vice-President and General Manager W. G. Campbell said today.

The best previous month, Mr. Campbell said, was October, 1923, when 5,028 cars were produced. This mark was shattered by 4,172.

Of the October output more than of 5,000 were for export. October, 1923, saw 3,046 sent abroad. Neither figure includes the cars that were produced at the assembly plants of the countries located in overseas countries excepting Australia.

Adding the Ford of Canada production to that of the Ford Motor Company of the United States, the total Ford production in the two countries was 214,027, by far the biggest in the history of the two companies. Output plans for the present month of both companies call for a production greatly in excess of the above figures.

Fords Buying Hudson Stock For Cash in Open Market

NEW YORK, Nov. 7.—The recent rumor that Henry Ford had acquired the Hudson Motor Car Co., denied by Edsel Ford, probably were caused by the fact that the latter has been purchasing for cash several thousand shares of Hudson stock in the open market and transferring it, it is said, to his wife's name.

It is understood that his outright buying for investment has made the Ford interest the largest outside interest in Hudson. The inside holders are R. B. Jackson, son-in-law of Hudson the founder of the concern, and W. J. McAneeny, operating vice-president, Mr. McAneeny representing the Hudson interests.

Company officials and insiders say that the stockholders are disregarding the wide fluctuations of the stock and are determined that control shall not be relinquished by them. Edsel Ford is said to have bought 7000 more shares last Friday at from 106½ to 114.

HAS NICKEL-PLATE PLANT

KENOSHA, Wis., Nov. 7.—A nickel-plating department for the convenience of local motor repair men has been established by the Igo Manufacturing Co. of this city. The department has been informally operating on an experimental basis during the past few months and some 2,000 articles including radiator shells, lamp rims, hub caps, door handles and the like have been plated during that time. The company has installed new equipment preparatory to announcing a new type of automobile bumper for Nash and Ajax cars. The new bumper will be announced to dealers about Jan. 1.

FORD MOVES TO PARIS

PARIS, Oct. 28.—(by mail)—Ford expects to be fully transferred from Bordeaux to the new factory at Asnieres, on the northern suburbs of Paris, during the month of November, thus coming into the heart of the French automobile manufacturing district and being better placed for distribution. Certain French manufacturers in the Paris district claim that Ford is disturbing the labor market by paying a much higher rate of wages than is common in the industry.

Louisville Building Race Track to Open in April

LOUSIVILLE, Nov. 7.—A half mile motor speedway, planned for track records, with special safety facilities, is being built in Louisville on the Dixie Highway, just south of the city.

The track will be dish shaped, 50 ft. in width, with a 16 ft. grade at the turns. A concrete wall will be built in front of the grandstands to protect spectators from any possible accident. When completed the grandstand will seat 6,500 persons.

Grading of the track is complete and, after settling, will be surfaced oil treated and hardened. Plans are being made for the opening in April with three other races during the year, on Memorial Day, Fourth of July and Labor Day. Some of the best drivers in the country are expected to compete in the opening event.

Louisville men interested in the speedway are Mansell Ouerbacker, Pat Moran, Forrest Holt, Raymond Reynolds, Harry Ransdell, Garland Lea and D. A. Given.

SOLEX PLANS U. S. ENTRY

PARIS, Oct. 28.—(by mail)—Maurice Goudard, one of the three owners of the Solex Carbureter Company, will sail for the United States during the month of November with the object of organizing a manufacturing branch of the Solex Company at Detroit. Goudard spent several weeks in America early this year, and returned with the conviction that the Solex carbureter could be manufactured and marketed successfully in the United States.

ADVERTISE FORDS IN TRAMS

NEW ORLEANS, Nov. 7.—Cars for Christmas presents are being advertised strenuously through street car cards by Jarreau Motors Co. of New Orleans. On the card is the picture of a Ford with this inscription: "A $25 deposit will reserve this car for delivery Xmas morning. Pay $85 on December 24. The gift that will bring greatest happiness."

New Peerless Light Six To Be Announced Soon

Car Will Be Shown by Dealers Nov. 21 After National Announcement Nov. 19

CLEVELAND, O., Nov. 7.—Announcement is made at the factory of the Peerless Motor Car Company that the new model 80 light six cylinder car will be formally announced in national advertising on November 19 and will be shown to the public in Peerless showrooms in different parts of the country on November 21.

The formal announcement of the new car will reveal to the public the conception which Edward Ver Linden, president of Peerless, has as to the kind of car the public is demanding. It will be found to be a car which is roomy and powerful enough for all ordinary business and family uses and at the same time light and compact enough for ease of operation, especially on crowded city streets of the present day. Most surprising will be the price. This new Peerless can be bought at a price within the reach of almost any purchaser who is in the market for a real automobile.

Dealers who have seen samples of the new model are enthusiastic over it and Peerless has formed many new dealer connections with men who feel that the new car will have a place of its own in the automobile market.

Sales of the established lines of Peerless cars, the Equipoised Eight and model 72, have been such that production for the month of October at the Peerless factory was announced as 100 per cent greater than the figures in October of last year.

Complete technical description of the new Peerless six will be published in the Nov. 19 issue of Motor Age.

Fort Worth and Waco Send Mechanics to Public Schools

FORT WORTH, Tex., Nov. 7.—The Fort Worth public schools are offering courses in automobile mechanics and have invited each dealer organization in the city to send any mechanic it may desire to the school for special training. The classes are being conducted at night and are without cost to students.

President Fisher of the Fort Worth Automotive Trades Association, in behalf of the body, thanked the schools for establishing the course and urged each dealer body to send any man they might have who desired a more extensive course in his work, to the new classes. The Fort Worth association has endorsed the establishing of the course in the public schools.

The Waco Public Schools have also included a course in automobile mechanics in its course of instruction. The dealers there have endorsed the action of the school board in this matter.

Texas Sees New Record In 1925 Car Business

New Automobile Volume Is Expected to Reach $130,000,00 by First of Year

DALLAS, Tex., Nov. 7.—The volume of business done in automotive lines in Texas this year will probably establish a new record. All lines of the trade have been active since the first of the year and it appears the trade will continue good for the remainder of the season

The new car business in Texas during the present year will amount to around $130,000,000, automobile dealers and distributors estimate. That will establish a record, not in money value of cars sold, but in number of cars, it is said.

Those closely in touch with the used car business in Texas estimate the number of used cars disposed of has been larger than the number of new cars. The value of these cars, however, is far below that of the new cars.

The accessory business during the year has already set a new record.

The tire business is good but frequent hikes in prices have driven many motorists to tire rebuilding shops in efforts to avoid steep quotations. The business this year, the dealers say, will amount to as much in number of tires sold, as in 1924, which means the volume of business will be larger.

The majority of the new cars sold now, as in the first ten months of the year, involves trade-in and part cash basis. The same applies to used car business. Dealers and credit corporations report collections good and few repossessions necessary.

Indiana Registrations in September Show Decline

CHICAGO, Nov. 7.—Statistics covering registration of new passenger cars in Indiana during September reveal that there was a drop of 17 per cent in the total as compared with the preceding month. Fords declined the sharpest with a loss of 37 per cent. Low-priced vehicles (excluding Fords) were off 1 per cent; there was a decline of 3 per cent in the medium-priced division while in the high-priced group the decrease was 15 per cent.

Following are the detailed figures for the first nine months of 1925:

Month	Fords	Low, excl. Fords	Medium	High*	Total
Jan.	4,239	1,024	1,837	117	7,217
Feb.	3,515	896	1,533	103	6.047
March	5,778	2,042	4,031	205	12,056
April	5,002	2,292	3,641	243	11,178
May	4,819	2,205	3,413	175	10,612
June	4,176	1,982	2,920	153	9,231
July	4,314	1,965	3,245	164	9,688
Aug.	2,816	1,868	3,274	181	8,139
Sept.	1,774	1,845	3,154	153	6,926
Total	36,433	16,119	27,048	1,494	81,094

*Includes miscellaneous cars not named.

The foregoing statistics were compiled from figures furnished to MOTOR AGE by Indianapolis Auto Trade Association, Indianapolis, Ind.

Mayor Sticks to Fire Horses

MILWAUKEE, Oct. 17.— Complete motorization of the local fire department is opposed by Mayor D. W. Hoan who has refused to accede to the request of his appointee, Fire Chief Steinkellner, and will block all efforts to completely motorize the department. Mayor Hoan's objection is based on his theory that motor apparatus cannot negotiate heavy snowdrifts and that some horse-drawn equipment should be maintained for use in stations near recently annexed suburbs where heavy snow is apt to be encountered in winter. Motor vehicle men in Milwaukee hold that a properly powered fire truck can go through any mud or snow obstacle as well as horse-drawn vehicles if not better.

BLACK & DECKER CHANGES

TORONTO, Nov. 7.—R. W. Sommerville has been appointed Canadian sales manager of the Black & Decker Manufacturing Co. Ltd., succeeding A. J. Hopkins, who resigned to go south. Mr. Sommerville has been associated with the company as its Ontario and western sales representative for some time.

CANADA NASH DEALERS

TORONTO, Nov. 7.—Breay-Nash Motors, Ltd., Ontario distributor of Nash motor cars, reports, that it has allotted the Nash franchise to the following dealers: H. S. Young, Aylmer, Ont., H. Holland-Hurst, Haileybury, Ont., Cook's Auto Service, Kingston, Ont., J. W. McLaughlin, London, Ont., Geo Spackman & Son, St. Thomas, Ont., Nash Motor Sales Co., Windsor, Ont.

INDIA DEALERS MEET

SAN FRANCISCO, Nov. 7.—Tire dealers to the number of 125, selling the products of the India Tire and Rubber Company in every city of the Pacific Coast, met in annual meeting at San Francisco at the call of J. M. Alderfer, president of the corporation. The meeting, which lasted two days, also took the form of a celebration of the fourth anniversary of the entry of the India company into the Pacific coast.

FLINT BUYS BRANCH

SAN FRANCISCO, Nov. 7.—The Flint Motor Company has purchased the business and good-will of Collier, Brooker & Broad, Flint distributors for the San Francisco territory, and are operating it as a direct factory branch. The three partners in the former distributing firm remain with the new branch. C. H. Collier becomes manager, with J. S. Brooker and Charles Broad as his assistants. C. M. Steves at the same time was appointed manager of the Pacific coast zone for the Flint Company.

Spring Rush Continues in Cleveland, Dealers Assert

Industrial Authorities Expect Heavy Demand Will Continue Throughout Year

CLEVELAND, O., Nov. 7.—All phases of business in the automotive industry here are riding high on a "permanent" wave of prosperity.

This, at least, is the cheering word which came today from manufacturers, wholesalers and retailers alike as they completed check on October production and sales records. October's output of automobiles here, far in excess of the production record for the corresponding month in 1924, kept abreast with the pace set early this spring which has continued without cessation or sign of let-up since, factory executives said.

Parts manufacturers made similar announcements, while wholesalers and retailers of both cars and accessories did likewise. Indeed, October proved itself a lucrative period for most everyone in Cleveland whose livelihood is dependent upon the automotive industry.

The current month, car makers said, might witness a slight reduction in production—a usual seasonal retrenchment which will be temporary. Production of greater proportions than ever, they predicted, would follow along about the first of the year. Parts manufacturers have a different story. Their production, they opined, will continue at the present high level throughout the winter.

OVERLAND DEALERS MEET

DECATUR, Ill., Nov. 7.—Distributors and salesmen of the Overland and Willys-Knight cars in the Illinois territory assembled here to discuss trade problems, the guest of W. C. Starr, local distributor, C. P. Kilbourn, assistant general sales manager of the Overland company, was the factory representative present and delivered the principal address.

Firestone Planning to Push Rubber Growth in Mexico

AKRON, Nov. 7.—Harvey S. Firestone, president of the Firestone Tire & Rubber Co., has announced that he is planning to extend his operations to every part of the world where there is a possibility of growing crude rubber for American consumption under favorable conditions.

In addition to the Liberian project, where work has just been started on a $100,000,000 development program, Firestone's latest activity is the leasing of 35,000 acres of rubber plantation land in the province of Tobasco, Mexico.

For several months the company has had forces at work in Tobasco, perfecting the organization of the huge plantation there. In that time buildings and roads have been constructed, and Indian laborers brought in from the jungles of the isthmus of Tehuantepec.

Along Automobile Row

CINCINNATI, O.—Announcement was made this week of the change of the representation of the Cleveland Six in the Cincinnati territory from the Hoadley Motor Car Company to the Hodge-Long Motor Company.

RICHMOND, Va.—The Butler Motor Company, Chrysler dealer, is one of the latest automobile sales agency to be formed in Richmond.

ST. LOUIS.—The formal opening of the new factory branch, Indiana Truck Company was held recently. A sales meeting was held during this opening, the Indiana Truck Corporation being represented by J. W. Stephenson, president, and E. A. Kightlinger, vice president charge of sales.

ALBANY, Ore.—Lloyd Templeton has returned to Albany's automobile row and has secured the distribution of Hudson-Essex cars in Linn County.

SALT LAKE CITY.—The Auto Exchange has been opened as a home for the used car department of Richardson-Bower, Inc., Dodge distributors and dealers.

CINCINNATI, O.—C. Brum of the Brum Motor Car Company has been given the agency for the Rollin car in the Cincinnati district.

CHICAGO.—The Bazek Motor Company has opened sales quarters at 8609 Commercial Avenue as South Chicago representatives of the Auburn.

ST. PAUL, Minn.—The Twin City Motor Car Co. has opened a retail community agency for sale of Hudson and Essex cars in charge of W. G. Heitmiller, who has appointed Peter Ehlens as service manager.

MILWAUKEE.—R. C. Zastrow, Inc., is the style under which the reorganized partnership of Zastrow & Burkert, Dodge Brothers car and Graham truck dealers of Racine, Wis., will operate in the future.

CHICAGO.—The Auburn Chicago company has been incorporated with 200 shares of no par value capital by R. S. Pruitt, F. G. Mason and P. Lee.

BURLINGTON, Ia. — The Burlington Cadillac-Nash company has filed its incorporation papers listing $20,000 capital to conduct its sales, service and garage business.

ELGIN, Ill.—The L. & G. Chevrolet Sales Company, has been organized here with capital stock of $25,000. A garage and sales agency has been opened at 141 South Grove Avenue. The members of the company comprise W. E. Graf, R. S. Lord, and H. C. Daniels.

PORTLAND, Ore.—The Art Mackenzie Motor Company has incorporated to handle the down town retail sales of Chrysler cars and have opened quarters at 105 North Broadway.

CHICAGO.—M. De Tulio has announced the addition of H. C. Sandusky as his assistant in the sale of Isotta-Fraschini, Excelsior and Austro-Daimler cars. Mr. Sandusky was formerly Chevrolet distributor for Texas.

DULUTH, Minn.—The Lang-Nash Motor & Tractor Co., as a result of adding the Ajax line in this territory, has moved into larger quarters.

GREENFIELD, Mass., Oct.—Athertons, accessory and tire dealer, has been incorporated as the Atherton-Hawes Co., with Fred E. Atherton as president and Arthur L. Hawes, formerly of Natick, Mass., as treasurer. A radio department has been added.

SPOKANE, Wash.—Richard Cole of the Eldridge-Buick company won the firm's sales contest held last month. A radio set was given as prize.

CHICAGO.—R. P. Miller has moved into his new Lincoln service station at 104th and Michigan, one of the largest exclusive Lincoln service stations in the city.

WINSTON-SALEM, N. C.—Twin City Motor Company, Ford dealer, of which F. J. DeTemble is president, has leased a $90,000 three-story fireproof structure, which will be occupied when completed by June 1.

WALNUT RIDGE, Ark.—J. J. Sharum, president of the Sharum-Hopps Motor Company, local Ford dealer, is having two store buildings remodeled to be used as assembly rooms for Ford cars and succeeding Floyd Ross who resigned.

CHICAGO.—I. Karno, associated for some time with the J. Toman Motor Co. at 6139 Cottage Grove Avenue, has been promoted to the position of sales manager, succeeding Floyd Ross who resigned.

COLUMBUS.—F. E. Avery, Oakland dealer, has opened a downtown used car branch store at 245 North Fourth Street, for the convenience of his customers in used cars. E. H. Hart has been placed in charge of the branch store.

EASTHAMPTON, Mass. — Lyon Motor Co., Ford and Lincoln dealer, has been reorganized and placed under the management of Peter Roberts, who has been for four years a salesman for the Automobile Sales Co., Inc., of Springfield.

PORTLAND, Ore.—Glenn C. Stater and Ralph G. Parker, both Portland automobile men, are the new owners of the Ford agency in the Pendleton, Ore., district. The business will be conducted as the East Oregon Motor Company.

COLUMBUS.—The first subagency for the Packard Motor Car Co. in Columbus has been established with the opening of the Tetlow Motor Co., at 2118 North High street.

LAYTON, Utah.—Lucius Laudie, owner and manager of the Layton Auto Co., has disposed of the business to four or five others and will retire in the immediate future. He has been a Ford agent for nine years.

CHICAGO.—With the retirement of the Louis Geyler company from the automobile field, both Case and Gardner will be handled as factory accounts in Chicago. Case will be handled by the Hampson-Board Co., at 2515 South Michigan, with display room at 2534 South Michigan, now occupied by the Davis Motor Co., Gardner will maintain a factory distributing depot at Twentieth and Michigan under the direction of Helm Walker, formerly local manager for the Pilot.

CLEVELAND, O.—Announcement has just been made by O. C. Tyner, president of the Jordan Ohio Company, local Jordan distributor, of the appointment of the Fifth City Motor Sales Company, as an associate Jordan dealer in this city.

MILWAUKEE. — Robert Lewis, star salesman for the West Point Garage & Sales Co., Willys-Overland dealer of Milwaukee, has been appointed manager of the company's used car department.

DAVENPORT, Ia.—H. W. Neuman of the Neuman Machine company, distributor for the Jordan, Auburn and Elkhart cars, has added the Studebaker agency to his list and will establish Studebaker service.

CHICAGO.—The Locomobile Company of Illinois has moved into its new building at Twenty-fourth Street and Michigan Avenue.

ST. LOUIS.—Venable Johnson, formerly sales manager of the Johnson Automobile Company, Ford dealer, has been promoted to manager of the company and J. E. Pelinski, leading salesman of the company for eight years, to sales manager.

ST. PAUL, Minn.—M. J. Owens, manager, of L. W. Jordan Co. has bought and reorganized the Moberg Auto Co. of Bemidji, Minn., as M. J. Dwens, Inc., to sell Dodge Brothers cars in that district.

EASTHAMPTON, Mass.—L. A. Rust has added the Hudson and Essex agency to his Chevrolet line and has opened a new store.

SAN ANTONIO, Tex.—The Travis Automobile company, Hudson-Essex dealer here, was incorporated this week.

CHICAGO.—Three women, Minnie Stutzky, Agnes Johnson and Helen Frazen have incorporated as the Service Auto Wreckers, Inc., 84 West Randolph Street. The firm will buy and sell automobiles and all parts and accessories.

BOSTON.—The Luxor Manufacturing Company, of Framingham, Mass., has just leased a large salesroom in the former United States Tire Company building where it proposes to sell its Luxor Taxicabs at retail.

SALT LAKE CITY.—The Richards Motor Co., headed by George F. Richards, as president; George F. Richards, Jr., as secretary, and Joel F. Richards, as manager and treasurer, has been organized here to handle the Chrysler car.

SPOKANE, Wash.—Spokane Battery & Ignition company has opened a new speedometer department with A. J. Richards in charge.

SAN FRANCISCO.—Fry-Schloss Motor Company has been formed by George W. Fry and Ansel J. Schloss to sell the Chrysler in the Mission district.

CHICAGO.—J. G. Shepard, retail sales manager of the Wills Sainte Claire Company of Illinois, has been made wholesale manager of the branch. Clyde G. Longnecker has succeeded Shepherd as retail sales manager.

MULTNOMAH, Ore.—Wilcox Brothers, Ford dealers, have recently completed a new garage and modern and fully equipped repair shop.

CINCINNATI, O.—The factory franchise of the Cincinnati district for the Velie Motor Car Company has been placed in the hands of the Norwood Velie Company, George Meixner, proprietor.

BOERNE, Tex.—Ed Herpel has sold the Ford dealership franchise for this territory to Harry A. Paige of Houston. Mr. Herpel is a member of the firm of Herple-Gillespie, Ford dealer, of San Antonio.

CHARLOTTE, N. C.—The E. and W. Motor Company, of Charlotte, was incorporated by Lane Etheredge and George Wilson, Jr., each of whom is a Ford dealer here. The new corporation, which has a capital of $50,000, will engage in the sale of Lincoln cars, taking over the Lincoln department of the Etheredge Motor Sales Co.

CHICAGO.—The B. L. Finney Motor Sales, Packard dealer, has opened a new sales and service home at 120 East 111th Street.

DULUTH, Minn.—The Duluth Rickenbacker Sales Co. and the Northern Motor Co. have united under the latter name at 210 E. Superior Street. The Northern Co. was Oldsmobile sales agent in the Duluth and Range districts.

MILWAUKEE.—Matt Kissinger, formerly general manager of the Wisconsin Magneto Co. of Milwaukee, has been appointed Metropolitan dealer for Willys-Overland in this city and has founded the Kissinger-Overland Co.

DECATUR, Ill.—J. D. Deiper, proprietor of the Midway garage, has taken the Auburn agency for this city. It is the first time in many years the Auburn has been locally represented.

PORTLAND, Ore.—The Pacific Automotive Service Company, Inc., has changed hands, having been purchased by Charles H. Mead and Clayton A. Sharp, who have been connected with the trade in this city since 1906. The new firm will be known as the Gabriel Snubber Sales and Service—Mead & Sharp retains the Gabriel line, Splitdorf, Purolater and the Johns Manville Lines.

With the Associations

Buffalo Has Sales School

BUFFALO, N. Y., Nov. 7.—Buffalo has inaugurated in one of its public schools a free course in automobile salesmanship, believed to be the first of its kind ever established in this country.

The course is under the direction of the city board of education, and the Buffalo Automobile Dealers' association. It deals with the fundamentals of motor car salesmanship. The instructors are Carlton C. Proctor, executive secretary of the automobile dealers' organization; Walter M. Ladd, president of the Reo-Ladd Motor Corporation; Albert L. Sawyer, secretary and sales manager of the Pierce Arrow Sales company and former service manager of the Pierce-Arrow factory and member of the department of public instruction. Mr. Sawyer's theme will be the relation of service to sales.

The lessons are to be held at Elm Vocational School. The course will be arranged in unit lesson form, and will comprise lectures and practical demonstrations, covering a period of eight weeks, three evenings a week. In addition lectures will be given by prominent Buffalo automobile dealers and sales managers. The graduates will be assured positions in the organizations of the automobile dealers of Buffalo.

Atlanta Meeting Dec. 7

ATLANTA, Nov. 7.— Monday, Dec. 7, is the date that has been selected by the executive committee of the Atlanta Automobile Association for the annual meeting of the organization, at which time officers will be elected for the ensuing year, and plans for 1926 activities discussed. The meeting will be held at the Capital City Club.

The nominating committee includes D. C. Black, Robert H. Martin, John E. Smith, R. N. Reed, Fred Tegder and W. R. C. Smith.

One of the principal reports of work the past year will be that of the legislative committee, which succeeded in bringing about the defeat of every measure that could be termed as detrimental to the automotive industry at the 1925 summer session of the Georgia State Legislature, and secured the passage of three or four important measures favorable to the industry.

Memphis Tire Dealers Elect

MEMPHIS, Nov. 7.—Peter J. Quigley, of the Quigley Tire and Rubber Co., has been elected president of the Memphis Tire Dealers' Association. A big delegation from Memphis will attend the national convention in St. Louis and extend an invitation by Memphis for the 1926 national meeting.

S. Carolina Fights Tax

CHARLESTON, S. C., Nov. 7.—Under the leadership of J. Gilmore Smith, president, the South Carolina Good Roads Association is carrying on a vigorous fight against the automotive war excises. The association has prepared a petition addressed to the South Carolina delegation in Congress and a supply of these petitions has been mailed to motor vehicle dealers, distributors and owners of parts and accessory stores in the state, asking their complete co-operation in the campaign.

Foster Heads Boston Boosters

BOSTON, Nov. 7.—Charles M. S. Foster, elected president of the Automotive Boosters Club at its annual meeting here, has called a meeting of the executives to appoint committees and plan for different events during the winter. There will be dinners at least one a month leading up to the big annual banquet during motor show week to which many of the prominent accessory makers and their executives will be invited.

The other officers chosen were Mason T. Rogers, vice president; J. Raymond Dade, secretary; W. C. Scott, treasurer; G. V. Sammett, Daniel Tannen, O. C. Lighty and S. F. Stowers, directors. At the first meeting of the officers a tentative list of committees were selected, and these will be acted upon at the November meeting.

Mr. Foster represents the Liquid Company, of New York City; Mr. Rogers, the Burton, Rogers Company, Boston; Mr. Dade, Sparks-Withington Company, Jackson, Mich.; Mr. Scott, Biflex Corporation, Waukegan, Wis.; Mr. Sammett, Bell, Timer Company, Boston; Mr. Tanner, I. Sonneborn, Inc., New York City; Mr. Lighty, Champion Spark Plug Company, Toledo, O.; Mr. Stowers, Lincoln Products Company, Chicago.

Tire Dealers Pick Quinn

ST. LOUIS, Nov. 7.—C. V. Quinn of the Reid-Quinn Tire Co., treasurer of the Associated Tire Dealers Inc., of St. Louis, has been elected chairman of the entertainment committee to succeed the late S. L. Chorlins.

Peoria Plans Show

PEORIA, Ill., Nov. 7.—At a meeting of the Peoria Automotive Association, it was decided to stage the fifteenth annual automobile and accessory show the third week of February. A committee to handle the coming event was appointed, comprising P. K. Norman, A. C. Thede, L. E. Graham, Bruce Rutherford, and C. A. Roadstrum. It was voted to make a larger appropriation than ever before in order to insure a larger and more attractive display.

Seek Opinion on Show Selling

NEW YORK, Nov. 7.—The show department of the National Automobile Chamber of Commerce has sent a questionnaire to all exhibitors at the annual show in New York City to determine the consensus as to the proposal that exhibitors refrain from soliciting orders during the show.

Sufficient replies have not been received to indicate the trend of opinion but the Automobile Merchants' Association of New York, Inc., at a luncheon meeting voted against the proposal on the ground that it is impractical and cannot be enforced. The question was raised as to exactly what is meant by "solicitation" and just where such solicitation during a show would begin.

The association adopted resolutions commending the N. A. C. C., the N. A. D. A. and other organizations for their work in arguing for repeal of the automobile excise taxes before the ways and means committee in Washington recently.

Closed Car Week, just observed by association members through individual displays, was described as a success, but Harry G. Bragg, general manager, said that closed car week next year, though observed in the same way, would be made even more effective through wider advertising and illumination and decoration of Automobile Row.

Joint Association Formed

SAN FRANCISCO, Nov. 7.—Owners and operators of automotive vehicles of all kinds, as well as distributors and dealers in these vehicles, and manufacturers of equipment in Oregon have organized a state-wide association under the name of the Oregon Motor Conference, according to reports received by officials of the San Francisco Motor Car Dealers' Association.

Included in the organization are the Oregon Auto Freight Association, the Oregon Automobile Dealers' Association, the Oregon Automotive Trades Association, the Oregon Motor Stage Association, the Oregon State Motor Association, the Portland Draymen's and Warehousemen's Association, and the Portland Industrial Traffic Club. The association was brought about because of the experience of all the organizations named that they could accomplish more when banded together than when operating each in its own individual field.

Problems of operation, distribution, sales, traffic, road-building and maintenance, taxes and license fees are to be taken up, and the strength of the state-wide association used to obtain the passage of legislation giving owners and operators of commercial vehicles, and dealers in automobiles, a square deal.

October Is Best Sales Month in Birmingham

Lower Priced Cars More in Demand but All Dealers Express Satisfaction

BIRMINGHAM, Nov. 7.—The automobile business had its record month of sales so far in Birmingham during the month of October. Dealers in all classes of cars sold in this city report exceptionally good sales on the new cars. The less expensive makes have been more in demand than the expensive cars, but all dealers have been well satisfied with the results of the month's business.

Sales on used cars have continued to be slow, though they too, have shown a slight improvement during the last 30 days. All dealers have been allowing trade-ins on a strict basis of value, and for that reason the condition of the used car market has shown an improvement.

Accessories shops and departments have had exceptionally good business this month, according to reports, and the tire business has been steadily improving in this section notwithstanding the increased prices that were put into effect several months ago.

Credits are in excellent condition in Birmingham, the dealers report. Very few re-possessions have been reported on new cars during the last 30 days in Birmingham and there have been not many used cars turned back because of failure to take up the notes.

Birmingham automobile men are anticipating their largest Christmas automobile season and are making plans and preparation accordingly. This expectation is based on the exceptionally good conditions and good demand in this section. The tone of all reports from the dealers is optimistic.

ONTARIO TITLES GAIN

TORONTO, Nov. 7.—Approximate figures prepared by the Motor Vehicles Branch for the Province of Ontario, up to October 1, show that to date 297,000 passenger cars, 35,000 trucks and delivery cars, 4,000 motor cycles and 943 trailers, have been registered, an approximate total to date of 336,943 licensed vehicles. The Department of Public Highways estimates that before the close of 1925 motor vehicles in the Province will have reached 350,000, thus eclipsing the 1924 record by some 40,000 registrations.

NEW CHEVROLET DEALERS

NEW ORLEANS, Nov. 7.—W. F. Doyle, sales manager of the zonal branch of the Chevrolet Motor Company, reports a number of new Chevrolet dealerships in Louisiana and Mississippi, which is in line with the expansion program of the Chevrolet company for the two states named.

The new dealerships include:

Winnsboro Chevrolet Co., Winnsboro, La., with H. A. Love, manager, and B. S. Landis, president; Lewis & Gage, Port Gibson, Miss., with L. E. Lewis, active manager; Motor Sales Co., Picayune, Miss., with Messrs. B. Graves, Seal and Barron as incorporators; Hover & Mulbert, Hammond, La.; Quin Chevrolet Co., Tylertown, Miss, with L. S. Quin, president; L. D. Melton, Arcadia, La.; Davis Chevrolet Co., Flora, Miss., with Miles Mosely, president, and W. C. Davis, manager; Andress-Hutchins Chevrolet Co., Hazlehurst, Miss., with W. L. Andress, Chevrolet dealer at Brookhaven, Miss., president, and Mr. Hutchins, formerly sales manager Pate Motor Co., Ford dealers, Jackson, Miss., in active charge; Jefferson Auto Co.; Bassfield, Miss.; Lowery & Ruffin, Mansfield, La., with R. A. Fraser, active manager; Homer Chevrolet Co., Homer, La., with H. B. Robinson, sole owner; Ross Chevrolet Co., Oak Grove, La., with W. A. Ross, president; Joyner Motor Co., Pelahatchie, Miss., with H. E. Joyner, manager.

Coming Motor Events

Automobile Shows

New York ..... Nov. 15-21
Twenty-first Annual Automobile Salon.

Chicago ..... Nov. 16-17
Annual convention, National Association of Finance Companies, Hotel Sherman. C. C. Hanch, secretary-manager, 76 W. Monroe St., Chicago.

Chicago ..... Nov. 16-18
Convention and exhibition of the National Standard Parts Association, Hotel Sherman, C. B. Fraser, secretary, 310 Hofman Bldg., Detroit.

Detroit ..... Nov. 16-21
National Motorbus Show in Grindley Hall, C. E. Stone, chief engineer People's Motor Coach Co., in charge of committee.

New York ..... Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J. ..... Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Ex ibition Co., Chamber of Commerce Building.

Bpffalo, N. Y. ..... Jan. 16-23
Buffalo automobile show by Buffalo Automobile Dealers' Association in 174th Regimental Armory, Carlton C. Proctor ,manager, headquarters, Hotel Statler.

Cleveland, O. ..... Jan. 23-30
1926 Automobile Show under auspices of Cleveland Automobile Manufacturers' and Dealers' Association, Herbert Buckman manager, in Public Auditorium.

Lowell, Mass. ..... Jan. 25-Feb. 1
Twelfth autmoboile show in Memorial Auditorium by Automobile Merchants' Association of Lowell, Inc., George R. Garmon, manager, 119 E. Merrimack Street.

Chicago ..... Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Washington ..... Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

San Francisco ..... Jan. 30-Feb.
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bdg., manager.

Denver ..... Feb. 2-
Annual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Providence, R. I. ..... Feb. 6-13
Providence automobile show under auspices R. I. Automobile Dealers' Association, Chester I. Campbell, manager, 617 Industrial Trust Bldg.

Toledo, O. ..... Feb. 8-13
Annual show by Toledo Automotive Trades Association in Civic Center Garage, T. J. Cooper, manager, 925 Jefferson Avenue.

Louisville, Ky. ..... Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Hartford, Conn. ..... Feb. 20-27
Automobile show by Hartford Automobile Dealers' Association in State Armory, Arthur Fifoot, manager, Hotel Bond.

Boston ..... Mar. 6-13
Boston Automobile Show under auspices of Boston Automobile Dealers' Association, Inc., and Boston Commercial Motor Vehicle Association, Inc., in Mechanics' Building, Chester I. Campbell, manager, 329 Park Square Bldg.

Races

Los Angeles, Cal. ..... Nov. 26

Conventions

St. Louis ..... Nov. 17-19
Annual Convention of National Tire Dealers' Association.

New York ..... Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago ..... Feb. 9-10
American Drivurself Association Annual Convention.

Galveston, Tex. May12-13
Tenth annual convention of Texas Antomotive Dealers' Association in Galvez Hotel.

Foreign Shows

Berlin, Germany ..... Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

January 1—National Shows Number—Automobile Trade Journal.

January 7—Motor Age—National Shows Number.

January 14.—Motor World Wholesale—New York Show Report.

February 4—Motor Age—Chicago Show Number.

February 4—Motor World Wholesale—Chicago Show Report.

February 18—Automotive Industries—Statistical Issue.

STEVENS JOINS OLDS

LANSING Mich., Nov. 7.—Herbert C. M. Stevens, formerly chief engineer of the Sunbeam Motor Company, Ltd., Wolverhampton, England, has been appointed consulting engineer of the Oldsmobile organization, it is announced by I. J. Reuter, president and general manager of Olds Motor Works. Mr. Stevens is well known throughout England and Europe for his long and important activities in the automobile industry, having been responsible for the production of the Sunbeam, Talbot and Darracq group, which is one of the largest motor corporations in Europe.

Details Complete for Next Year's French Grand Prix

Four Heats and Final with Drivers in Three Groups Is Plan of Board

PARIS, Oct. 25.—(by mail)—Four heats and a final will constitute next year's French Grand Prix race for 91½ cubic-inch cars, to be held on Miramas track, near Marseilles. The competitors will be divided into three groups and will be obliged to run a distance of about 62 miles. The fastest in each group will be qualified for the final. All those not having qualified will run in fourth heat and the fastest of these will be admitted with the others for the final over a distance of 300 miles.

This method of running the race has been adopted on the assumption that there will be a big list of starters and that it will be unsafe to send them all way together. There is nothing at present to justify the belief that the number of starters will be higher than usual, and since the war the average number of starters has been 13.

Sunbeam will not race next year, but the English firm will be replaced by the French Darracq, which is under the same management as Sunbeam. Eight-cylinder supercharged 91½ cubic inch cars are under construction. Fiat has both two-stroke and four-stroke racing cars almost completed. Alfa Romeo is not expected to race next year. Delage, Bugatti and the Italian O. M. are practically certain starters.

Provisionally the date of the French Grand Prix has been fixed at June 27, but Indianapolis having protested that this is too near Memorial Day, there is a proposal to postpone it to July 7. This is the first time the French race will be run under purely track conditions.

Dealers in Southeast See 1925 Tire Sales Record

ATLANTA, Nov. 7.—Managers of the larger tire manufacturing concerns with southeastern headquarters in Atlanta interviewed in regard to the outlook for tire business in the territory this fall and winter, almost without exception predict that the last quarter of 1925 will result in the hanging up of a new sales record for the tire industry in this district.

This is largely indicated by the heavy orders jobbers and factory branches have been receiving from the retail dealer trades in the Southeast during the last three or four weeks, and the fact that automobile sales in this section during the first nine months of the year—January to September inclusive—were as large as they had been for this period in the past four or five years.

All indications are that 1925 sales, regarding the year as a whole, will be the largest by far they have ever been in the history of the tire business in the Southeast, in spite of the lull during the latter part of the summer. The volume of present business indicates that the dealer trades in this district are carrying the largest tire stocks they have ever carried before at this season of the year.

SQUEEKS and RATTLES

THE GOLD-FISH BOWL



"Off'cer, thish shervice 'sterrible—'s gettin' so lately a gen'man's got no privacy 'tall"

—Judge.

At sixty miles
Drove Willie Smidder;
He lost control
His wife's a widder.
—Town and Country, Pennsburg, Pa.

They also serve who stand and wait until the traffic cop says "go"—and they don't have to serve time either.

—B-C-A News.

She: I'm just wild about a yacht!
He: Do you think you could behave yourself in an automobile.

—Princeton Tiger

"My man went away in a huff."
"Is that so—I didn't know he had a car."

—Wisconsin Octopus.

Save me, please,
From Lizz McNabb
She always says,
"Let's take a cab."
—Notre Dame Juggler.

Bill Turpin sneered
At careful folk;
He hasn't sneered
Since his axle broke.
—Pitt Panther.

Ever hear of the "Cinder Car?"
I'll bite.
It's a used Cole.
—J. R. H.

There are probably more people in the country today who have been kicked by a motor car than by a horse.

—B-C-A News.

Boy: I just bought a used car.
Friend: Cheerio! a rattling good investment . . . Shake!

—Williams Purple Cow.

"Do you like walking down hill?"
"Goodness, no, my heel always catches."
"Fine, let's drive up this mountain."

—C. C. N. Y. Mercury.

VACATION ECHOES



Wife: Now John, is there anything we've forgotten?
John: (sarcastically) There's the piano, my dear.

—London Opinion.

CAR AUCTIONS CANCELLED

ST. LOUIS, Nov. 7.—It has been decided to discontinue the used car auction which has been held on Saturday mornings at a public market lately by the Selkirk Auctioneering Co., acting for six members of the St. Louis Automobile Dealers' Association. The affair never proved to be the success it was hoped it would be largely because of the bad weather. Never for many years has the month of October been so unpleasant as it was this year.

CRAWFORD IS PROMOTED

CHARLOTTE, N. C., Nov. 7.—Joe Johnson, manager of the Carolinas branch of the White Motor Truck Company, has resigned and departed for Florida to enter the real estate business. Byron Crawford, salesman, is promoted to branch managership. Mr. Johnson formerly was southeastern wholesaler manager of this company, with headquarters at Atlanta.

New Car Sales Hold Up Well in Salt Lake City

SALT LAKE CITY, Nov 7.—New car sales are holding up well. Business is as good as it was a month ago, and while the present good weather lasts is not likely to fall, dealers believe.

Sedans, Coupes—in short closed cars, continue to lead. This was not generally true of the Ford sales, however. Dealers say they are looking for everything to be in the closed class in the near future.

In point of population, city business is a little better right now than the country business, but there is no doubt that this will be reversed later. Every one is looking for a good volume of business from the farmers this fall and early winter as a result of the excellent crops which are selling at big prices.

Several dealers are making big efforts to dispose of their surplus used-car stocks. Some of them are rather heavily stocked, but taking this city as a whole the number of used cars on the market is not unduly heavy. Used Fords are now reported to be well in hand, stocks being lower than for a long time.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
.....	4-p	Sport-Roadster	1,495
.....	6-p	Touring	1,395
2900	5-p	Brougham	1,595
2885	5-p	Sedan	1,795
.....	.....	Wanderer	1,845
.....	7-p	Sedan	1,995
		"8-88"	
.....	3-p	Sport Roadster	1,975
.....	6-p	Touring	1,995
.....	5-p	Brougham	2,250
.....	5-p	Sedan	2,350
.....	7-p	Sedan	2,550
.....	.....	Wanderer	2,400
BUICK		**"Standard"**	
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
3350	2-p	Roadster	1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Brougham Sedan	1,925
3940	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line	
		(132 in. W. B.)	
4075	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
4155	7-p	Sedan	3,295
4240	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built (132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	.....	Phaeton	3,250
.....	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		**J. I. C.**	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"X"	
3020	3-p	Roadster	1,570
3050	5-p	Touring	1,595
3380	5-p	Sub. Coupe	2,290
3380	5-p	Victoria	2,290
3400	5-p	Sedan	2,385
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2345	5-p	Touring	$895
2435	5-p	Touring DeLuxe	1,025
2470	3-p	Coupe	975
2600	5-p	Sedan	995
		"43"	
2750	5-p	Touring	1,095
2910	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2950	3-p	Coupe	1,175
3050	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
2990	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
.....	7-p	Sedan (135 in. W. B.)	.....
DODGE BROTHERS			
2473	2-p	Roadster	$855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DURANT		**A-22**	
.....	2-p	Sp. Roadster	$900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$765
2395	5-p	Coach	795
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
		With Starter and Dem. Rims	
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER		**6A**	
.....	5-p	Brougham	$1,595
3070	5-p	Touring	1,395
.....	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	.....	DeLuxe Sedan	1,895
		8A	
.....	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3360	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		**D-1**	
3360	5-p	Sedan	$1,695
HUDSON		**"Super Six"**	
3400	7-p	Phaeton	$1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4 d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE "A"			
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195

SHIP. WT.	PASS.	BODY STYLE.	PRICE
JEWETT		**"23-25"**	
3060	4-p	DeLuxe Road.	$1,500
3000	5-p	DeLuxe Touring	1,320
2990	5-p	Coach 2d.	1,245
3160	5-p	DeL. Coach 2d.	1,400
3325	5-p	DeLuxe Sedan	1,680
JORDAN		**"J"**	
.....	4-p	Playboy Road.	$1,695
.....	5-p	Sedan	1,845
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		**"55"**	
3130	2-p	Speedster	$1,795
.....	2-p	Sp'dster DeLuxe	2,085
.....	4-p	Speedster	1,895
.....	4-p	Sp'dster DeLuxe	2,185
3530	2-p	Enc. Speedster	2,085
.....	4-p	Enc. Speedster	2,185
.....	4-p	Enc. Spdstr. DeL.	2,685
.....	2-p	Enc. Spdstr. DeL.	2,585
3190	4-p	Tourster	1,795
.....	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
.....	7-p	Touring	1,685
.....	7-p	Touring De L.	1,885
3430	4-p	Coupe	2,085
.....	4-p	Coupe De Luxe	2,485
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,485
.....	5-p	Brougham 2 d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Berline Sed. DeL.	3,185
3530	5-p	Victoria	2,185
.....	5-p	Victoria DeLuxe	2,485
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster DeL.	2,585
.....	2-p	Enc. Speedster	2,485
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Enc. Speedster	2,585
.....	4-p	Enc. Sp'd'r DeL.	3,085
.....	4-p	Tourster DeL.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Duxe	2,885
.....	5-p	Brougham Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,095
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,885
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4460	2-p	Roadster	$4,000
4580	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	.....	Sport Touring	4,500
4750	4-p	Coupe	4,600
4885	4-p	Sedan	4,800
4960	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,300
LOCOMOBILE "48"			
5280	4-p	Sportif Tour	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Drive Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,785
3400	5-p	Sedan	2,285
3350	5-p	Brougham	2,285

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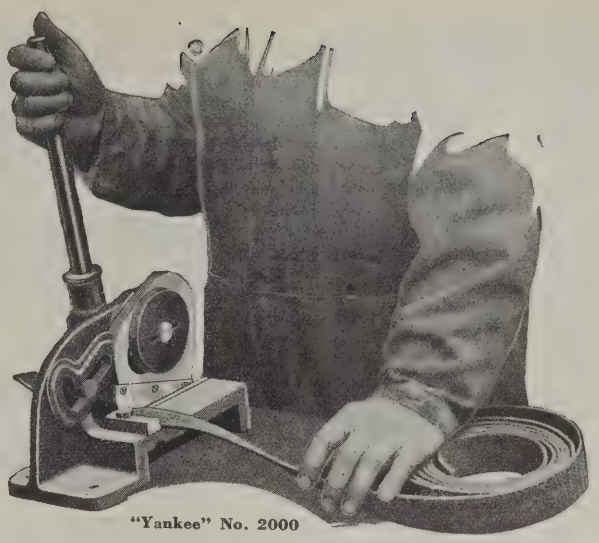
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"Yankee" No. 2000

Here's the way to cut brake lining

The quick, easy "YANKEE" way

When you have a hurry-up lining job, time counts. That's when a "Yankee" Brake Lining Cutter comes in handy.

One stroke of handle cuts the lining cleanly, and quickly. No time lost looking for something to rip it apart.

Not only on fast jobs, but on every lining job day in and out, the convenience of this dependable cutter, is worth while.

"YANKEE" No. 2000 Cutter

Can be fastened to bench or floor, or mounted on board so it's portable. Lever operates a rack and pinion movement. Knives are highest grade steel. Adjustable in case of wear.

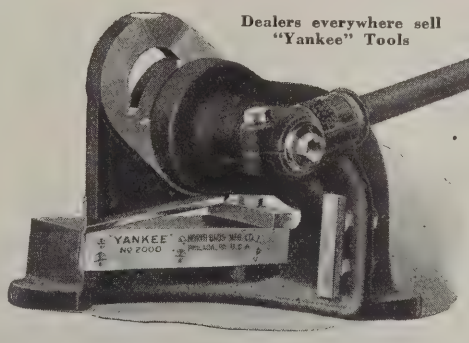
Capacity, 3/8 x 6 in. Cuts belting also. Extreme length, 11½ in. Height, closed, 7 in. Open, 8¼ in. Handle length, 13 in. from center. Weight 22 lbs.

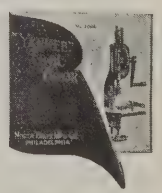
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Ratchet Hand Drills
Automatic Feed Bench Drills
Automatic Feed Chain Drills
Ratchet Tap Wrenches
Vises, Removable Base

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Dealers everywhere sell "Yankee" Tools



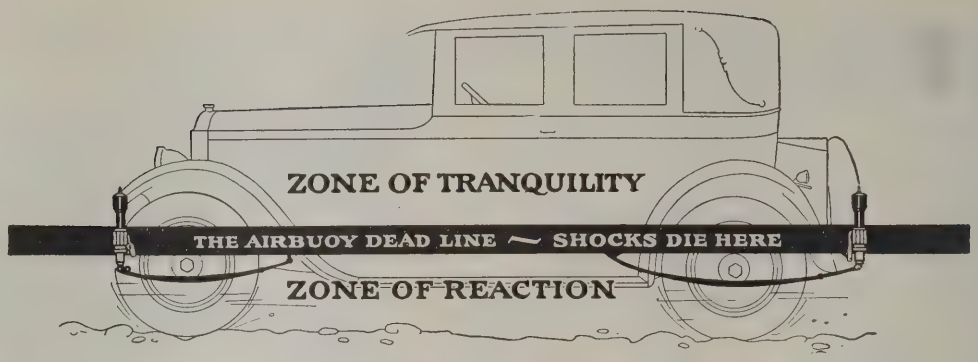


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Make Better Mechanics

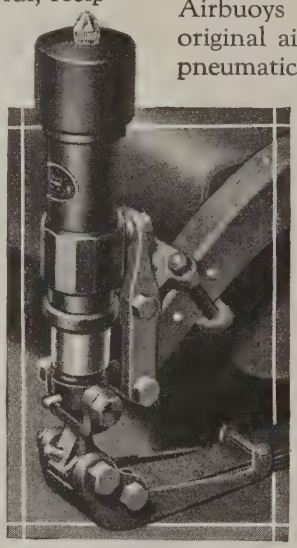


Why an Airbuoyed Car Rides Like a Pullman

PULLMAN comfort needs more than steel rails and ballasted roadbeds, more than heavy leaf springs. Above and beyond all these, the car is floated on powerful, reciprocating shock absorbers.

So also with Airbuoyed motor cars. Above and beyond their steel springs and balloon tires, they are steadily balanced on compressed air, regulated and controlled by hydraulic power. Every one of the four channels, through which road-shock reactions may reach the frame, is guarded by an Airbuoy. And in the Airbuoys those reactions are not only arrested; they are eliminated.

Below the Airbuoys are the springs, axles, wheels and tires—bouncing, bending, twisting and shimmying. Above the Airbuoys is the car frame, supporting chassis, engine and body—all smoothly gliding along—their balance constantly maintained.



Airbuoys are a further development of the original air-springs for automobiles. Their pneumatic-hydraulic operation (air and oil) combines the extremes of elasticity and power. Their simple sturdy construction—no springs, ratchets, belts or cables—assures a long life at highest efficiency.

Transferred from old car to new one, they operate perfectly for hundreds of thousands of miles.

Mile for mile, Airbuoys are the most economical shock eliminators obtainable. And in actual performance they surpass equipment costing more than twice their price.

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To Distributors who appreciate, and can adequately represent a product with all the elements of unquestioned leadership, we can offer a profitable and permanent relationship in territories not already closed.

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MOTOR AGE

Vol. XLVIII | Chicago, November 19, 1925 | No. 21

Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

AUTOMOTIVE manufacturers begin retrenching as sales volume starts to decline. Dealers report stocks low and declare Christmas campaigns will be big boost. Page 32.

Delage refuses to race in French Grand Prix next year. Says new 91½-inch cars are too dangerous and serve no good purpose. Page 42.

Thompson Research Laboratories developing carbon monoxide consumer to be used also as car and bus heater. Page 35.

Chrysler insurance plan is upheld in New York federal district court and state superintendent is enjoined from revoking license. Page 35.

Space details now arranged and exhibitors are making plans for booth decorations and number of cars to be displayed at big national shows in New York and Chicago. Page 36.

Benjamin Cram, automobile economist, sees more buying and even greater production in 1926 than in 1925. Page 36.

House ways and means committee in Washington votes to recommend reduction in automobile, truck and accessory war taxes. Page 37.

Florida automobile dealers are now receiving cars shipped to border towns in Georgia and driven across line. Page 37.

AMBITIOUS plans for expansion are voted at Automotive Equipment Association convention. Show is greatest ever held from business standpoint. Page 33.

Tom Milton wins Armistice Day race at Charlotte speedway. Page 43.

All October business records are broken in Cleveland by dealers and builders. Page 43.

Unusual color schemes are featured at annual automobile salon in New York. Page 37.

Oakland breaks all former production records in October with output of 8,088 cars. Page 39.

American race records may be given European recognition as result of decision by international association. Page 39.

Necessity of increased trade interest in national automobile shows is emphasized by Manager Sam Miles. Page 38.

Dodge Brothers sets new mark in sales and profit for first nine months of 1925. Page 38.

Tire makers see no hope of decline in prices, as result of continuing firm price of spot rubber. Page 38.

National Standard Parts Association opens show and convention in Chicago. Page 32.

In Next Week's Issue—Capitalizing Your Plus Profits.



Main hall of Coliseum, seventh annual show of Automotive Equipment Association

A. E. A. Show Reveals Progress in Design of Accessories and Equipment

THE trend in modern automotive equipment finds a parallel in that of modern automotive design wherein radical changes have been superseded by improvement in detail.

It is possible, indeed, to apply to a good many things which faithfully year after year make their appearances at national shows that well known expression of one motor car builder "Constantly improved but no yearly models."

What is true in the designing and building of automobiles is also true of the accessories, fitments and machinery that play their part in the evolution of the great automotive industry in all its phases.

It is quite evident that modern automobile design is standardized to such an extent that radical changes are the exception. To-day we see refinement; a polishing up of details. More colorful bodies. Usefulness.

Exactly so in automobile acessories and shop equipment. There are new things, of course, but many of these are only the result of constant endeavors to improve former designs and add to their usefulness.

Old Timers Are Present

"What's new at the show?" we ask. And many of us pass rows and rows of the exhibits and say half heartedly "Nothing much, same line of stuff." We forget sometimes in memory of frills of former shows the "constantly improved but no yearly model" slogan.

We forget many of the companies exhibiting at the seventh annual show of the Automotive Equipment Association in Chicago last week have been in business many years with a product or products that have stood the test of time and in many cases have been but little changed since their inception. They have proved their usefulness.

Novelties come and go, but the practical things stay.

And so in gazing back upon this show we are tempted to take our hats off, first, to the old timers who consistently exhibit year after year with practical and sound merchandise and, secondly, to the younger concerns who are in step with modern trends for useful things and who exhibit equipment that commands respect from the trade.

Trend Toward Colors

A superficial examination of the things shown last week reveals quite forcibly the trend towards colors in automotive equipment of every kind.

Just as the motor car makers have seen fit to finish their cars in colors rather than plain black, so have the accessory makers adopted colors for their products. It is true also of the makers of shop equipment.

The accessory maker is right on the job to match the car makers' products. Where a car maker finishes some of his cars, let us say, in a certain shade of brown, we find bumper manufacturers on the job with a bumper finished in exactly the same shade to match. Trends in accessories follow those of car design. The Buckeye Brass & Mfg. Co., Cleveland, for example, displayed a line of bumpers in a variety of bright colors to match current models of passenger cars.

Color also is used in the merchandising of things not always so readily gazed upon as a car or bumper. There was at the show a maker of hand tire pumps, the Neora Mfg. Co., Waterbury, Conn., with a line of pumps attractively finished in bright colors such as red, blue and gray. This was not done to match a particular make

f car, but to furnish a ready appeal when the car owner omes into the dealer's establishment. Color catches the ye long before the spoken or written work takes effect.

The show itself was colorful. Movable display devices leverly driving home a message from the manufacturers ried with stationary apparatus adorned with clusters of nulti-colored light bulbs. Then there was the magnifient gray Pierce-Arrow coach belonging to Black & Decker, to be used by the latter company in connection vith mechanical clinics to be held in various parts of the ountry. This coach has incorporated in it all the comforts of home in addition to carrying at the rear a comlete line of Black & Decker products. A 110-volt Kohler ight plant furnishes current for the tool equipment and hus it becomes quite an easy matter to demonstrate nywhere these tools under actual working conditions.

So far as the accessories and equipment are concerned here were no frills, but naturally some makers took advantage of their opportunities to bring to the show novelties to attract attention. The Victor Mfg. & Gasket Co., Chicago, brought to the show an immense gasket, a faithful reproduction of the cylinder head gasket used on the Studebaker Special Six. This gasket measuring some 7 or 8 ft. in length was hand made and of excellent workmanship. Then, there was The Piston Ring Co., Muskegon, Mich., with an immense piston ring 6 ft. in diameter. This, it is stated, is the largest ring ever made. Suspended from it was a tiny ring 1 in. in diameter, used for air compressor work.

Canned Goods in Evidence

As in former shows of this kind the makers of canned goods were on the job with a display of products known wherever motor vehicles are operated and maintained. There is not always something attractive about a tin can filled with a liquid or a box of powder and consequently such booths often are passed by because "there's nothing new."

And yet, you will find among many of these canned goods items that have been on the market many years longer than some makes of motor cars or mechanical devices.

There was Van Cleef Bros. of Chicago, for instance, with the well-known line of tire cut fillers and gasket shellac; the Simoniz Co., Chicago, with its preparation for shining up and maintaining car lustre, Brake Juice, a tar remover and Corol, a rust preventive; Warner-Patterson with its liquid solder; Nu-Back Mfg. Co., St. Louis, radiator liquid and repair enamel; Kant Rust Products Corp., Rahway, N. J., with its rust preventive and the Buckeye Cleanser, a soap made by Davies-Young Soap Co., Dayton, Ohio.

Those who looked over the show carefully saw a little of the romance of automobile racing. What? Racing stuff at a show for dealers and jobbers? Yes. Just this.

Several makers of products used in passenger vehicles took the opportunity to tell the world about their achievements on the race track. Everybody loves a winner and the winners were shown.

Take spark plugs. They have an immense task to perform in a racing engine turning over better than 5000 r.p.m. And so at the show we saw the Champion Spark Plug Co., Toledo, Ohio., playing up its achievement in racing and at the same time expounding the use of sillimanite for a plug insulator in its every day type of plug for the motorists. The booth of the Indianapolis Tool & Mfg. Co., Indianapolis, smacked of racing with its "The Winning Gears" sign and illustration of drivers who used these ring gears and pinions in their mounts. And we saw The Indiana Piston Ring Co., Hagerstown, Ind., showing how its rings performed in the 122 cu. in. Duesenberg racing engines this year. Nor must we forget the oil companies. There was White & Bagley Co., Worcester, Mass., with Oilzum a trade name of long standing years before the supercharger gave the added kick to racing engines.

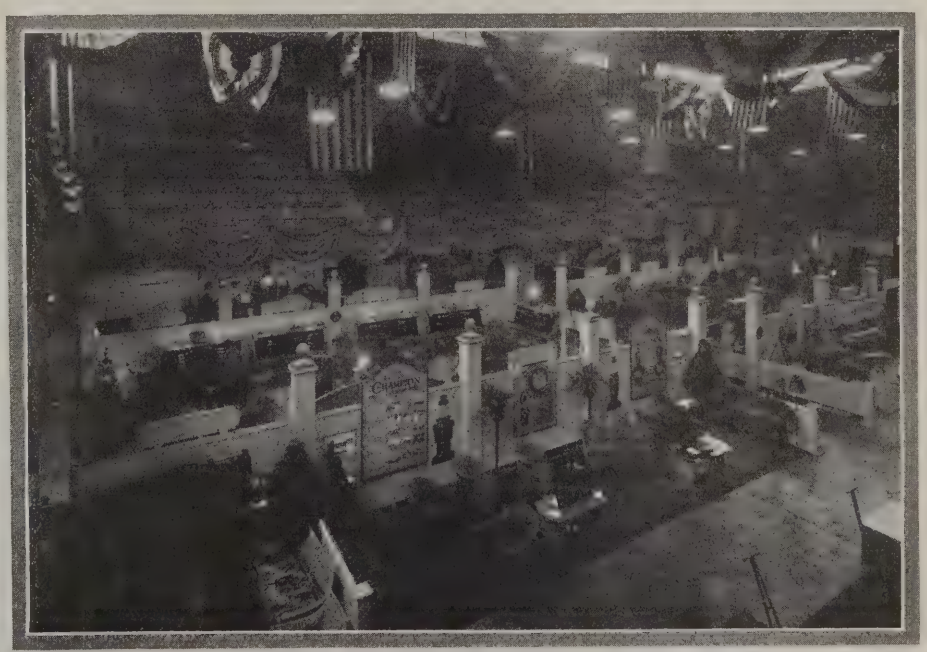
Stronger and Lighter Materials

Metallurgy has done the same thing in the accessory field as it has for the motor vehicle industry. It has given us stronger and lighter materials. Tools, while not differing in fundamental design, have been made more useful and dependable by better materials. Example: J. H. Williams & Co., Buffalo, N. Y., now has a line of wrenches made from chrome-molybdenum steel, by far stronger and lighter than carbon steel. Result: Mechanics have better tools. A case of refinement again.

Better materials are used in the fitments for motor cars and in the case of shop equipment we find not only better materials and better finished apparatus, but equipment in which the human element has been largely eliminated and the chance for error made very remote.

Some of the excellent performance these days with motor vehicle clutches is due in no small part to manufacturers. Much clutch trouble of former days was due to faulty facings of the disks and it probably can be safely said that the present-day success of clutches of the disk disk type is due to ground facings, which do not vary the thickness of a hair in their makeup.

That is why such concerns as Johns-Manville, Inc., New York; Multibestos Company, Walpole, Mass; The Raybestos Co., Bridgeport, Conn., and others must not be passed up at the shows as having "nothing new."



North hall of Coliseum



South hall of Coliseum

There was much evidence that manufacturers had in mind the automobile mechanic and service man by making his product more easily identified. Burgess-Norton Mfg. Co., Geneva, Illinois, for example, now furnishes its piston pins with the number etched into the surface showing exactly its diameter and length. This makes it possible to get the standard or oversize pin for a piston as the job may require and there is no danger of the mechanic picking up a wrong size.

Engine parts makers were there in abundance showing such products as timing chains, valves, timing gears, axle shafts, etc. In many of these exhibits the processes involved in the manufacturing of these parts was shown thus adding a little educational touch to the show here and there. Among such concerns was the Thompson Products, Inc., Cleveland, Ohio, makers of valves, bushings and starting cranks; Detroit Steel Products Co., Detroit, springs, and other parts; Timing Gears Corp., Chicago, timing gears; Federal Mogul Corp., Detroit, bronze back bearings, bronze bushings, cored and solid bars, connecting rod bolts, etc.; American Auto Parts Co., Detroit, car springs; Goodrich-Lenhart Mfg. Co., Hamburg, Pa., engine testing valves, wiring assemblies, brake shoes, electric cables, etc., and the N. A. Petry Company, Inc., Philadelphia, Pa., makers of tuning up valves, dash controls, foot pedals, etc.

Gasket Exhibits of Interest

One cannot help but be impressed with the excellent materials now obtainable to make a tight joint between cylinder head and block, front end gear case cover, oil pan joints, axle housing plates and the 101 other places where it is desired to retain air, water, gas or lubricant. To that end the exhibits of the manufacturers making gaskets and packings were of interest. Many of these companies have consistently put their product into the field for a great many years and notable among these concerns are the Thermoid Rubber Company, Trenton, N. J., Fitzgerald Mfg. Co., Torrington, Conn.; Vellumoid Company, Boston. Mass., McCord Radiator & Mfg. Co., Detroit, Mich., and Victor Mfg. & Gasket Co., Chicago.

Naturally a large per centage of the show is given over to electrical equipment with a variety of designs and purposes. Aside from the concerns already mentioned making electrical equipment, A. C. Spark Plug Company, Flint, Mich., was on hand with its line of well known plugs and A. C. speedometer for Fords, Forrest Electric Co., Newark, N. J., battery chargers, test sets, etc.; Mosler Metal Products Corp., Mt. Vernon, N. Y., spark plugs, timers, intensifiers, etc.; French Battery Co., Madison, Wis., flash lights radio batteries, dry batteries; Edison Lamp Works of General Electric, Harrison, N. J., bulbs; Yale Electric Corp., Brooklyn, N. Y.

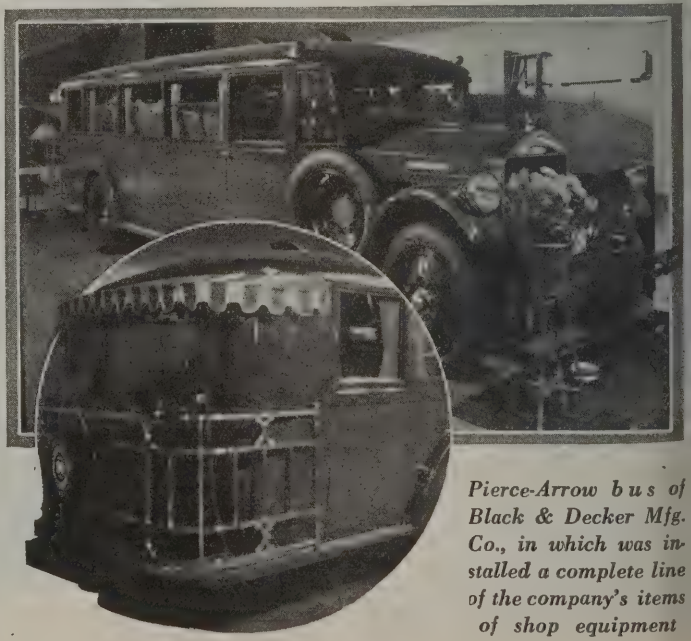
The Blackhawk Mfg. Co., Milwaukee, Wis., showed a very complete line of its Speed wrenches, hand tool grinders, water pumps, and similar items and A. Schrader's Sons, Inc., Brooklyn, N. Y., who have become one of the shining lights of the accessory industry showed their well known tire valve, pressure gages, etc.

Naturally some of the booths were crowded with a variety of material almost too numerous to mention. Various concerns who have been in business for many years have added items from time to time that have appreciably swelled their list. Some of these makers have equipment not only for the motor car, but for the shop and service station as well. Under such headings we find concerns like Edelmann & Co., Chicago, Appleton Electric Co., Chicago, Imperial Brass Mfg. Co., Chicago, and others.

We have already stated the trend of the accessory and parts makers to follow the trend of automotive design toward simplifying and beautifying their product. Although the following concerns exhibited nothing radically new, their product showed tendency toward refinement and greater usefulness: Indianapolis Pump & Tube Co., Indianapolis, Indiana, The Auto Compressor Co., Wilmington, Ohio, Lincoln Products Co., Chicago, Thompson Products Company, Cleveland, Ohio, Gemco Mfg. Co., Milwaukee, Wis., Advance Auto Accessories Corp., Chicago, Columbus-McKinnon Chain Co., Columbus, Ohio, Spencer Mfg. Co., Spencer, Ohio, Bell Mfg. Co., Boston, Mass., Gilfillan Brothers, Inc., Los Angeles, Calif., Walker Mfg. Co., Racine, Wis., American Hammered Piston Ring Co., Baltimore, Md., Lyon Metallic Mfg. Co., Aurora, Ill., Frank Mossberg Co., Attleboro, Mass., Laminated Shim Company, Long Island City, N. Y., and the Cooper Mfg. Co., Marshalltown, Iowa.

NATIONAL SHOWS ISSUE
And Specification Number
of
MOTOR AGE

Will be published January 7, 1926, and will contain descriptions of brand new 1926 models and about 40 pages of up-to-date specifications of passenger cars, trucks, taxicabs, tractors and motorcycles, and many other special editorial features.



Pierce-Arrow bus of Black & Decker Mfg. Co., in which was installed a complete line of the company's items of shop equipment

What the Show Visitors Saw in the Individual Exhibits

BUMPERS finished in colors to match the colors of automobile finishes were put on display at the show or the first time by the Central Brass Fixture Company, of Springfield, O. Bumpers of this character will be included in this company's future catalog fferings. The C. B. and F. Company elieves the demand for cars of different ues will create a large demand for umpers to harmonize.

Among the interesting displays of umpers was that of the Badger Manuacturing Corporation, of Milwaukee, Vis., which, in addition to specimens of s older products, offered the first showng of its Badger Ultra Guard Round Bumper with steel rear members. This s a massive looking tubular bumper nameled in black with nickle finish. t was designed both for severiceability nd attractiveness.

The Reliance Manufacturing Company, f Massillon, Ohio, which occupied booth Vo. 348, interested many of its visitors vith the Reliance Phosphor Bronze ockwashers, which is a new product vith this organization. This is a nonorrosive washer for use in radios and utomotive devices where it is desired or contact with electric current.

Shopsutes for Mechanics

Something that should appeal to the nechanic in the automotive shop was ound in the Shopsutes which have been dded to the line of the Crawford Manuacturing Company, Inc., of Richmond, Va. The Crawford Company was located n booth 342. The Crawford Shopsute s a big, roomy one-piece khaki overall. Sizes 36 to 44, inclusive sell for $4.50 nd size 46 sells for $4.75.

Attendants at the booth of the Sterling Manufacturing Company, Cleveland, Ohio, caught considerable interest on the part of callers with a designer's model of a Radiola Battery Tester. The tester s simple in design and operation and will be ready for the Christmas trade where it is believed it should have a good appeal.

The Hall-Thompson Company, Hartford, Conn., was on hand with an artistic display of its Wonder Worker products, the red togged and be-goggled Wonder Worker mascot being much in evidence. Wonder Worker products include such items as Wonder Worker Brilliant Lustre, tire veneer, auto soap, car and road oil remover, compression grease, cup grease, tire cement, etc.

Keystone Reamer & Tool Company, Millersburg, Pa., at booth 168 was showing its new Keystone Standardized Piston Pin Reamer of helical flute design. This reamer is standardized the same as the company's 1106 reamer. The new device offers a reamer with an extreme spiral. In the foreground of the booth was a large display of taps, dies, screw plates, etc., while the show marked the first appearance of the company's catalog "Tools That Do the Job Right."

Considerable attention was attracted by the constant flow of a gas flame through a design of tubing at the booth of the Manhatten Electric Supply Company, Inc., of New York. Investigation revealed that the stunt was a demonstration of the Neon Gas Tube used in the Manhatten's B eliminator. The company was showing its new "Manhatten B Power," a B eliminator which gives a voltage up to 135. It was also showing its regular line of Red Seal electrical and radio products.

On this and the following pages MOTOR AGE presents descriptions of products exhibited at the A. E. A. Show which were not announced until the opening day of the show and therefore constitute items entirely new to the trade. There also are mentioned things which concerns of long standing recently have added to their line, but which have not previously been described in MOTOR AGE. Quite naturally some of the exhibitors had no brand new items, but displayed their wares substantially the same as in the past. In view of the fact that most of these concerns have been in the field with excellent products for many years, we mention here also the exhibits of such concerns.

At booth 175 the Continental Rubber Works, Erie, Pa., displayed samples of its wide range of products including such items as rubber mallets, blowout patches, dust caps, fan belts, automatic windshield cleaner tubing, etc. Explaining the presence of a reel carrying 500 feet of Vitalic Air Hose those in charge of the display announced that the company is prepared to sell this hose in such lengths hereafter. Heretofore the hose has been offered in lengths of 25 and 50 feet.

That such products as valves can be worked into an inviting display setting was demonstrated at the booth of the Toledo Steel Products Company, Toledo, Ohio. Conspicuous boards in the front of the booth presented valves for specific makes of automobiles while a large board in the rear and tables held other Toledo Steel units.

The Elite Manufacturing Company, Ashland, Ohio, had two new products to show the trade, one being its Reliable No. 50 Hydraulic Jack and the other its Reliable Jump Jack. The former is designed for protection against leakage and it is for general garage purposes. It lists at $50. The Jump Jack is a jack for quick changing curve. The company had an electrically actuated display demonstrating its Reliable No. 7 Balloon Tire Jack while it displayed others of its products.

Moto-Meter Company, Inc., Long Island City, N. Y., provided one of the show's conspicuous landmarks in its huge exhibition Moto-Meter design. This is one Moto-Meter that will fit no current automobile. It measures something more than two feet across the face of the dial and around three feet from the base of the cap to the top. Samples of the revamped De Luxe Moto-Meter and Standard Moto-Meter were shown at the booth. Each model now has a gold dial instead of the black dial as formerly while the retaining rings are embossed instead of plain. It makes them more attractive. Prices will remain unchanged and the revamped models will be in production Jan. 1. Jobbers can turn in old models on new ones by prepaying shipping charges.

The Continental Piston Ring Company, of Memphis, Tenn., which claims the distinction of being the only piston ring manufacturing concern in the south had its usually inviting display, this time in booth 189. Both the Elastic Oil Ring and the Elastic Piston Ring, well known to the trade, were presented on a board in the back ground.

Bumpers seemed to get a big share of the departures at the A. E. A. show this year and evidence to this effect was found again at the booth of the Harvey Spring & Forging Company, Racine, Wis. "Harvey's New Bumpers and Fender Guards" drew much attention. The bumpers and guards are made of three bars of 5/8 in. spring steel, the steel structure and design giving the units unusual resiliency and shock-withstanding qualities. An unusually wide bumping surface is also afforded.

Dolls Tell Story

Harvey's new bumpers are in black enamel and nickle trimmed. The company also showed springs and spring oilers.

The Protexall Company, Abingdon, Ill., holding forth at booth 195 did not keep the spectator guessing long as to what it had for the market. A long line of large dolls told the story. Each was dressed in a Protexall one-piece garment.

Sparks-Withington Company Jackson, Mich., signalled its invasion of the radio field with a showing for the first time of Spartan Radio Sets. They are of

the five tube tuned radio frequency variety. One of the models lists at $75 and the other at $58. Hand tinted views of the Sparks-Withington plant at Jackson were displayed to commemorate this company's silver anniversary. Of course Sparton horns were conspicuous in the exhibit.

Clifton Manufacturing Company, Waco, Texas, quartered for the show at booth 203 employed an impressive method of showing some of its auto fabric equipment. In the booth was a miniature automobile dolled up with a hood and radiator cover, top cover, and a seat cover and canopied by an automobile tourist's tent—all belonging to the company's line.

Troubles that befall the American automobile tourist were aptly illustrated on a novel map that formed part of the display of the Frank Rose Mfg. Co. of Hastings, Neb. On different sections of the map the tourist was found in some new grief. A good hand tire pump would have helped the tourist out of the difficulty on many occasions—and that is one thing the Frank Rose company sells. Another thing is a line of grease guns.

Temco Electric Motor Company, Leipsic, Ohio, received many vistors who were interested in this organization's electric drills, grinders and other shop equipments. A display rack for jobbers' show rooms was exhibited which carries six drills and grinders.

Bushings reigned supreme at booth 106 which was occupied by the Johnson Bronze Company of New Castle, Pa. This was a bright looking display and well arranged. Dealers' stock assortments of bushings were displayed, one of piston pin bushings, one of steering knuckle and tie rod bushings and one of spring bolt and general purpose bushings.

King Radio Receivers commanded the central position at the booth of King Quality Products, Inc., Buffalo N. Y., while displays presented the company's lines of such products as piston pins, piston pin screw sets, steering knuckles, shackle bolts, etc. New Shackle bolts were also shown.

New Ford Radiator Shell

McCord Radiator & Mfg. Co., Detroit, announced and displayed a new Ford nickle-plated radiator shell. This radiator shell is for Ford models from 1917 to the current 1926 designs. The booth exhibited also two gasket display boards for jobbers or service stations or other large gasket handlers. One board holds a complete assortment of ring gaskets and exhaust type gaskets, over 2000, while the other board shows exhaust or manifold type gaskets to fit all popular cars, there being about 400 gaskets in this assortment. The booth also displayed a cabinet for showing cylinder head gaskets in the dealer's place of business. The cabinet has roller bearing drawers with a locking device to prevent the drawers from coming entirely out and has several other convenient features.

The Curtis Style Y Direct Pumping Air Compressor for private garages and small public garages was one of the interesting things at the booth of the Curtis Pneumatic Machinery Co., St. Louis, Mo. This is a new product. It sells for $90 and can be used anywhere where an electric light socket is available for attachment. The outfit is on casters which can be removed along with a pushbar handle if it is desired to use the compressor as a stationary facility. There is a compression gage and the company recommends the device especially for balloon tires.

Russell Manufacturing Company of Middletown, Conn., had its latest contribution to the shop on the floor of the show. This is the Rusco Brake Lining, Drilling and Counter Sinking Machine which has been out only a few weeks. The machine is said to be particularly adapted for brake service stations and it will handle any size of brake band.

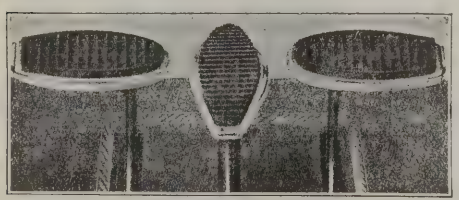
Apcó Manufacturing Co., Providence, R. I., in booth 216 introduced its Anti-Shimmy, which is a spring designed to take the wobble out of Ford wheels. It snaps onto the steering rod. The company also displayed its Anti-Rattlers, Auto Radiator Heaters and a new type of outside oiling system, all for Fords.

(Continued on next page)

Some New Products at Automotive Equipment Show

FULTON PEDAL PADS

RUBBER pedal pads for the 1926 Fords are made by the Fulton Company of Milwaukee, Wis. These come in sets of three and sell at a list price of $1 for the set. A new model accelerator for all Fords including 1926, is also being produced, this selling for $1.50 and being so designed that it can be located 4½ in. from the brake pedal to obviate the danger of stepping on the accelerator when attempting to apply the brakes.

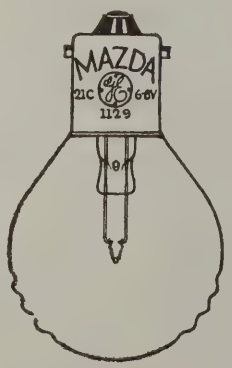


Fulton pedal pads for 1926 Ford

The Fulton Company also have a new truck mirror with 20 in. arm, plate glass being used in the mirror portion of the device. This sells for $1.25.

NATIONAL LAMP BULB

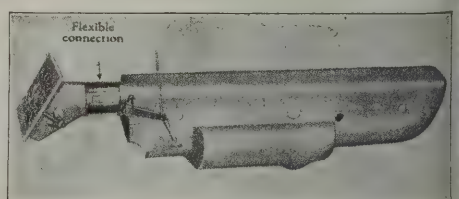
A NEW type bulb with a wrinkled surface is being made by the National Lamp Works of General Electric Company, the purpose of this being to reduce the glare when double filament bulbs are used. This change in the spherical surface is required when one bright filament is above the other for use in getting a depressed beam for passing an approaching car. For the sake of uniformity it is also being used with a single filament bulb, although its effect is inappreciable with this type and the plain glass bulb is just as satisfactory as the wrinkled type when a single filament only is employed. At the exhibit of the National Lamp Works the effect of improperly placed filaments and other details of lenses and reflectors which affect adequate and inadequate lighting was shown by means of screen on which the light from the various lamps was thrown.



Wrinkled bulb used with double filament lamp

MONROE HEATERS

A LINE of heaters for Chevrolet, Dodge Brothers, Chrysler, Overland, Maxwell and Ford is made by the Monroe Auto Equipment Mfg. Co., of Monroe, Mich. These heaters are of manifold type and carry warm air to the car by means of register in the toe board. A conveniently operated handle on the dash controls the valve and either gives more or less hot air. Heaters are aluminum



Typical manifold heater made by Monroe

with the exception of Chevrolet which is cast iron. Prices range from $1 to $7.50, the heater at $1 being a sheet iron model used on Ford cars.

NEW LAMP

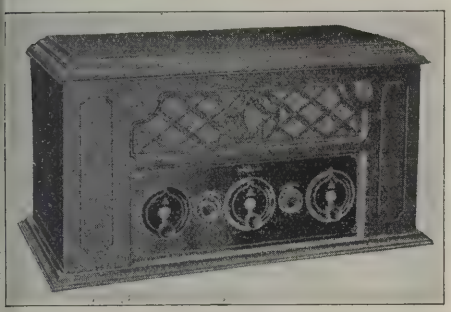
A NEW lamp for the 1926 Ford car was shown by the Cincinnati-Victor Company of Cincinnati, Ohio, this lamp being equipped with a Brown reflector. The lamp attaches to the fender in the manner used in 1926 Fords.

Some New Products at A. E. A. Show

(Continued)

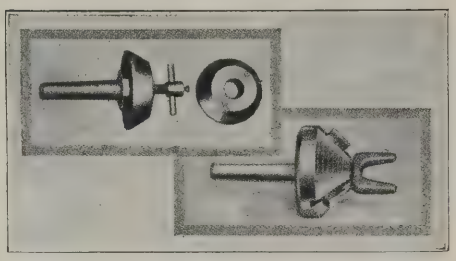
NEW APEX RADIO SET

APEX De Luxe Receiver. Apex Electric Mfg. Co., Chicago, Ill. This Apex radio product combines the company's Super Five Receiver with the Apex Entertainer (loud speaker) house in a complete unit. The receiver is so



Apex receiving set

constructed that it permits installation of certain standard types of battery eliminator equipment. With such installation it can be operated from the electric light socket, thus doing away with the everyday type of A and B batteries and chargers. Solid walnut cabinet. Size 29⅝ by 15⅝ by 18 in. high. Price $135, including Apex Built-in Entertainer, but without accessories. Slightly higher west of Rockies and Canadian prices 40 per cent higher.



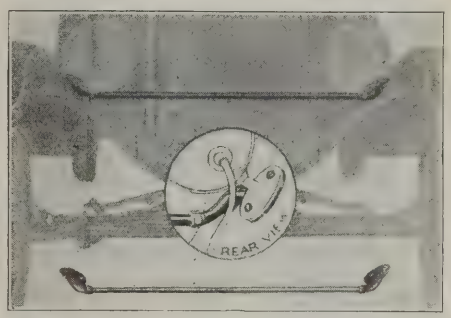
ADAPTERS FOR HOLDING PISTONS

Cut shown above

ADAPTERS for holding pistons in a lathe, South Bend Lathe Works, South Bend, Indiana, are made in two styles, A and D. The former is a cone adapter to be used for turning pistons although it is especially designed for grinding work. The three adjustable jaws which slide in dove tails milled in the cone have special screws for locking them securely in position. The taper shank is ground to fit the spindle of the lathe and the cone is highly polished and graudated in quarter inches to take pistons from 2 3/8 to 5 in. Price of style A is $15. In the style D two rings, a large and small size are furnished and additional rings for larger or smaller pistons can be purchased. The two rings being turned to a 60 deg. taper, the same as a lathe center, fit into the skirt of the piston very accurately. The piston is turned by means of a driving dog. Price $9.50.

MARQUETTE LAMP AND FENDER SUPPORT

MARQUETTE Lamp and Fender Support for New Ford. Marquette Manufacturing Company, St. Paul, Minn. Recommended by the makers because of its neatness, simplicity and strength in



Marquette lamp and fender support

service. It is said to prevent vibration which soon results in loosening and fender rattle. Attached beneath the Ford lamp brackets with same bolts. No holes to drill in installation and can be put on in few minutes. The support is made in two styles, nickle and black enamel. List price, black enamel $1.40; nickle, $1.80.

(Continued on next page)

What Show Visitors Saw in the Individual Exhibits

(Continued from page 14)

That the Apco Timer for Fords is as "steady as a clock" was demonstrated with a display in which a clock face featured.

The Price-Hollister Company, Rockford, Ill., made use of cut away samples and display charts to present the merchandising virtues of its Jumbo Giant Transmission for Fords.

Very attractive Christmas packages for Williams Accelerators were on display at the booth of Williams Brothers Aircraft Corp., of San Francisco, Cal. The Christmas boxings are for both the Senior and Junior models. Another thing seen at this booth was a showing of Safe-Tie Nuts for Ford transmission bands. Then there was an accelerator merchandiser in the shape of an easel display board for the dealer.

A new jobbers' display board of welding, cutting, carbon burning and lead burning equipment was a feature at the booth of the Imperial Brass Mfg. Co., Chicago, Ill. There also was a new jobbers assortment case for compression coupling fittings in addition to a showing of other products.

One of the show's highly interesting display boards was in the booth occupied by the Modine Mfg. Co., of Racine, Wis. This company is the maker of the Modine Super Spirex Ford Replacement Radiator. The display board explained the construction of the radiator.

A new one sprung at the show by the Gladiator Mfg. Company, Auburn, Ind., was the Gladiator Air-Vac Automobile Vacuum Upholstery Cleaner. This is a small vacuum cleaner for the autombile seats, etc. The suction is created by the automobile engine, a connection being made to the intake manifold. Control is by a control cock at the dash. List $5.

Another new Gladiator product was the "Air Flex" Air Cleaner, a cleaner which it is said cannot be injured by backfire and which will not interfere with the carbureter adjustment or increase gasoline consumption. Price for Ford or Chevrolet cleaners $5. Company will furnish other prices.

New Air and Water Station

The Romort Mfg. Co as a new offering showed the Romort Air & Water Station using a Safety Tire Inflator which registers before inflation the amount of air desired in the tire. The station is built for an illuminated top without glass to break. It has a special radiator filler and a new air valve which enables the operator to reach difficult places. The company also showed a working model of its Advertising Air Station, which provides places on its sides for advertisements.

Klaxon Company, Anderson, Ind., took occasion at the show to introduce Klaxon No. 18 high frequency horn to list at $12.50, deliveries Jan. 1. The company also announced two new horn models on the motor-driven line, the 8C and the 12C, listing at $3.50 and $5 respectively. The price of the hand signal has been reduced from $5 to $4.

Bushings and bearings had another big inning at the booth of the Buckeye Brass & Mfg. Co., of Cleveland O., while Splitdorf Electric Co., Newark, N. J., presented its new socket wrench assortment in addition to such products as Bethlehem caps, spark plugs, radio and radio parts and other electric and radio products.

A new item of shop equipment was shown at the booth of the Canedy-Otto Company, Chicago Heights, Ill. This was the Canedy-Otto Motor Drive Sensitive Drill, which has been designed for any sensitive high-speed work up to ⅜ inch. The drill comes complete with motor, belt, switch, and necessary lamp cord at $44 to the dealer.

Chas. O. Tingley & Co., Rahway, N. J., showed a new clincher flap and a count-

er display box for each of its products. The company has been well known as a handler of blowout patches, plaster patches and flaps.

A photograph of a carload shipment of Pedrick Heat-Shaped Piston Rings was passed around to callers at the booth of the Wilkening Mfg. Co., Philadelphia. The picture had just been taken and the big consignment was going to Cummings & Emerson, A. E. A. jobbers at Peoria, Ill.

The Dearborn Equipment Co., Kalamazoo, Mich., exhibited display boards of its line of shop tools for Ford, Fordson and Chevrolet. It also had a good display of burnishing machines, motor stands, axle stands, etc.

It was not difficult to identify the headquarters of "Dutch Brand" goods, handled by Van Cleef Brothers of Chicago. Aside from the women running the hat checking place the "Dutch Girl" at Van Cleef's booths was the only representative of that sex on the Coliseum floor. The occasional feminine visitor is excepted. The "Dutch Girl" was a part of the big show.

Phinney-Walker Company, Inc., of New York occupied a booth with its display of clocks and watches for the automotive trade and there was plenty in gaskets at the booth occupied by the Victor Mfg. & Gasket Co., of Chicago.

Stone Mfg. Co., of Chicago, handling rims, rim parts and tire carriers had a new counter display for tire carriers and a new counter cabinet for rim parts.

Protection to the car and its human freight seems to be the goal of the American Chain Co., of Bridgeport, Conn., long known as the makers of Weed chains, while a complete line of bumpers also shows the trend of automotive merchandising, toward a more practical and safe vehicle. The exhibit of the Wolverine Bumper and Specialty Co. of Grand Rapids, Mich., also showed a variety of bumpers, both of the flat bar and round type.

Protection and Safety Keynote

Protection to property as well as safety for the car and its occupants is exemplified by exhibits at the show, the former feature being well brought out at the display of the Fraim-Slaymaker Hardware Co. of Lancaster, Pa., this display including padlocks of all sorts and sizes as well as chains with locks for use in protecting the spare tire from theft.

But protection is not necessarily confined to those things which appear to the casual observer. Under the fine exterior of the modern car is a net work of nerves, the wires that carry the electrical current to operate the horn and lights. Light circuits go here and there, under the body, across sheet metal edges and frame corners, where in spite of the most careful installation trouble is likely to occur at some time. Here the fuse, used on many cars is provided to take care of the emergency and prevent loss of battery current and possible fire hazard. Complete lines of fuses were shown by the Chicago Fuse Manufacturing Co. of Chicago and the Bussman Manufacturing Co of St. Louis. Mo., the former company also displaying a radio fuse designed to protect the filaments from possible overload from a stray connection with the "B" battery circuit.

Time was when lights were needed to light up the road, then to light the road with minimum interference with the vision of the fellow driving in the other direction, but now lights are made for many purposes, to park with, to signal with, to read by in enclosed cars and for purposes of decoration. These various types of lamps and possibly some others not mentioned, were shown by the K-D Lamp Co. of Cincinnati, Ohio, and the Culver Stearns Mfg. Co. of Worcester, Mass., the latter also having a radio set on display.

The realization is becoming more general that the receipt of profits should start rather than end with the completion of the sale of the new car, for from the time it enters the owner's hands, there is a continual opportunity for additional business and profits. Jacks, luggage carriers and tire pumps, such as are handled by the Wm. E. Pratt Mfg. Co. of Chicago, find ready sale. Other items displayed which come in this same classification are the visors, made by the

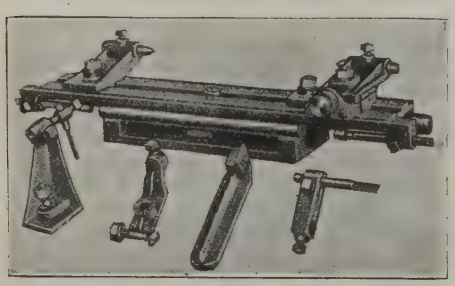
(Continued on next page)

Some New Products at Automotive Equipment Show

(Continued from page 15)

REAMER GRINDING ATTACHMENT

THE Sioux expansion reamer grinding attachment, Albertson & Company, Inc., Sioux City, Iowa, is especially designed for grinding both straight and spiral expansion reamers. The reamers are held between centers which are hardened and ground. A micrometer adjustment assures alignment of the reamer so as to insure grinding the reamer straightly and accurately. A gage for adjusting the tooth rest assures proper clearance on the reamers. There is an adjustable stop which insures perfect grinding of the cutting surfaces of the reamer without injury to other parts of the latter such as pilots or guides. A double screw adjustment adjusts the ways to running clearance. The capacity is up to 2½ in. diameter and 15 in. in length. The attachment complete with holder for a diamond dresser is priced at $65.



Reamer grinding attachment



SIOUX VALVE SEAT REAMER SET

Cut shown above

THE No. 38 Sioux standard valve seat reamer set, Albertson & Company, Inc., Sioux City, Iowa, will handle approximately 90 per cent of all engines. It comes complete in a neat metal case and contains the following equipment:

1—No. 192 Roughing reamer—45 deg., will handle valve seats from 1⅜ to 2¼ in. diameter.

1—No. 193 Valve seat reamer—45 deg. will handle valve seats from 1⅜ to 2¼ in. diameter.

1—No. 194 Nickel tooth reamer—15 deg. will handle valve seats from 1⅜ to 2¼ in. diameter.

1—No. 195 Nickel tooth reamer—75 deg. will handle valve seats from 1⅛ to 1⅞ in. diameter.

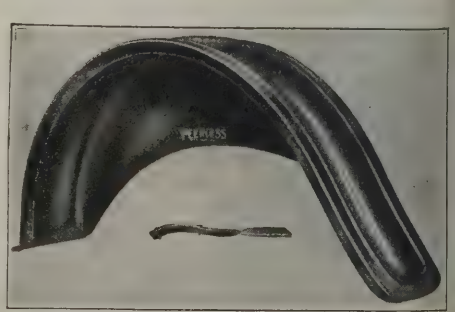
1—No. 196 Nickel tooth reamer—75 deg. will handle valve seats from 1½ to 2⅜ in. diameter.

8—Sioux pilot stems ranging from $\frac{5}{16}$ to ⅜ in. in standard and oversize.

The set complete in a metal case lists at $38.00.

FENDER FOR FORD TRUCK

PEERLESS Commercial Fender No. 7. The Corcoran Mfg. Co., Cincinnati, Ohio. A general purpose rear fender for Ford truck. It will fit any 1926 Ford truck chassis and match up with the standard front fender.



Peerless rear fender for Ford trucks

Some New Products at A. E. A. Show

(Continued)

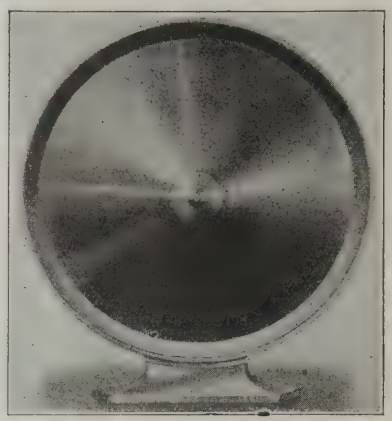


"Amberola," the new American Bosch radio set

NEW BOSCH SPARK PLUG

IN the American Bosch exhibit is a new spark plug shown for the first time at any equipment show. This is type P-115, a two piece heavy duty Ford plug designed for the truck, and of course being usable on car models as well. It can be taken apart and cleaned if necessary. The line of Bosch radio equipment makes its first Jobbers' Show appearance. On display is the Bosch radio receiver known as the Amberola, also the Ambotone, the Bosch Wood-cone reproducer, also the Junior Ambotone, a smaller reproducer, and the Nobattry, the Bosch "B" battery eliminator.

The Amberola is a 6-tube radio receiver, the exterior design of which is very pleasing. The Ambotone reproducer has the exclusive Bosch feature of a wood reproducing cone. This cone is 18 in. wide and gives accurate reproduction of sound. The Junior Ambotone is a smaller reproducer with the cone directly mounted to wood. It follows the same principles used in constructing the Ambotone as far as the actuating mechanism is concerned, and derives its mellow tone from the use of wood.



"Ambotone," the American Bosch wood cone reproducer



APEX RADIO CONSOLE

Cut shown above

APEX Baby Grand Console. Apex Electric Mfg. Co., Chicago, Ill. An artistic radio cabinet. Will accommodate any type of A and B batteries and necessary chargers or eliminators. The console is equipped with the Apex Entertainer (loud speaker) and measures 48 by 18 by 36½ in. high. Price $225, including Apex Super Five Receiver and Apex Built-in Entertainer, but without accessories. Prices west of Rockies slightly higher; Canadian, 40 per cent higher.

(Continued on next page)

What Show Visitors Saw in the Individual Exhibits

(Continued from page 16)

Pennsylvania Piston Ring Co. of Cleveland, Ohio, decorative radiator caps as made by the J. C. McAdams Co. of Long Island City, N. Y., cutouts made by the Cooper Mfg. Co. of Marshalltown, Iowa, accelerators made by the W. H. Thomas Mfg. Co. of Spencer, Iowa, and curtain lights and fittings made by the Hastings Mfg. Co. of Hastings, Mich., the latter concern and the Pennsylvania Piston Ring Co. also making piston rings.

After the car has run a few thousand miles it needs inspection and lubrication and after it runs ten thousand miles it needs piston rings, and possibly other items. From that point on the market for shop business broadens and the parts maker finds an opportunity to serve and profit by serving. The item of axle shafts alone has been the main stay of W. D. Foreman of Chicago, a line of piston pins also being produced. Piston, pins and piston pin locking screws are the product of the Spencer Smith Machine Co. of Howell, Mich; valves are made by the Jones Motor Valve Co. of Detroit, Mich., while leather items such as belts, clutch facings and discs for fabric type universals are produced by the Hide Leather and Belting Co. of Indianapolis, Ind.

Time was when the so called mechanic went under the car with his trusty pliers and monkey wrench and parked there for a week or more, but "them days are gone forever." Today its the well equipped shop that gets the business.

Even the crawl-under part of the job has to a great extent been rendered an obsolete procedure, rendered so by chain hoists, such as are made by the Wright Mfg. Co. of Lisbon, Ohio, while the attachment of new equipment requiring the drilling of holes through tough steel is made easy through use of the products of such concerns as the United States Electric Tool Co. of Cincinnati, Ohio, and Fleming Machine Co. of Worcester, Mass., these concerns also make other items of electrical shop equipment such as bench and portable grinders.

Vise an Essential Item

Sometimes we are inclined to pay a lot of attention to the complicated machinery, that which involves the use of electricity or specially constructed mechanism and forget the common items that we use all the time. Just try to do a job of any kind on the running board of a car and see what is most needed. It is the sturdy vise, which is practically an integral part of any bench, the lack of which adds great difficulty to the simplest job. A well rounded line of these essential items was shown by the Chas. Parker Co. of Meriden, Conn.

In overhauling the car it is often found necessary to replace some of the electrical units in order to get the best possible operation of the engine. Here we find use for such items as timers, made by the Milwaukee Motor Products, Inc., of Milwaukee, Wis., the ignition coils made by the Jefferson Electric Co. of Chicago and battery terminals and tools as made by the Ohio Parts Co. of Cincinnati, Ohio.

Small tools, which like the vise are often overlooked are made by the Crescent Tool Co. of Jamestown, N. Y., specialists in the production of adjustable wrenches and pliers, also by North Bros. Mfg. Co., well known for their Yankee line of screw drivers, breast drills and radio tools.

Like the vise and screw driver, sometimes forgotten because accepted as a matter of course is another item, without which the car could not run; the lowly wheel, sturdy as the hickory from which it is made, and the product of the Bimel Spoke and Wheel Co. of Portland, Ind.

PACKARD CABLE ASSORTMENT

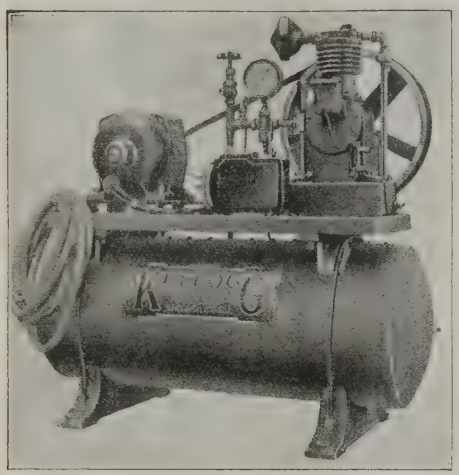
In the November 12 issue of MOTOR AGE, page 23, there appeared a description of The "Merchandiser," a display board containing Packard Automotive Cables, but the name of the manufacturer was omitted. These items are the products of The Packard Electric Co., Warren, Ohio.

Some New Products at A. E. A. Show

(Continued from page 17)

KELLOGG AIR COMPRESSORS

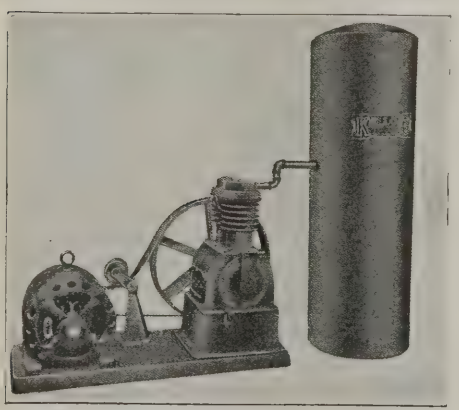
FOUR new air compressors were displayed by the Kellogg Manufacturing Company of Rochester, New York. The Bearcat model, for small service stations comprises a tank and on top of the tank the electric motor and air pump. The compressor will fill a 12 by 36 tank from



Kellogg "Bearcat" compressor for small service stations

110 to 150-lb. pressure in approximately 10 minutes. With 110 volt A. C. motor the price is $186.50, with direct current the price is $195 and with 25 cycle, 110 or 220-volt current the price is $204. In either case the motor is 1/3 h.p.

Another new compressor is known as model E. M. 1222, this being a two stage compressor. This compressor has copper inter-cooler and is provided with ball bearings. A patented constant level lubrication system is used which eliminates oil from the air. An oil gage shows the amount of oil in the reservoir of the



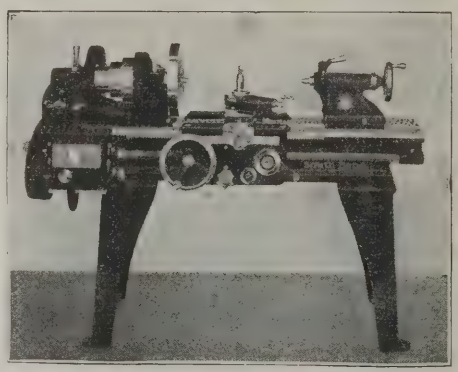
Kellogg model E. M. 132 compressor for paint spraying

pump. Prices range from $350 to $400, depending on type of motor and tank included in the outfit.

Another new compressor is E. M. 132 and 142 to be used for spray painting, sand blasting and operation of pneumatic tools. It is capable of delivery from 20 to 40 cu. ft. of air per minute at pressures up to 100 lbs. It is made in several sizes with motor ranging from 5-h.p. to 10-h.p. at prices from $780 to $995. The outfit is equipped with a vertical tank of 80 gal. capacity. The compressor only without electric motor or tank may be obtained for $390 for model 132T and at $410 for model 132TL.

NEW SOUTH BEND LATHE

AN 11-inch quick change gear lathe, South Bend Lathe Works, South Bend, Indiana. This lathe follows closely the general line of South Bend lathes and is particularly adapted for use with a cylinder re-grinding and re-boring attachment, adapters for holding pistons for grinding and turning and the numerous other fittings handy for the automotive shop. The lathe has an 11¼ swing over bed and is made in four sizes taking from 12 to 36 in. between centers. The swing over the carriage is 7⅝ in. and there is a ⅞ in. hole through the spindle. The quick change gear box provides 48 changes for cutting threads from 2 to 112 per inch including 11½ in.



New South Bend lathe

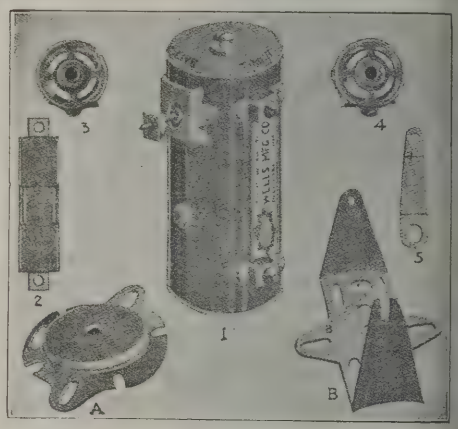
pipe thread. In addition a wide range of automatic feeds, coarse or fine is instantly obtainable. This lathe may be supplied at extra cost with a milling and keyway cutting attachment, taper attachment, hand wheel draw-in chuck, quick acting lever type draw-in chuck, thread indicator, tool post turret, internal or external grinding attachment, etc. It requires ½ h.p. to drive it.

LUPTON STORAGE CABINET

A NEW steel storage tool cabinet for the use of garages and service stations is being put on the market by David Lupton's Sons Company, Detroit. It provides slanting shelves, subdivided to provide suitable places to keep reamers, drills and other special tools. Steel drawers are provided for expensive tools such as micrometers and gages while flat shelves at the bottom with more space take care of larger tools. The price is $35.

WELLS FITSALL COIL

WELLS Fitsall coil, Wells Manufacturing Co., Fond du Lac, Wis., designed with two brackets to service all cars. There is no complicated wiring and it can be quickly installed by anyone. Besides the two brackets the coil can be had with a condenser, 6-volt resistance, 12-volt resistance and a ground

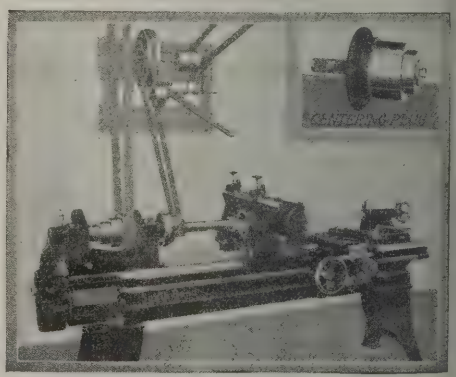


Wells Fitsall coil

strip, all of which are shown in the illustration. Price coil only $6, condenser $1, brackets 30 cents, resistance 30 cents and 35 cents, and ground strip 5 cents.

REGRINDING ATTACHMENT

A PRACTICAL attachment for regrinding engine cylinders on a South Bend lathe, South Bend Lathe Works, South Bend, Indiana. The cylinder block is supported on an adjustable fixture which rests on the cross slide at the top of the angle plate. The centering plug which fits the large hole bored in the angle in the angle plate is used to locate the cylinder concentric to the lathe spindle.



Lathe attachment for regrinding cylinders

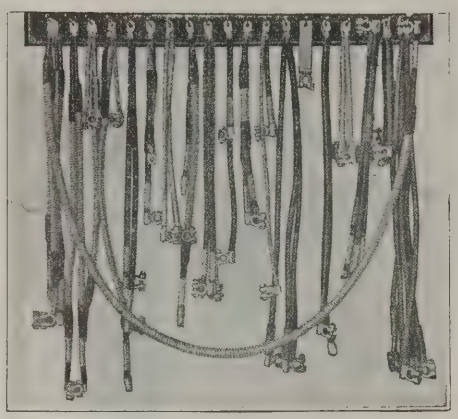
The small pilot ring attached to the end of this plug enters the cylinder hole. After centering the block is clamped to the angle plate. The countershaft drives the ball bearing grinding spindle at 4000 r.p.m. The outfit comes in various sizes to fit lathes 16 to 24 in. and ranges in price from $300 to $350.

Some New Products at A. E. A. Show

(Continued)

REPLACEMENT BATTERY CABLES

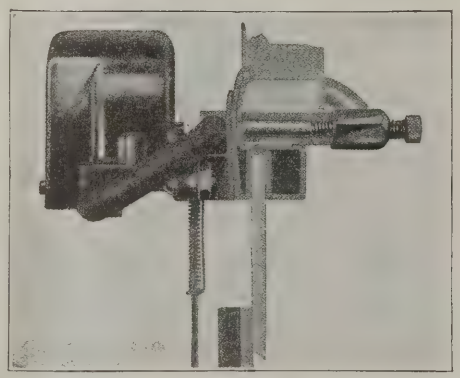
A NEW assortment of replacement battery cables for the most popular cars is being featured by the Whitaker battery Supply Company of Kansas City, Missouri. This assortment includes a display board and contains 56 assorted cables for Chevrolet, Dodge Brothers, Buick, Ford, Studebaker, Overland, Willys-Knight, Maxwell, Star, Hudson, Essex, Oakland and Packard. This is known as No. 2 assortment, the list price being $7.55. A new cable terminal is also available. this being known as the Fitzall elbow. It can be used for either positive or negative, right or left. The sleeve portion which fits over the terminal has a double taper meeting in the middle so as to fit either tapered or straight battery posts. It is made of red brass and is lead coated, the list price being 50 cents each.



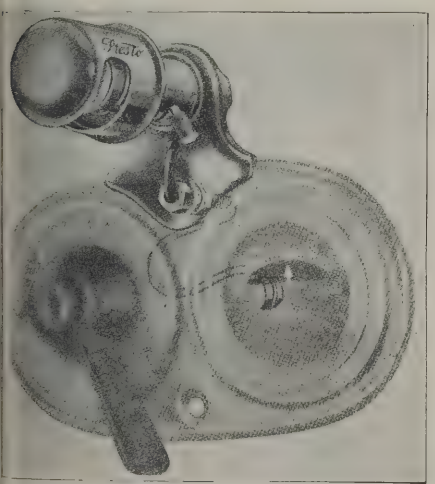
Whitaker replacement battery cables

TRICO WINDSHIELD WIPER

A NEW windshield wiper operating on the vacuum principle is being produced by Trico Products Corporation, Buffalo, New York. The mechanism of this windshield wiper is completely enclosed and is mounted together with the wiper on the outside of the windshield. It is secured by a tube through which the air is carried. Shut off is on the inside. The unit is especially designed for Ford closed cars, the list price being $5. The same company is producing a tandem mirror for use of both driver and passenger, the list price being $7.50.



Trico windshield wiper



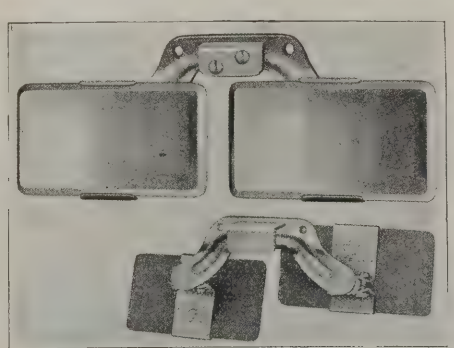
PRESTO LAMP FOR 1926 FORDS

Cut shown above

THE Presto panel-lamp for 1926 Ford dash, Metal Specialties Mfg. Co., 338 N. Kedzie Avenue, Chicago, designed to be used in connection with the switch panel on the present model Fords. No drilling is necessary as installation is made by removing the top bolt and replacing it with a hollow bolt through which the wire runs from the light to the ammeter connection. The price complete with bulb, wire, switch is $1.

THOMAS RADIATOR COVER

THOMAS Dash Control Radiator Cover. Thomas Auto Top Company, Muncie, Ind. The cover is controlled much on the order of a window shade, a leader extending from the curtain (under the hood) to the dash where it can be managed by the driver and fastened. The cover is constructed of water-proofed and durable material and is designed for practically all makes of cars. Protects shell as well as sides of radiator thus preventing freezing at bottom.



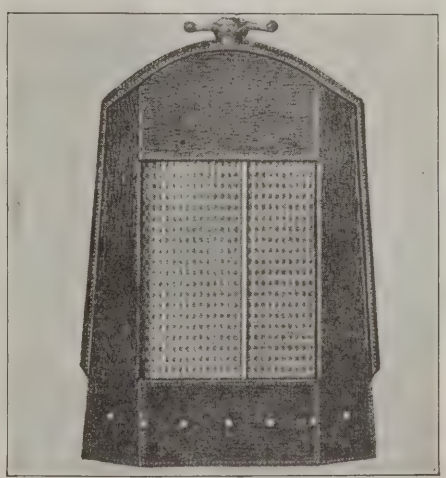
Kokomo dual mirrors

LE COMPTE PEDAL PADS

PEDAL pads for the 1926 Ford including a rubber corrugated center together with nickel plated brass rim and ears are the product of the LeCompte Mfg. Co., of Newark, N. J. The ears make it a simple matter to attach the pads, these being merely bent under to hold them in place. Another device put out by the same company is an oil tester for Ford cars. It replaces the lower pet cock in the flywheel housing. A wire extension runs from this valve through the running board shield and to check up on the oil it is only necessary to pull on this rod in order to let oil flow from the lower opening. A spring return is provided to close the oil cock after a test has been made. The list price is 75 cents. The same company has a repair type of crankcase arm for use on the Ford engine. A change has been made in this so that it is now provided with eccentric bushings to make it a simple matter to line up the bolts with the hole in the crankcase arm.

NEW BRAKE LINING

FOR use on heavy duty service the General Asbestos & Rubber Company of Charleston, S. C., are now producing a folded and molded brake lining. This is applicable on taxi brakes, also on trucks and busses. Lining is made of one piece of fabric folded over at both sides so that the edges meet in the middle. It is then molded under high pressure and temperature.



Thomas radiator cover

KOKOMO DUAL MIRRORS

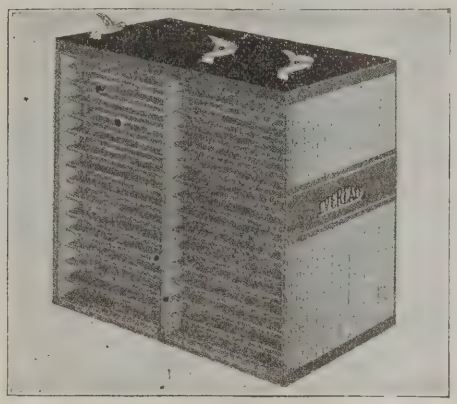
DUAL MIRRORS are made by the Kokomo Automotive Mfg. Co., Kokomo, Ind. Mirrors of this type provide rear view vision for both occupants of the front seat. The two individual mirrors can be separately adjusted to any position by means of ball and socket construction. The list price is $2.50 including the two mirrors and the combination bracket.

Some New Products at A. E. A. Show

(Continued)

NATIONAL "B" BATTERY

A NOVEL type 45 volt "B" battery is being made by the National Carbon Co., Inc., of New York City. This is known as Layerbilt and by means of cells of rectangular section eliminates a lot of the dead space which is present when cylindrical cells are used. In addition to this feature it has only three soldered connections, due to a special construction. There are no soldered connections between cells, but the negative electrode of each cell is turned over and covered with carbon to form the positive electrode of the next cell. In this manner trouble due to internal loose connections is reduced to a minimum. The list price is $5.50 and the battery is recommended for sets having four tubes or more where the drain on the battery is heavy.



Layerbilt "Eveready" B battery of National Carbon Co.

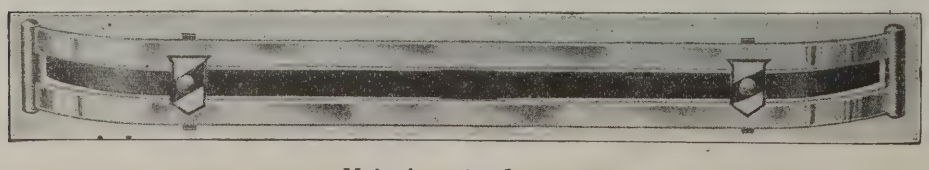
Another item by the same company is a unit cell lantern known as No. 4753 the special feature of this being that it is designed to take standard cylindrical cells instead of requiring cells of special shape. This makes a more commercial article and one that can be used in practically any district where electrical service of any type is available or where there are hardware stores or other stores handling flash light batteries. This lantern lists at $4.



Eveready dry cell lantern No. 4753

MAJESTIC SPRING BUMPERS

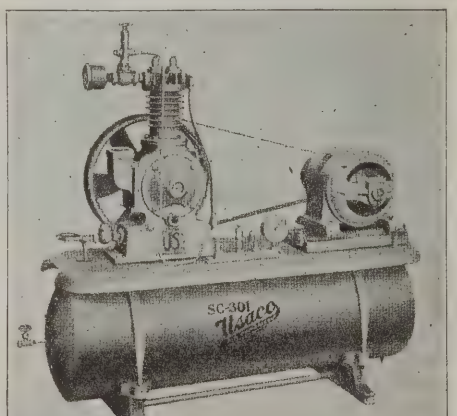
MAJESTIC spring bumpers, Metal Stamping Company, Long Island City, New York, made of heavy oil tempered spring steel bars fastened to substantial tubular ends, and reinforced with ornamental clips. It is made to fit all popular makes of cars in widths of 1½ in. for small cars to 2 in. for the larger models. Prices range from $12 to $22.



Majestic spring bumper

U. S. AIR COMPRESSORS

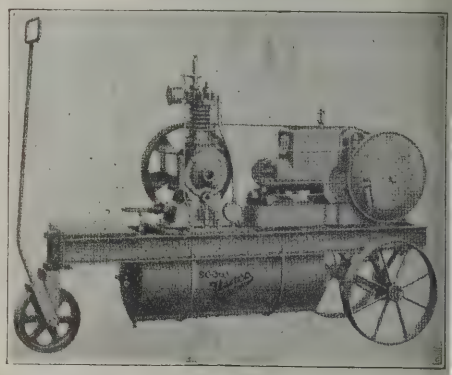
THREE new items of compressing equipment are being put out by the United States Air Compressor Company of Cleveland, Ohio. These are especially designed for paint spray equipment. One known as model SC-301 consists of a 3 in. by 3½ in. air cooled single cylinder compressor together with 1½-h.p. electric motor and 30-gal. tank suitable for pressures up to 200 lbs. This model sells for $256 while the same outfit, except equipped with a 2-h.p. gasoline engine, sells for $270. A portable outfit known as model SC-303 is similar except that the tank capacity is 22 gal. and the working pressure 150 lbs. It is provided with 2-h.p. gasoline engine and sells for $304 list. A third model is capable of handling two paint guns at one time. It consists of a 4½ by 3½ in. air cooled single cylinder compressor together with 3-h.p. electric motor; price, $306.



Usaco model S. C. 301 compressor

NEW PYRENE PRODUCTS

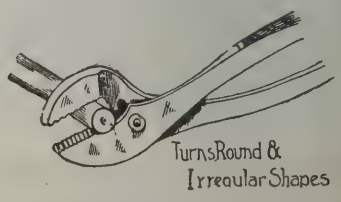
PHOMENE, a foam-type fire extinguisher and Chromine, an anti-freeze solution. Both articles are produced by the Pyrene Manufacturing Company, 560 Belmont avenue, Newark, N. J. Phomene is said to be effective on all classes of fire including such high combustibles as gasoline, oil, grease, etc. It is recommended by the makers as a valuable protection in garages. Three gallon tank furnished complete with one charge and hanging hook. Additional charges promptly supplied on order. Chromine, the anti-freeze solution in liquid form is shipped in 50 gal. drums equipped with spigot. Said to prevent radiator freezing at 15 degrees below zero. One charge in radiator is said to last all winter without evaporation.



A portable model Usaco compressor

GIANT GRIP PLIERS

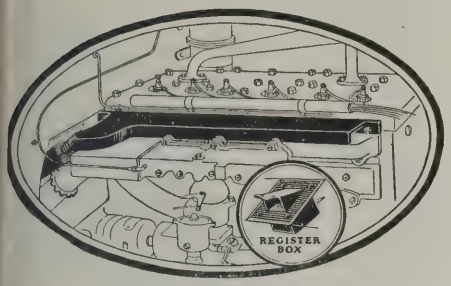
A CLEVERLY designed pair of pliers known as Giant Grip No. 444 is a new Red Devil tool made by Smith & Hemenway, 263 Broadway, New York City. The pivot point of the pliers is offset and the teeth of one jaw are set at one angle and in the other jaw at the reverse angle. This gives the tool somewhat the characteristics of a Stillson wrench so that it is possible to take a grip on a round piece of iron or irregular shaped piece and push on one handle of the pliers only. The construction takes care of the grip and makes it unnecessary to clamp tightly on the two handles of the pliers. The design of the jaws is such that they are practically parallel or have portions which are practically parallel so that nuts up to ¾ in. in width may be securely and easily held. This is accomplished by means of the shape given to the jaws and by the two pivot points available as in conventional pliers. The tool lists at $1.



Giant grip pliers

Some New Products at A. E. A. Show

(Continued)



RED CAT HEATERS

Cut shown above

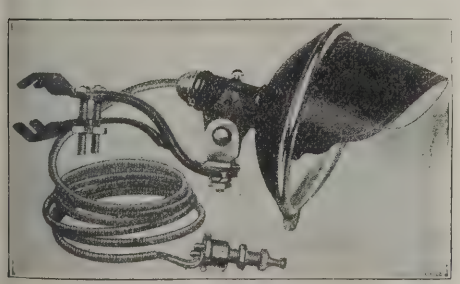
RED CAT heaters made by G. A. Roth Mfg. Company of Hastings, Nebr., are now made for Dodge Brothers, Star, Hudson, and Essex, as well as for Chevrolet and Overland, the first four named being new. The heaters are of the manifold type carrying air to the car body by means of a register box located in the toeboard. The Dodge heater lists at $9, the Star at $9.50, the Hudson at $8 and the Essex at $9.50.

PRESTO CIGAR LIGHTER AND LAMP COMBINATION

THE No. 310 Presto Automatic Rewinding ratchet type cigar lighter, dash type, Metal Specialties Mfg. Co., 338 N. Kedzie Avenue, Chicago, is equipped with 12 ft. of cord held in position without any return pull of the lighter because of the patened ratchet feature. It is equipped with a patented safety fuse. The lighting element or tip is encased in hard rubber to protect fingers from heat. Lighting element is large enough to light entire end of any shape cigar or cigarette. Has safety switch button on tip. With 12 ft. of cord and with either 6 or 12 volt tip, price $5.50.

DELTA ROADLITE

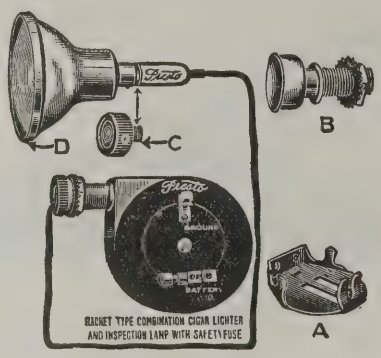
DELTA roadlite, Delta Electric Company, Marion, Indiana, made with two types of brackets, one called a clamp bracket assembly and the other a pedestal type. They are respectively known as models 50 and 51. The mountings for No. 50 are on the brace rod between headlights, on headlight supports, bumper or bumper brackets or fender braces. No. 51 can be mounted on any fender position, cowl, either running board or on splash pan in front of the radiator. The light itself is brass, nickel trimmed, hand buffed. It has a 4 in. reflector and a visor is integral with the lens ring. The visor slides around to any position. A push and pull type switch is furnished for mounting on the dash. The price with either bracket $4.50.



Delta Roadlite

BIFLEX FORD BUMPER

A NEW bumper for use on Ford cars is announced by the Biflex Corporation of Waukegan, Illinois. This is a parallel bar bumper known as No. 1500 which sells for $12.50.

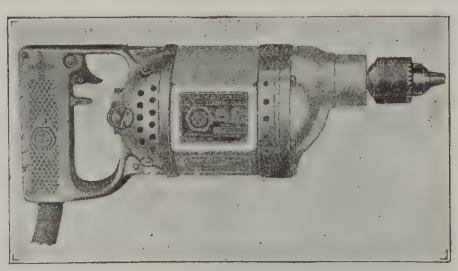


Presto cigar lighter and lamp

BLACK & DECKER DRILL

Cut shown below

A NEW heavy duty ¼-in. drill is being marketed by the Black & Decker Mfg. Co., Towson, Md., the price being $38. The motor is ¼ h.p. and is provided with ball bearings. The chuck speed is 3,000 r.p.m. This motor is especially designed for heavy work and makes possible the drilling of more holes per minute than would be possible with a motor of less power. The high power and high speed of this drill make it suitable for driving Fleming valve seating stones. The drill can also be used in connection with battery repairing and tire repairing.



Black & Decker heavy duty drill

KANT-RUST SPRAY TANK

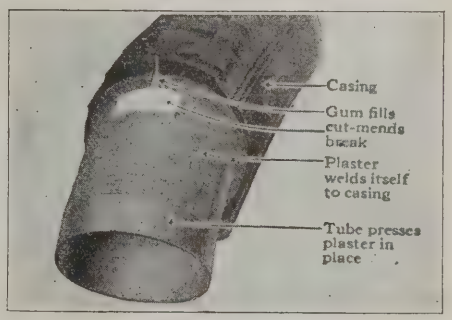
A TANK for use in spraying the underneath side of a car and the springs with Kant-Rust is provided by the Kant-Rust Products Corporation, Grand Central Palace, New York, to dealers who wish to use this method of lubricating and protecting cars. The tank is sold for $45 and a rebate is allowed on every 10 gal. of Kant-Rust in addition to the regular discount. In this manner the initial cost of the tank is gradually rebated to the dealer making the purchase.

WESTINGHOUSE LAMP BULB

THE new type lamp bulb with the wrinkled surface for use with the two-filament type is also produced by the Westinghouse Lamp Company. At this exhibit a novel device was used for proving that the deflection of the rays of light was complete. A photo-electric cell was employed and the light rays were allowed to operate on this cell. By means of delicate instruments the interruption of the rays of light could be made to operate a buzzer. Walking in front of the light would operate the buzzer or deflecting the rays of light downward would accomplish the same purpose. The arrangement was so made that either the light or the absence of light on the photo-electric cell could be made to operate the buzzer, thus making a very spectacular testing device.

LAS-STICK CASING PLASTER

LAS-STIK Casing Plaster. Las-Stik Patch Mfg. Co., Hamilton, Ohio. Put on the market to meet the need for a cold repair that anyone can apply to a nail hole or blowout without the aid of special tools and heat. It serves as a self-vulcanizing boot that welds itself to the casing, carrying a filler patch that fills the break. Repair is said to be complete, keeping out water and dirt. Packed 12 to a carton. Standard shipping carton contains six dozen. Dealers' prices range from $1.80 per dozen to $5.40 per dozen less 10 per cent discount for orders of six or more dozens.



Las-Stick casing plaster

BENZER GLASS INSULATORS

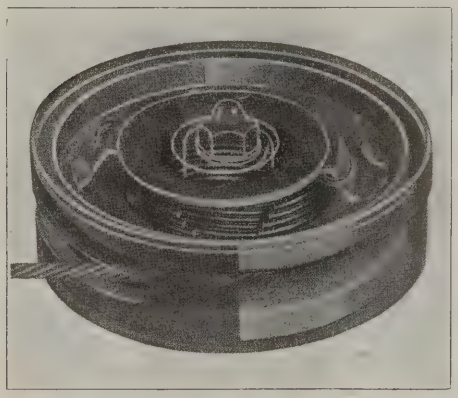
BENZERIZED Glass Insulators. Benzer Corporation, Myrtle and Cooper avenues, Brooklyn, N. Y. This is a radio product. It is said the Benzerized Glass Insulators improve broadcasting reception by delivering a maximum of antenna energy to the receiving set. Naturally they do not absorb water and they do not retain surface moisture. The insulators are made of special heat treated glass which is unaffected by weather extremes. Made in one size, four inches long.

Some New Products at A. E. A. Show

(Continued)

BLACKHAWK ACCELERATOR

A MOST novel accelerator was shown at the booth of the Blackhawk Mfg. Co. of Milwaukee, Wis., this having a foot rest at the side which automatically adjusts itself to the position in which the accelerator pedal is being used. With the ordinary type of foot rest, the foot is at a certain angle for 15 miles per hour and at another angle for 30 miles per hour. One position may be comfortable while the other may not be. With this device, the rest moves down as the pedal is depressed, but can not move down by itself. Then when the pedal is released, the rest also comes up to the right position. This makes it possible to hold the foot at any convenient angle and still have the support of the foot rest. The list price is $3. A number of new wrench assortments were featured at the Blackhawk exhibit, while water pumps for thermo-syphon cooled cars were also shown, covering equipment for Chrysler four, Maxwell, Overland and Fordson, the first three being $8 each and the Fordson being priced at $15.



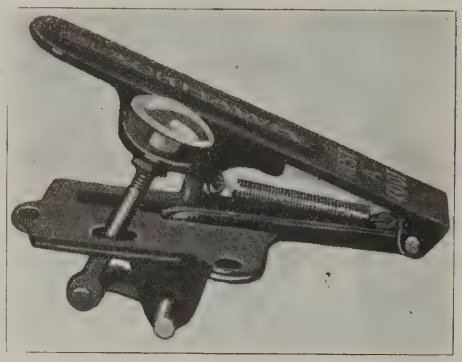
WEED LEVELIZERS

Cut shown above

THE newest product of the American Chain Co., Inc., Bridgeport, Conn., makers of the well known Weed chain, is the Weed Levelizer which in addition to proportioning the resistance of a car body's upward speed, counteracts this by providing a cam which reduces the levelizing when the car spring is in the normal position to an amount that does not retard the free action of the spring, but allows it to follow small irregularities of the road. When, however, due to the car hitting a medium or large bump, the levelizer wheel is rotated away from the normal, the full levelizing needed is again put into play. There are no adjustments on the device nor are there any places to oil and it is stated that some cars have gone 50,000 miles without any attention to the levelizers.

VAN DORN DRILL AND VALVE GRINDER

VAN DORN heavy duty drill valve grinder and 8 in. bench grinder, Van Dorn Electric Tool Company, Cleveland, Ohio. The heavy duty drill has been brought out to meet a demand for operating cylinder hones and operates at comparatively slow speeds. The company also has added an electrically driven valve grinder together with an 8 in. bench grinder.



Blackhawk Accelerator

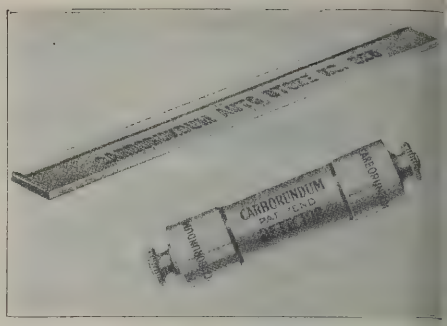
FLEXO SERVICE CAN

NEW Dover Flexo Service Can. Dover Stamping & Mfg. Co., 385 Putnam avenue, Cambridge, Mass. This is a convenient device in car servicing. It has a flexible pouring tube which stores inside the can when the can is not in use as means of preventing damage while in stock or in shipment. Flexo Service Cans of 5 gallon capacity list at $5 each and cans of two gallons capacity list at $3.50 each.



Flexo service can

Additional descriptions of new products will appear in a later issue of Motor Age.



CARBORUNDUM AUTO STONE

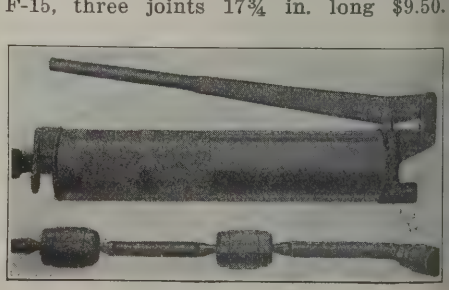
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A CARBORUNDUM auto-stone which can be used in place of a fine file is a product of the Carborundum Company, Niagara Falls, New York. In the finishing of interrupter points, for example, when they have become pitted and burnt a stone of this kind can be used in place of the magneto point file. Ignition instruction books often call for honing the points and this auto-stone makes this procedure possible.

Another item is a carborundum detector for use in radio sets which require a crystal detector. Carborundum has the advantage that it is not necessary to hunt for sensitive spots in order to make a detector operate. The carborundum auto-stones sell for 50 cents each and the detector at $1.50 each list.

THURO LUBRICATOR

THURO Semi-Automatic Super High Pressure Lubricator and Thuro Flexible All-Steel Universal Ball Jointed Hose. Larkin Automotive Parts Co., Dayton, Ohio. Both the lubricator and ball jointed hose are shown in illstration. The Thuro lubricator is designed for lubricating cars, trucks, etc., especially where the volume of such work to be done is sufficient to require speed and effective operation. It is convenient to fill with oil or grease and feeds automatically, with no screw action. Operation is fast and easy. Two sizes 1¼ lbs. and 2¼ lbs. capacity. The Thuro ball jointed hose can attach to the Thuro lubricator but is recommended by the makers for all sizes and styles of hand compressors. The ball joints swivel in all directions and make the attachment very flexible. List, F-13, two joints, 12¾ in. long $6.50, F-15, three joints 17¾ in. long $9.50.



Thuro Lubricator

Periodic Maintenance Cuts Service Costs

Prevention Rather Than Cure Advocated by Engineers as Means for Greater Satisfaction of Car Owners and More Profit for Dealers

By DONALD BLANCHARD

INTEREST at the service engineering meeting held in Chicago, Nov. 9 and 10, under the joint auspices of the service committee of the National Automobile Chamber of Commerce and the Society of Automotive Engineers, centered around the general topic of reducing the cost of service to the car owner by prevention rather than cure.

Among the major subjects discussed in this convention were periodic maintenance, piece work compensation of mechanics, corrosion of engine parts, service tools, trouble diagnosis and fuels.

Following the address of welcome by O. B. Zimmerman, International Harvester Co., G. Frank Lord, Durant Motors, Inc., presented a paper in which he emphasized the importance of periodic maintenance service as a means of preventing trouble and urged that car manufacturers assist their dealers in establishing systems which would bring owners into the shop at regular intervals for inspection, lubrication, and adjustment.

Although performance and cost of production are prime considerations in the design of a car, D. C. Hinckley, Hinckley-Myers Co., pointed out that often these objectives could be attained in a new model without making it necessary for the repairman to increase his investment in service tools materially. He cited one make of car which has had four new models in recent years on each of which small changes in the hubs had made it necessary for the service station to provide itself with a special wheel puller. To illustrate his point further, Mr. Hinckley suggested that crankshaft gears could be designed so that the repairman could handle a larger number of cars with a fewer number of pullers.

Discuss Corrosion of Parts

At the session on corrosion of engine parts, the speakers were M. A. Thorne, Tidewater Oil Co., and Frank Jardine, Aluminum Co. of America. This trouble is evidenced by noisy operation, looseness in the timing chain, blow-by the pistons and discoloration and pitting of parts. It is caused by sulphurous and sulphuric acids, resulting from the combustion of the sulphur content of the fuel, together with the water produced by combustion and the moisture contained in the air drawn in by the carbureter. As a direct result of combustion about 9 lbs. of water are produced for each gallon of fuel consumed but, of course, a major portion of this goes out of the exhaust.

The only successful way, according to Mr. Jardine, of preventing condensation on and consequent rusting of the cylinder walls, is to provide a lubricating system that will supply oil to these surfaces as soon as the engine starts. This requirement is met by the splash system. In pressure systems, he recommended placing the pump in the sump as in a higher position it might not be able to lift a cold, viscous oil; the use of a 30 mesh or coarser oil screen; oil lines ½ in. or more in diameter; a by-pass around the oil screen so that clogging will not stop circulation; clearances at the connecting rod bearings of .0015 in. on the diameter and .006 to .008 in. at the sides; and the use of light oils in winter.

On engines and parts to be stored for any considerable length of time in cold weather, he recommended a protective coating of castor oil as it has been found to be more resistant to the destructive action of water than mineral oil.

Diagnosis of trouble was covered in a detailed manner by J. C. Talcott, Pierce Arrow Motor Car Co. In this paper, each unit was taken up separately, the symptoms of trouble were described and the interpretation of these symptoms given.

The paper presented by John Squires and Carl Breer of the Chrysler Corp., was really a history of the development of an organization to service the Chrysler. Much trouble was experienced also as a result of the failure on the part of the dealer service man to follow factory instructions, particularly as regards adjustments.

A real instruction book was also emphasized as an important factor and an effort is made to get dealers to have one of their service men spend half an hour going over this book with each new owner.

Leakage past valve stems changes mixture proportions desipte the effectiveness of the carburetion and manifolding with resultant loss of power, inincrease in crankcase dilution and rough operation, according to Frederick Alberty who recommended the use of the felt packing at the top of the valve guide to insure tightness at this point. A method of testing an automobile which informs its owner as to its condition, was described by F. E. Edwards.

Chemical Factory on Wheels

The automobile is a chemical factory on wheels, according to Dr. T. A. Boyd, General Motors Corp., who talked on fuel from the service standpoint. He explained that the raw materials consisted of air and gasoline and that the output consisted of carbon dioxide, carbon monoxide, water and nitrogen.

Not much trouble is experienced with foreign matter in fuel, provided the channels of supply are kept clean. Some cracked gasolines will give a brown residue which will deposit itself on heated parts such as manifolds and carbureters. The formation of this residue, which results from improper manufacture, is accelebrated by storage in a warm place. It may be removed most easily with acetone. In addition to corroding iron and steel parts, sulphur in the fuel will also attack brass and copper parts in some cases.

Among the devices described by Donald Blanchard in his paper were the Cadillac crankcase ventilating system, the Marmon purifier, the Kingston aerator, the Bijur chassis lubricating system, the Rushmore steam cooling system and the Oakland harmonic balancer. Discussion following this paper centered chiefly around steam cooling.

Judging from expressions of opinion at the Question Hour, which closed the convention, the car factories are sold on piece work compensation of service mechanics. It was pointed out that it is likely to be an important factor in getting men who are now going into other industries because of higher pay, to enter the service business as the piece work plan enables them to earn as much or more than they could obtain elsewhere. A number of examples were cited where the adoption of this method has turned losses into profits.

Some Pertinent Thoughts From the S. A. E. and N. A. C. C. Service Convention in Chicago

By getting owners to adopt a plan of periodic maintenance, which would bring their cars into the service stations at regular intervals, much trouble could be avoided and the cost of operation reduced. Correct diagnosis of trouble is important and frequently wrong interpretation of symptoms results in unnecessary work being done for which the owner is charged.

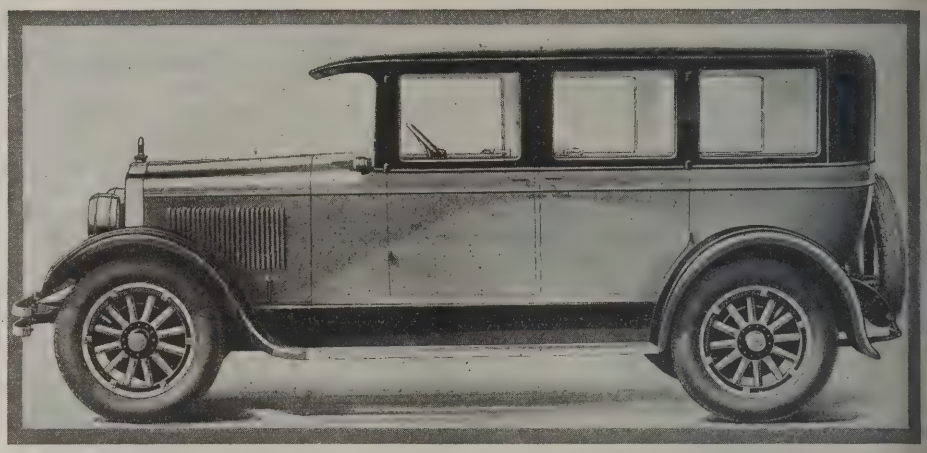
Piece work compensation fosters the introduction of modern shop equipment which results in better work at less cost.

Engineers should give more attention to the service tool equipment already in dealers' service stations when making changes in car design.

Peerless Enters Field of Medium Price Six

New Model Known As the 6-80 Series Offered in Six Body Styles. Price of Standard Sedan Is $1595. Engine of Car Maker's Design to Be Built by Continental Motors

By LESLIE S. GILLETTE



The five-passenger sedan listing at $1595 will be the first model Peerless will produce on its new line of six-cylinder cars. Balloon tires and hydraulic four-wheel brakes are standard equipment

ENTERING the medium price six cylinder field with a sedan at $1595 and mounted on a 116 in. wheelbase chassis employing a 3¼ by 4⅝ in. L-head engine and four wheel brakes, the new car of the Peerless Motor Car Co. will broaden their dealer's line which hithertofore consisted of a larger six and an eight cylinder model.

While six body styles will be offered on the new model known as the 6-80 series, production is being concentrated at the present time on the standard four door sedan. It is the intention of the Peerless company to announce a new body model each succeeding month and plans have been perfected to have both a four door close coupled sedan and a two door sedan available at the national automobile shows.

Plan 3-Passenger Coupe

Early in the new year a three passenger coupe will be ready with a 3-5 passenger sport roadster next, followed by the remaining model which will be a five passenger touring car. With the exception of the $1595 standard sedan referred to, prices for the other body styles have not yet been decided, but it is understood that the standard sedan will have the highest list with the prices scaling down to the five passenger open car. The last mentioned model will be ready in time to enter the open car selling season in spring.

The new models have an exterior appearance which resembles the lines of the larger six very closely while the design of the chassis is characterized by its conventional and exceptionally sturdy layout. An unusual feature of the chassis for a car of this size is the depth of the frame which is given as seven inches. The seven bearing engine is assembled with the single plate clutch and three speed transmission forming a unit powerplant supported in the frame at four points. Metallic universal joints at either end of the propellor shaft transmit the drive to the semi-floating rear axle, which provides a gear ratio of 4 5/11 to 1. Lockheed four wheel hydraulic brakes and 30 by 5.77 in. balloon tires are standard equipment.

Through special attention paid to the angularity of the spring shackles and the graduating of the springs themselves, exceptionally easy riding qualities are claimed for the new model. The rate of acceleration is also said to be unusual while the car is credited with a high speed of better than 70 m.p.h. and a speed of 42 m.p.h. in second gear.

Although conceived and designed in the Peerless shops, the engine is specially constructed for the new car by the Continental Motors Corp. This is the first of a series of engines to be built outside of the Peerless plant for a number of years. Rated at 25.35 h.p. and with a piston displacement of 230.2 cu. ins., the new powerplant develops 68 actual brake h.p. at 2,800 r.p.m. on the dynamometer. The peak torque is stated to be 149.5 ft. lbs. at 1,100 r.p.m. A new type of high turbulence combustion chamber and special valve timing are two of the important factors contributing to the high output of the engine.

Gray iron cylinders are cast en bloc with the upper half of the crankcase having the flange for the pressed steel oil pan 2⅞ in. below the center line of the crankshaft. The detachable cylinder head is secured by 22 steel studs. Each of the seven main crankshaft bearings is held in a heavily ribbed bulkhead which runs from one side wall of the case to the opposite side wall. The carbon steel crankshaft is of massive construction employing 2⅜ in. diameter main journals and weighing 54¾ lbs.



The specially attractive all Bakelite steering wheel on the Peerless Six is apparent in the photograph of the front compartment. The tredle type of foot accelerator should be noted

Gray Iron Pistons

Connecting rods of "I" beam section have a bearing diameter at the big end of 2⅛ in. with a length of 1⅜ in. At the upper end the gray iron pistons are secured by a 1 in. diameter piston pin formed from solid bar stock and locked in the piston by a set screw. An additional locking device in the form of snap rings at the ends of the pin is also provided. Hand fitted to the cylinders, the pistons are provided with three rings each $\frac{3}{16}$ in. wide above the pin, the bottom ring being a special oil control type and of Drainoil brand.

A new developed low pitch Morse chain No. 54, 1¼ in. wide and making for unusual quietness provides the front end drive for the accessories and camshaft. Adjustment for the timing chain is provided for in the movable generator —ignition unit mounted on the right side of the engine. The pressed steel timing case cover can be removed without disturbing the engine mounting making the chain and gears readily accessible, while all gears are marked to facilitate retiming of engine.

Both valves are interchangeable, the head diameter being 1⅝ in., the length 4 45/64 in., stem diameter ⅜ in. and the lift 21/64 in. for both.

Located in a position on the outside of the crankcase near the carbureter, the oil pump is driven by helical gears off the crankshaft, the take off being placed on a line between cylinders number 5 and 6. This pump incorporates the oil pressure relief valve in the same

casting, the unit being secured to the crankcase by four bolts. By removing six additional bolts, the pump cover may be detached exposing the spur pump gears. Lubrication is by the full pressure system, oil being forced through tubing to each of the main bearings. Through the hollow crankshaft oil passes to the connecting rods while the cam shaft bearings are oiled by passages drilled in the crankcase. Other parts are lubricated by mist, the surplus oil falling back upon the oil pan tray and is screened before entering the oil pan proper. There is another screen of circular shape below the screen from which the oil is drawn by the pump above. As a further guard against impurities in the lubrication system, a Purolator oil filter is bolted on the dash.

A plain tube cross throttle type of Stromberg carbureter model OX-2 with a nominal outlet size of 1¼ in. is bolted to the cast integral intake and exhaust manifold.

Electrical Units

With the exception of the 6-8 volt U. S. L. make of battery, the electrical units are of Auto-Lite manufacture. Both starter and generator are mounted on the right side of the engine, the former carrying the S. A. E. mounting and an outboard type of Bendix drive employing an 11 tooth pinion. The generator which is mounted on a separate support casting is driven from the front end chain by a special spring drive at 1 1/5 engine speed. On this special casting the semi-automatic advance distributer unit is placed and is driven from the generator drive by spiral gears. The accessibility of this type of construction is demonstrated by the fact that either the distributor or generator can be removed without affecting the other.

Between the transmission and the engine a single plate dry disk, Borg and Beck clutch, model No. 10-QL is employed. The tens pline 1½ in. clutch shaft is supported at either end in roller bearings and carries a graphite throw-out collar requiring no attention or lubrication.

The gearset is of Detroit Gear Machine Co. manufacture with special modifications and provides three speeds and one reverse of the following ratios:

Low: 3.11 to 1.

Second: 1.70 to 1.

Third: 1.00 to 1.

Reverse: 3.78 to 1.

A simple linkage is employed to connect the emergency brake lever with the transmission brake. The dimensions of the brake drum are 7 in. diameter by 2 in. wide.

A two inch tubular propeller shaft with an oil-tight metal universal joint at either end transmits the power to the semi-floating Columbia make rear axle. Except for slight modifications, the axle which is designed for the Hotchkiss form of drive is identical to Columbia-axle model number No. 12035. A standard gear ratio of 4.45 to 1 for all body models is provided, the teeth on the 9¼ in. diameter ring gear being 49 and those on the pinion 11.

Lockheed hydraulic brakes of the external expanding type having drums 14 in. in diameter and 2½ in. wide are used on both axles. The thickness of the friction lining is $\frac{5}{32}$ in. and the width 2 in. Brake anchors are set 45 deg. ahead of center giving ¾ wrap on the brake bands and making for more effective and smooth operation. Following customary practice the master cylinder of the braking system is bolted to an extension on the clutch housing.

The front axle is a Columbia model No. 1200-H of "I" beam section with the $\frac{15}{16}$ in. diameter steering pivot pins at an inclined angle. As on the rear axle, Timken roller bearings are employed. Steering knuckle thrust is taken by a radial ball bearing which together with the Ross cam and lever type steering gear provides easy turning of the wheels. The gear ratio is 11½ to 1, while the turning radius in either direction is approximately 20 ft. Steering wheel whose diameter is 18 in. is of attractive design and formed throughout of Bakelite with the short throttle and spark levers and the horn button mounted in the center.

Semi-elliptic springs are employed, those on the front being mounted above the axle while those on the rear are underslung, the dimensions being 37¾ in. long by 2 in. wide with 8 leaves on the front and 54¼ in. long by 2¼ in. wide with 11 leaves at the rear.

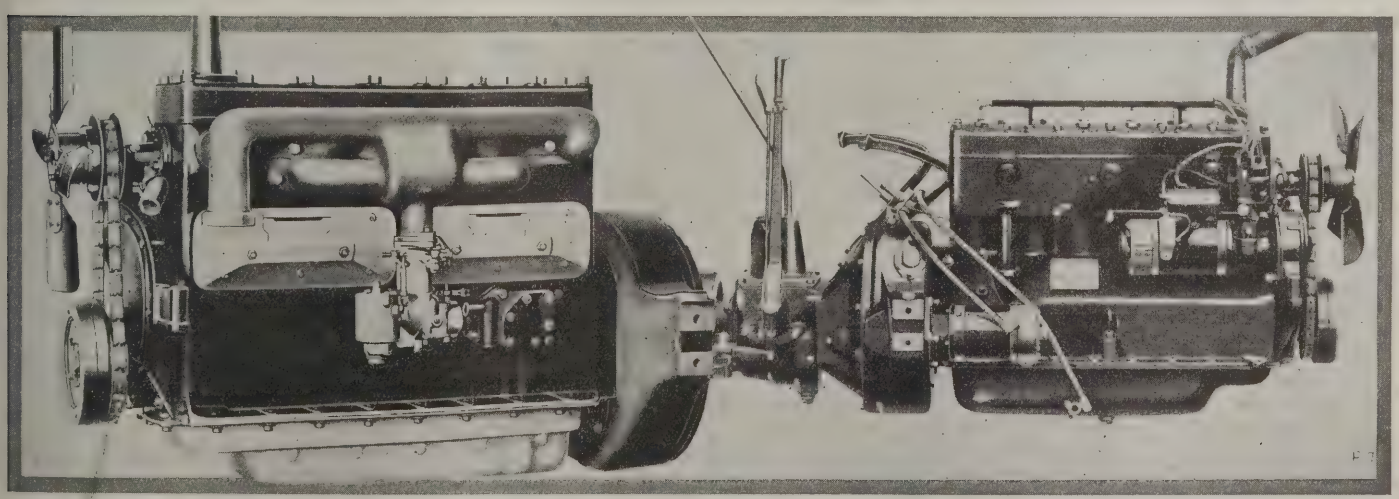
A rugged straight tapered frame is provided for in the new car. The maximum depth of the side channel members is 7 in. The thickness of the stock is ⅛ in.

Standard tire equipment consists of 30 by 5.77 in. balloon tires mounted on Firestone "A" rims attached to 12 spoke artillery wheels. In addition Gabriel snubbers are used all around while the chassis lubrication is by the Alemite system.

Semi-Elliptic Springs

All bodies including the present sedan will be of composite wood and steel construction while the exterior finish will be in three color lacquer with suitable striping. On the closed cars a fine grade of mohair plush will be employed for the upholstery with genuine Spanish leather used on the two open cars. In addition to the usual dash instruments which are mounted in a panel embodying the radiator design, a gasoline gage is installed which together with the following items are fitted as regular equipment. Windshield wiper, rear view mirror, rear traffic signal, cowl lights, transmission lock, snubbers all around, foot rest, robe rail besides a dome light and curtains on the closed cars.

The headlights which are nickeled to correspond with the radiator are fitted with special lens and a single 21 c. p. bulb with the dimmer control mounted in a combination switch on the metal dash. All interior hardware on the closed jobs including the rotary window regulators, will be given a bright and dull silver finish. Ready for the road but excluding passengers, the sedan model weighs 3310 lbs. with 1715 lbs. of the weight taken on the rear wheels.



Left: The combined fan and water pump unit on the front of the cylinder block and the Lanchester vibration dampener are apparent in the three-quarter view of the Peerless Six engine; right: Right hand side view of the complete Peerless Six power plant showing the simple linkage between the hand brake and the transmission lever

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Adjusting Zenith Float Level

Q.—What is the proper float level on the Zenith carbureter and when installing new needle valve and seat, how is this float level checked?—Cliff Green, 601 Pleasant View, Trenton, Mo.

Whenever possible, it is well to have this work done by an authorized Zenith service station, as a special test gage is needed in order to accurately check the float level. As different size gages are needed for different carbureters, it might not pay the average repair man to have this equipment. The data necessary for checking the gasoline level in the float chamber, however, is given in the table and in the illustration which shows a section through the carbureter.

Where a special gage is not available, it occurs to us, that an approximate test might be made by drilling a small hole in the float chamber cover through which a small round stick painted black might be inserted. This method would prove somewhat difficult, however, because the float very nearly fills the float chamber, and does not leave much room for inserting the stick.

Another Method

Another method would be to drill a small hole at the proper level line, as determined from the table and another very small hole slightly below it and a third one slightly above. The gasoline should flow through the lower hole and just barely moisten the middle hole and should not flow through the upper hole. After it was found that the level was correct, the float could be removed and the carbureter dried out and the three holes soldered up again. In making a test of this sort a test tank should be used located 30 inches above the carbureter.

The only place any adjustment of the level should be attempted is at the Needle Valve Collar, its relative position on the Needle Valve determining the point of closing of the Valve. Remove the Float Cover from the carbureter, draw out the wire holding the lever weight axles and remove the needle valve entirely from the cover.

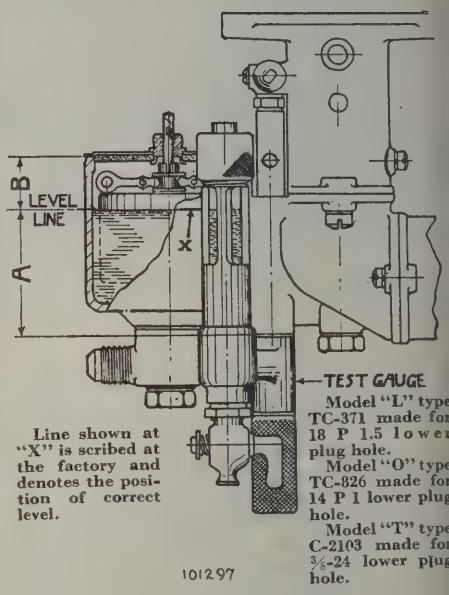
Take a knife or any sharp instrument, and mark around the needle valve at the lower side, of the collar (the side towards the point). This will show the original setting of the collar in case it is found necessary to bring it back to this position.

To lower the level, scratch a mark on the needle valve 1/32 of an inch above the collar. Provide a block of hard wood through which a hole slightly larger than the largest diameter of the needle valve has been drilled. Put the needle valve into this, with point down. Now, with a flame soften the solder holding the needle valve collar on the valve, first wetting it with soldering acid or paste, and when the valve is free in the collar tap it down to the upper mark, or 1/32 of an inch. Allow it to cool, thus again setting the solder, and replace in the float cover. This will lower the level.

If further lowering is found necessary repeat the above, but never go further than 1/32 of an inch at a time. Next, replace the cover on the carbureter, press the needle valve down tight against its seat with the finger and mark a line around it at the upper edge of the boss on the cover that takes the thread of the dust cap. Remove the cover from the carbureter and with the fingers bring the mark on the valve back to the above position and see what position the lever weights are set. If they are not horizontal it means that you have gone too far, that the travel of the valve will be insufficient and that the float mechanism will not function properly. This travel should not be less than 5/64 inch.

To raise the level, move the collar towards the point of the needle valve. To do this grip the needle valve between two blocks of wood in a vise. Provide a piece of copper or brass tubing which can be slipped over the upper end of the valve and against the top of the collar. Tap lightly on this tube to move the collar and be very careful not to mar or bend the needle valve. Never bend the lever weights to change the level, and do not put additional gaskets under the needle valve seat.

Before reassembling the float chamber cover, see that the counterweight levers swing freely and do not bind in the needle valve collar.



Line shown at "X" is scribed at the factory and denotes the position of correct level.

Model "L" type TC-371 made for 18 P 1.5 lower plug hole.

Model "O" type TC-826 made for 14 P 1 lower plug hole.

Model "T" type C-2103 made for 3/8-24 lower plug hole.

101297

VERTICAL CARBURETORS

*Model and Nominal Size	Dimension A		Dimension B	
	Millimeters	Inches	Millimeters	Inches
CV20	31	1 7/32	11	7/16
L4, L5, L6,	59	2 21/64	29	1 9/64
L7, L8	73	2 7/8	29	1 9/64
O3½, O4, O5	42	1 21/32	20	25/32
Q4,Q5	42	1 21/32	20	25/32
Q6	61	2 13/32	29	1 9/64
T3	40	1 37/64	15.5	33/64
T3½, T4	42	1 21/32	18	45/64
T5	34	1 11/16	18	45/64
U4	59	2 21/64	18	45/64
U5	60	2 23/64	23	29/32
U6	64	2 17/32	23	29/32
U5F	61	2 13/32	26	1 1/32
U6F	62	2 7/16	26	1 1/32
UL5	59	2 21/64	23	29/32
UL6	64	2 17/32	23	29/32

DUPLEX CARBURETORS

48DC	68	2 43/64	31	1 7/32
O4D	42	1 21/32	29	1 9/64
O5D	48	1 57/64	29	1 9/64
O6D, O7D	61	2 13/32	29	1 9/64
O8D	60	2 23/64	29	1 9/64
T4DS	44½	1 47/64	23	29/32
US52	68	2 43/64	40	1 37/64
US54	40	1 37/64	67	2 41/64

HORIZONTAL CARBURETORS

*Model and Nominal Size	Dimension A		Dimension B	
	Millimeters	Inches	Millimeters	Inches
HF2½, HF3	37	1 29/64	15.5	33/64
HF4, HF5	40	1 37/64	18	45/64
HP4 HP5	61	2 13/32	20	25/32
HF6	42	1 21/32	20	25/32
HR26	30	1 3/16	16	5/8
HR26	34	1 11/32	16	5/8
HT3½F	42	1 21/32	16	5/8
HT4F	42	1 21/32	18	45/64
HT5HF	42	1 21/32	20	25/32
HU4	59	2 21/64	20	25/32

101296

INSTALLING A FIELD FUSE

Q.—Is it possible to put a field fuse on an American Bosch generator used on Essex cars and if so how should it be connected.—G. & J. Stromer, Battery Service Station, East Main street, Gillett, Wis.

Such a fuse can be installed if desired, and should be connected between one end of the field and the third brush or may be connected between the other end of the field and ground. The latter connection would be the easiest to make as only one end of the fuse would have to be insulated.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Adding Second Floor to Old Building

Q.—We have read with considerable interest suggestions that you have given others regarding building layouts for automobile business. We now plan larger quarters for ourselves and will appreciate your suggestions. Our present building is one story. A penciled sketch herewith shows arrangement and size. We want another floor and think that the space now occupied by the shop would make an ideal used car sales room. A quick service space might be left beside ramp leading to shop on second floor. Surplus new car stock might also be kept on second floor.

Our present new car salesroom seems large enough—50 by 40 ft. but the front needs modernizing. Possibly a side entrance for cars would be better, however, the street in front is wider. We often wish that we could move cars from shop or wash rack without having to drive out into the street. We like the idea of having the office in the center of the building adjoining parts room, and where view of both salesrooms might be had.

The service station employs four or five men. We carry about $6,000 parts, a few tires and accessories.—Baldwin Motor Company, Tyler, Tex.

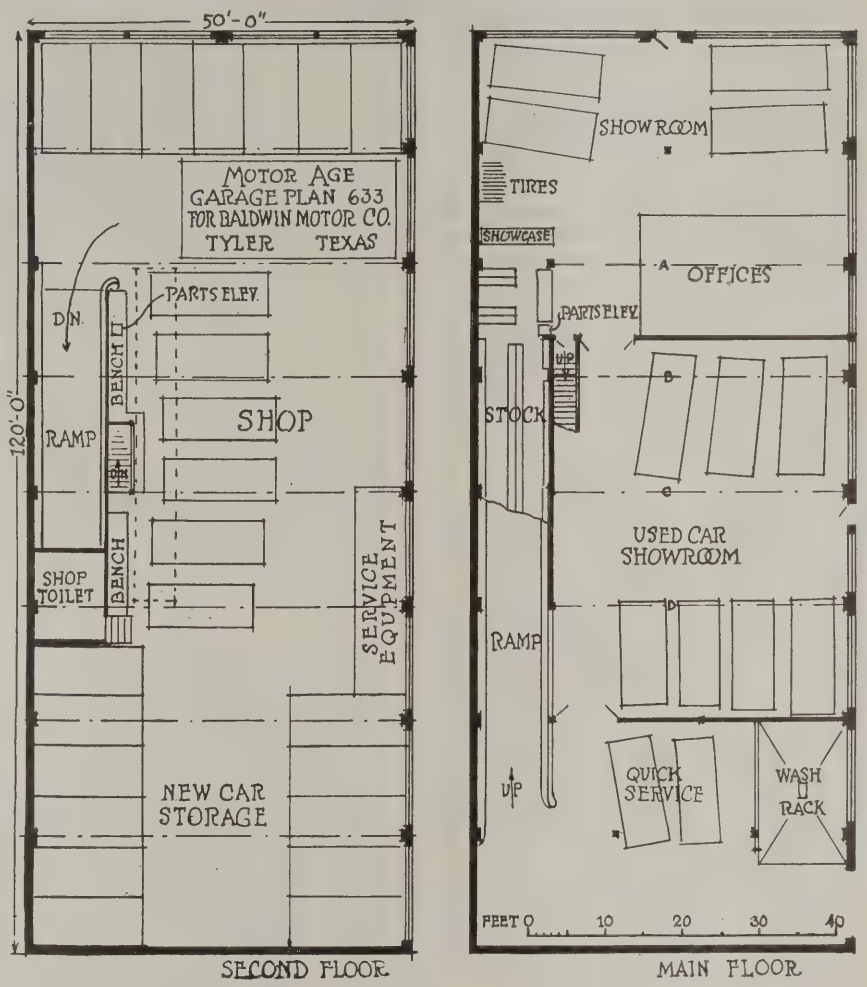
Ramp Reduces Space

We have tried to carry out this plan embodying the ideas you have suggested relative to your showroom and quick service station. It is always difficult to introduce a ramp into a building as narrow as 50 ft. in width and no doubt you will be disappointed when you see how the back part of your building has shrunk, because of the introduction of the ramp. We have reduced the width of the ramp to the minimum in order to have it kill as little space as possible and believe we have succeeded quite well in arranging it to avoid awkward turns and congestion both at the top and bottom. The only features we do not like is the lower end and the space reserved for quick service and wash rack. This should be three or four feet wider and if you can steal a little space from your office and a little from the used car showroom, we think it would be well to add it to this part so that there would be room for cars to pass coming in and going out.

By using 39 ft. girders at A—B—C and D supporting the second floor the floor arrangements will not be dependent on any column and this space may be rearranged without interfering in any way with the construction.

You have given us no details as to the construction of your present building and therefore we have gone ahead as if we were planning a new building and no doubt the addition by reason of extensive alteration etc., will be virtually a new building.

As you suggest it is much better to bring the cars into your showroom from the inside than the outside and consequently we have arranged an entrance at the rear between the offices and the



Usually a ramp is a difficult thing to plan into a 50 ft. building and this is no exception.

stockroom. The stockroom is planned for accessories and parts and a dumb waiter or electric elevator is planned to take parts to the shop on the second floor. You will note that this elevator does not stand in a vertical line, but slants to avoid the ramp. The elevator is not large, but undoubtedly large enough to carry 90 per cent of the parts going to the shop. The ramp will have a 20 per cent grade supposing that the second floor is 13 feet above the first.

TEXAS LIEN PROCEDURE

Q.—We have in our shop a Studebaker car which was left here for repairs, and after we had made all repairs and had the car fixed up the man that owns the car wrote us a letter telling us not to fix the car. We then mailed him a bill for same which was $415. At that time he was in Arkansas and since then we have not heard from him. He told us when he left the car here that the Insurance Co. would pay the bill as he had it insured, but we have never heard from them. Now we want you to tell us how we can dispose of this car and get our money out of it. We have had the car here and ready for 60 days or more.—W. E. Norvell, Malakoff, Texas.

Chapter Eight (8) Article 5665 of the Texas Statutes (1920) gives you a lien on the repaired automobile, authorizing you to retain possession of the car until your charges for repairs are paid. Where no price is agreed upon then the charges must be reasonable and the customary and usual charges. After holding possession for 60 days without payment the repairman should notify the owner to pay the charges, and if such charges are not paid within 10 days after this notice then the garagekeeper, after 20 days notice of intended sale, may proceed to sell the repaired property at public sale and apply the proceeds to the payment of charges and costs and pay over the remaining balance to the owner. If the owner's residence is beyond the state or is unknown, the repairman is not required to give the ten days notice to the owner before proceeding to give notice of sale and advertising the public sale of the property.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

A Half Way or Thorough Job on Main Bearings

Q.—Would it be advisable to loosen all the main bearings on a D-45 Buick six and slip in an upper bearing half when the old one is burned out, or would you advise tearing down the engine completely, removing the crankshaft and lining up the four main bearings? — Wisconsin Reader.

On a car as old as this one, it is probable that the crankshaft journals are worn undersize, so that the new main bearing would not fit properly. Accordingly from a mechanical standpoint it is much better to tear down the engine and remove the crankshaft, also checking the crankshaft journals to see that they are not eccentric. One point to keep in mind is the value of the car as compared to the cost of doing the job. If the car is not worth spending very much money on, it might pay to try the first method of slipping the bearing in place, although there is quite a chance that the bearing improperly fitted would pound out in a short time.

Q.—Some mechanics have the idea of taking up the front and center main bearings on a Ford engine just by loosening the bearing and tearing out the shims, and leaving the rear main bearing alone. I do not think that is a good job, do you.

If this is repeated it draws up the front and center main bearings and tends to spring the crankshaft. To keep the crankshaft properly lined up the same number of shims should be removed from all three bearings.

Q.—What would cause the connecting rod bearings on a 490 Chevrolet to crack up and fall out of the bearing if the bearing was properly fitted and had plenty of oil? The oil pump was working all right. My idea is that the rod may be twisted or bent.

A twist or bend in the rod may cock the piston or cause the upper end of the connecting rod to knock against the piston boss, but we do not believe that it would cause the bearing to crack up. This might be due to poor material in the babbitt or it might be due to the babbitt not making good contact with the connecting rod itself, so that the bearing material was not well supported, and had tendency to flex and eventually crack.

Q.—How many one thousandths does 1/64 inch equal and how many one thousandths does 1/32 of an inch equal?

We are publishing a table of decimal equivalents of 64ths which should be of service to you as well as other MOTOR AGE readers.. When you have any fraction and have no table of decimal eqivalents always divide the top figure of the fraction by the lower figure of the fraction. In the case of the fraction 1/64 you take the figure 1, put a decimal point after it and add as many ciphers as you need and divide this by 64.

Table 24.—Decimal Equivalents of Fractions of One Inch.

1-64	015625	17-64	.265625	33-64	.515625	49-64	.765625
1-32	03125	9-32	.28125	17-32	.53125	25-32	.78125
3-64	046875	19-64	.296875	35-64	.546875	51-64	.796875
1-16	0625	**5-16**	.3125	**9-16**	.5625	**13-16**	.8125
5-64	078125	21-64	.328125	37-64	.578125	53-64	.828125
3-32	.09375	11-32	.34375	19-32	.59375	27-32	.84375
7-64	109375	23-64	.359375	39-64	.609375	55-64	.859375
1-8	125	**3-8**	.375	**5-8**	.625	**7-8**	.875
9-64	140625	25-64	.390625	41-64	.640625	57-64	.890625
5-32	15625	13-32	.40625	21-32	.65625	29-32	.90625
11-64	171875	27-64	.421875	43-64	.671875	59-64	.921875
3-16	1875	**7-16**	4375	**11-16**	.6875	**15-16**	.9375
13-64	203125	29-64	453125	45-64	703125	61-64	953125
7-32	21875	15-32	.46875	23-32	.71875	31-32	.96875
15-64	234375	31-64	484375	47-64	734375	63-64	984375
1-1	25	**1-2**	.50	**3-4**	.75	**1**	**1.**

101305

We are publishing a table of decimal equivalents of 64ths which should be of service to you as well as other MOTOR AGE readers.. When you have any fraction and have no table of decimal eqivalents always divide the top figure of the fraction by the lower figure of the fraction. In the case of the fraction 1/64 you take the figure 1, put a decimal point after it and add as many ciphers as you need and divide this by 64.

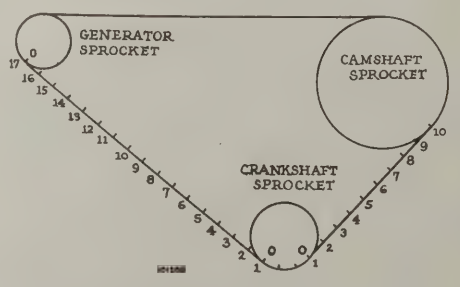
Q.—Would light weight pistons improve a Ford Coupe in obtaining more speed and power? Are regular Ford piston rings used in these pistons.

In general the lighter the piston the higher speed can be obtained from the engine. If you refer to aluminum alloy pistons, it is customary to use a concentric ring, but recommendations will be given by the piston manufacturer.

REPLACING TIMING CHAIN ON A STAR

Q—Give instructions for installing new timing chain on Star car where old chain has broken.—W. L. Mauk & Son, Eakly, Okla.

An illustration is given showing the crankshaft sprocket together with the camshaft and generator sprocket. On the crankshaft sprocket there are two teeth marked with the letter O and on the camshaft and generator sprocket there is one tooth so marked. The engine should be turned until the center mark on the flywheel is in line with the indicator which will leave the marked teeth of the crankshaft sprocket in the positions indicated. With the chain in place you can start counting the teeth on the chain beginning with No. 1 which is the tooth at the O mark on the crankshaft sprocket. The tenth tooth should register with the O mark on the camshaft sprocket, while the seventeenth tooth should register with the O mark on the generator sprocket. The exact setting of the generator sprocket is not so essential as the camshaft sprocket although if properly set it will facilitate timing the ignition.



Setting sprockets and chain to get correct valve timing

Larger Oil Groove Stops Oil Leakage

Q.—I am asking for some information about the rear main bearing of a Hupmobile model R-13 which has an oil leak. This oil comes out of the rear end of the oil pan, but I think it comes through the rear main bearing, which I believe is worn side ways. Would like to know if the bearings in this engine are poured in the block or if they are of the replaceable type. In changing bearings is it necessary to take the engine out or can they be replaced without doing this.—General Mechanic.

The trouble is usually due to slight wear in the rear main bearing, lower half. This bearing takes the end play of the crankshaft and in some cases the oil thrower, which is a ring on the crankshaft touches the groove in the lower half of the rear main bearing and this has the tendency to cause oil to work out into the pan. The remedy is to remove the engine pan and take off the lower half of the rear main bearing and see that the groove is large enough so that the oil thrower on the crankshaft does not touch it. If necessary an entire new cap can be used, but you can determine this when you see how much the ends of the cap are worn. If the wear is slight, enlarging the groove somewhat will overcome this condition.

GOOD WORKMANSHIP HELPS ON OTHER ENGINES ALSO

Q.—Being a subscriber to MOTOR AGE for some time past and having enjoyed the benefit of other mechanics' experience, I now wish to reply to the item published on page 26 of October 1, 1925, issue signed by the Main Garage, Kenton, Ohio. Having had considerable experience on Essex 4 cars myself I have in the past run into the same trouble as they are having, once in No. 2 and once in No. 4 cylinder. I have found the only remedy was the perfect alignment of the connecting rod and the perfect fitting of connecting rod bearings. Because of the fact that these motors have a very long stroke and fairly heavy rods they are prone to slap to the side under compression, if the rod is cocked or if rod bearing is somewhat faulty. Shorting the cylinder will also stop a noise of this character.—Ira W. Thornton, Pomeroy Motor Co., Longview, Wash.

Clearing Up Electrical Trouble

EDITED BY A. H. PACKER

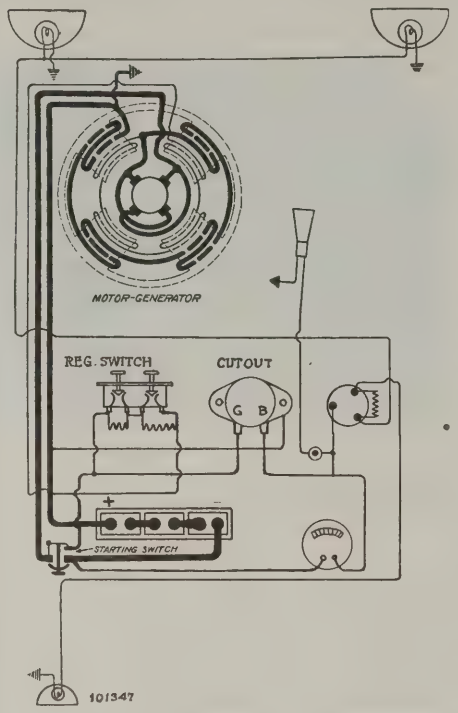
The READERS CLEARING HOUSE

Replacing the Regulator on a Grant Six

Q—I have been a subscriber and reader of Motor Age for several years, and have received lots of good information from your Reader's Clearing House columns. Now I have a question of my own to ask, and would appreciate seeing the answer published in your valuable magazine.

I have been having trouble with an Allis-Chalmers motor generator as used on Model V Grant 6. The motor works fine, but the generator only works occasionally. I have had the unit out and tested thoroughly, but believe the main trouble to be in the relay regulator. I have removed the old relay regulator from the switch panel and mounted a Basco regulator on the dash; together with the fuses and dimming units. I would like to know if there is any way to use a straight cut-out on this type of generator and if there is any other way of regulating the output of the generator than by the system I now have.—L. G. Devaney, 406 W. Cass Street, Roseburg, Ore.

A regulator of this sort may be replaced by a conventional cutout and a switch with resistance units on the back. We are showing a diagram which gives a method of changing the circuits. The resistance units on the back of the switch may be made out of iron or German silver wire. Stove pipe wire might be tried at first and one coil should be twice as long as the other. With this system it is desirable to use an ammeter so that you will know how much charging current is being produced. When starting up the engine the two buttons on the regulating switch may be pushed in so as to short out both resistance units. This will give the maximum charging current. Then as the current increases the left hand button drawn out will effect some reduction in the charging current. The right hand button controlling double the resistance will have more effect and with both buttons out we have the maximum effect. If the current still goes too high it will be necessary to use different resistance coils using either smaller wire or a greater length of wire.

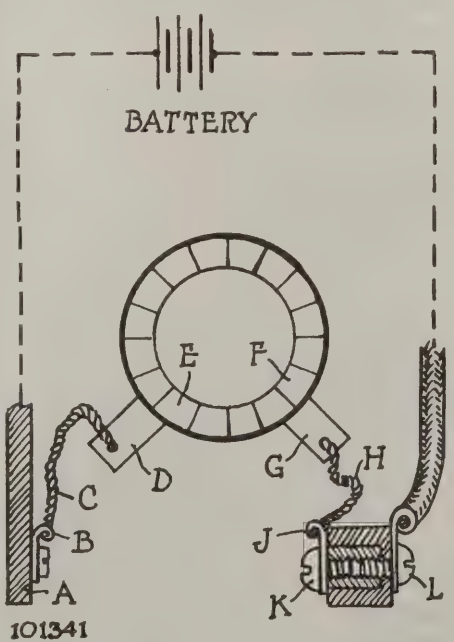


This method of regulation is simple but necessitates watching the ammeter

HUNTING FOR A POOR CONTACT WHICH IS MAKING GENERATOR OVERHEAT

Q.—We are having trouble with Auto-lite generator model GJ on a Chevrolet superior, on which the armature gets hot and after a few weeks burns out. It is the third armature we have installed. We have also installed new brush holders and brushes and the armature runs true and free. The bearings are perfect. It was tested for shorts and grounds. We also had two electrical service stations check up the generator, but it seems to be a puzzle to everyone. We had it run on the test bench at different speeds, and without the cutout, but it heats up in three minutes. It seems as if the ground brush is at fault as it gets hot as the armature. Could you suggest anything to overcome this before we install a new generator? —Universal Garage, 24 Hartford Avenue, New Britain, Conn.

If you are using rewound armatures there is a possibility that the laminations in the old cores are shorted together from having rubbed the pole pieces at some time or other. It is also possible that the winding is incorrect or that the wire which is used is too small. You say that the armature turns freely, but we wonder if you have tested it with field current flowing. To do this you can lift the main brushes and run current through the field only and then see if the armature turns easily. It will usually turn a little harder than with no current flowing, but should not rub or bind at any particular place.



Points at which to make voltage tests to run down cause of heating

From what you say about the brush heating up we think there is a high resistance where the brush pig tail or shunt connection is attached to the brush. To thoroughly check the internal portions of the generator to make sure there is no high resistance you should use a voltmeter and test as indicated in the sketch we have made. A voltage reading from A to B would locate a high resistance between the pig tail terminal and the frame of the generator. A test from B to C would find a poor connection between pig tail and terminal, a test from C to D would locate a high resistance between the brush and its shunt connection or pig tail. In all of these tests you should get practically no voltage when the generator is running and delivering 10 or 12 amperes to a battery.

A voltage test from the brush D to commutator segment E just under the brush would show the loss of voltage due to the brush contact, while a test from F to G would show a similar condition at the other brush. In this manner you can test from G to H and from H. to J, from J to K and from K to L. There will be of course, a slight loss at each of the points mentioned, so that the voltage from E to F might be 7.9 while the voltage from A to L might be 7.7. Practically all of this voltage however, should be lost between the commutator and the brushes.

Some Lamp Flare Is Normal

Q—Please advise why the lights on an Overland 91 flare up and down as the engine speed increases or decreases. The size of the bulbs makes no difference.—Earl Bowman, Oneida, Ill.

Some flare in the head lamps is normal, as a fully charged battery will show a voltage of 6 just after the starter has been used, and a voltage of 7.5 as soon as the generator begins to send charging current to it. If the bulbs do not burn out, you probably have merely a normal condition. If the bulbs burn out frequently, it may be that you have a high resistance at some connection between the generator and battery. This is difficult to locate without a voltmeter. If a voltmeter is available, you can take readings from the frame of the car to various points on the generator to battery circuit while the engine is running and the generator is charging 10 or 12 amperes. For example, if at one side of the ammeter you found a voltage of 7.3 and at the other side a voltage of 8, it would show a poor connection in the meter, which would result in excessive voltage at the lamps.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Influence of Flat Rate Seen in Equipment Show

IN looking over the displays and especially the shop equipment at the seventh annual A. E. A. show which was held in Chicago last week, we are smitten by developments that have taken place in automotive shop machinery and fitments to further the cause of flat rate.

Talk with most any maker of equipment today and he will tell you that with his line of wrenches, hoist, tire changing machine, brake lining machine, valve refacing machine and so on, that the work can be done in very much less time than with the old hand methods.

What's the reason? Flat rate, to be sure.

Makers of equipment have studied the flat rate schedules of the car manufacturers and have brought out new or revamped old equipment to make it entirely possible for the shop to come under the wire on these schedules on time, or even less time.

We must remember that most flat rates are based, not upon the time it takes a cracker-jack mechanic to do the work, but the time the average man requires for the operation. A skilled man almost always comes under the wire in less time (although we admit there are some time schedules given out by makers of flat rate that cause many a man to go without lunch to break even) and a fairly handy man with the right equipment is sure to beat even the efforts of the highly skilled man without equipment.

Lately, many shops have gone into specialized forms of service, such as brake lining work, engine overhaul, electrical work and battery work, painting and top work, and so on. Those who do this almost always install equipment that cuts down the time factor. And so, at the show mentioned above, we saw many new machines and shop furniture that make it possible to do a certain job better and do it in less time.

Not only that but these makers of equipment have sensed the need for apparatus that disregards the human element. No two men read a micrometer alike, for example and when you leave something to the discretion of a mechanic who may not do the same thing in the same way from one day to another you are getting intro trouble.

That's why we see gages and templates that accurately set cutting tools, position reamers or whatever the case might be, so little is left for the mechanic to do but press the button and set the machine going.

Then, while the machine is in operation the mechanic can go to work on some other job and thus the shop production, the number of jobs, is materially increased. A manufacturer recently told us that in some shops wherein his machines have been placed the shops were able to profit nearly $30 per day on that machine alone.



THINGS THAT HELP FLAT RATE

A well placed service entrance encourages car owners to frequent the service station to take advantage of flat rate system of repairs. It is not always possible to have the service entrance on a main or side street, but this should always be done where possible

MOTOR AGE'S FLAT RATE FORUM

No. 40

FLAT RATES FOR BUICK BODY OPERATIONS

Manufacturer's Official Designation			Charge
1	Body Bolts—Tighten all		$1.45
2	Bumper—Install one door bumper		.50
3	Bumpers—Adjust all door bumpers		.75
4	Doors—Tighten all hinge, lock and check strap screws		.95
5	Door Handle—Install one	open models	.60
		closed models	.95
6	Door Hinge—Install one	open models	.75
		closed models	1.20
7	Hood Laces—Install new	one side	.60
		both sides	1.20
		both sides double	2.70
8	Lock—Door—Free up all	all models	.50
9	Lock—Door—Install new	open models	1.70
		closed models	2.40
10	Rattles—Remove all from body and hood. (Operations 1, 3, 4, 7 and 11 in combination)		4.80
11	Windshield—Tighten windshield post nuts and top anchor screws		.60

See Flate Rate Manual

Aberdeen, S. D.

To the Editor of MOTOR AGE:

Kindly advise us what data you have available on flat rate prices for general garage work. We are very much interested in this important subject and will appreciate any information and suggestions you may have to offer.

SOUTH DAKOTA STATE AUTO TRACTOR AND ELECTRICAL SCHOOL.

See MOTOR AGE'S Flat Rate Manual which covers service operations on practically all makes of American cars. It was published in the April 30, 1925, issue but is sold separately for 50 cents.

Importance of Good Accounting

As it now stands there are a great many men engaged in the servicing and repairing of automobiles who primarily are mechanics and who as a class know little or nothing about accounting. In fact many of them dislike bookkeeping and accounting so much that they would rather go broke than give the proper thought and time towards the establishment of records to show their costs of doing business. Without such records a shop will go broke and because for one thing labor almost invariably will be sold at a loss in such a shop.

Automobile repairing never will be a business of good credit standing until bookkeeping and accounting will be given as much or more attention than equipment and men.

EDITORIAL

Parts Must Be Recognized

LONG ago Henry Ford recognized the commercial importance of the automotive replacement parts business. He lost no time working out a plan whereby this business, as related to the cars and trucks he manufactured, would bring profit to both himself and to his dealers. The plan worked. Many a car manufacturer today would be glad to do a volume of business in motor vehicles equal to the volume of Mr. Ford's parts business.

The vital factor in the Ford parts plan was that it made it easy for the car owner to get parts for his vehicle no matter where he might be. He didn't have to hunt up an authorized Ford dealer to buy genuine Ford parts, and yet in every sale of Ford parts a dealer made a profit.

Owing to the growth of the reconditioning and rebuilding business, both for the car owner and for the promotion of used car sales, there has grown up a strong demand for parts for practically all makes of cars. In very few cases are the manufacturer's parts obtainable as in the case of Ford, but enterprising manufacturers have made available to the trade and the public full lines of dependable parts for practically every make of motor vehicle. And in consequence there has grown up a tremendous business in the distribution of standardized and trade-marked replacement parts for motor vehicles.

The magnitude of this business was revealed in Chicago this week when the first exhibition of the National Standard Parts Association was held at the Hotel Sherman. The parts business is no insignificant factor in the automotive equipment field.

Preventive service is more profitable than extensive repairing.

Show 'Em and Sell 'Em

THE new merchandising campaign planned by the Automotive Equipment Association has for its slogan "Show 'Em and Sell 'Em." At the same time the A. E. A. merchandisers will continue to "Ask 'Em to Buy." As we have frequently pointed out in these columns one of the most effective ways of asking people to buy merchandise is to show them the goods. And the voice with the strongest appeal is the price tag. No matter how good nor how beautiful merchandise may be the average consumer does not formulate a positive desire to possess it until he knows what it will cost.

The most successful accessory merchants give the widest possible display to their goods. Their sales increase in proportion to the number of items that are exhibited where customers can see and examine them. An automotive merchant who makes a success of Christmas selling told in last week's MOTOR AGE how he put tables in his store and filled them with articles in various price groups. Many items that he had considered slow moving were snapped up. He found his turn over was speeded up. It paid him to show his merchandise with prices plainly marked. It was his most effective way of asking people to buy.

There are some classes of automotive merchandise, however, that must have more than a casual showing in order to win over prospective buyers. Cars must be demonstrated. But a real demonstration and not merely a trip around the block with the salesman or the dealer's driver at the wheel is the better way to show 'em and sell 'em. A dealer selling one of the most expensive cars advertises a 100-mile demonstration trip for prospective buyers over any route the customer selects. Another successful dealer selling a popular priced car invites prospective buyers to take a car out alone and drive any way they want to. "If you drive it you will want it," he says, and his sales records seems to prove the case.

If you show your merchandise in the right way you surely are asking them to buy.

Now for the two-car family and then before you know it every other person will be rolling his own.

Lower Prices Coming

THERE is excellent prospect of a general price reduction affecting all kinds of automotive merchandise. It comes from the decision of the Ways and Means Committee of the House of Representatives to recommend repeal of the tax on trucks, parts, tires and accessories, and reduction of the tax on passenger cars from 5 to 3 per cent. These tax savings, if they become effective, will enable automotive merchandise to be sold to the public at lower prices without in any way impairing the profits of the trade.

The automotive industry has felt that it is entitled to complete elimination of the war taxes on its products. But since the passenger car has been the largest producer of revenue under the excise tax it appears that the Ways and Means Committee could not quite agree to give up so generous a contributor. It might have been done by making income tax reductions smaller, but it seems that income tax payers, who are much fewer than automobile owners, make a louder noise.

At any rate there is definite prospect of automotive tax reduction and there is still the possibility that on the floor of Congress the complete abolition of these taxes will be accomplished.

Car Producers Begin to Retrench

Although Sales Show Decline No Sign of Danger Is Seen

Most Dealers Enter November With No Stocks and Christmas Campaigns Promise Boost

PHILADELPHIA, Nov. 18.—New car sales have shown a marked drop during the last two weeks. Production has not shown a corresponding decline, but as a general condition retrenchment is the rule at the factories. The slowing-up of output after such a period of record-breaking activity as marked the entire month of October would naturally be expected to take some little time. The current surplus of product over sales to consumers cannot be considered a danger sign, as most of the dealers in the leading lines went into November with virtually no stocks on hand.

The prospects of Federal tax reductions on automotive products are having an effect on the production plans of the manufacturers. If the House Ways and Means Committee had decided to eliminate the levies entirely, the producers would be preparing for a somewhat higher level of business next year than is now the case. But even so, the saving to automotive buyers of about $70,000,000 a year, as provided in the bill in its present form, should prove a good stimulant to sales.

Lower taxes are not the only sign of good automobile business ahead. The generally high level of business activity in the country and the constantly expanding volume of foreign sales combine to promise a continuation of the prosperity in the automobile industry at least during the first half of 1926. But the automobile producers have seen slumps develop suddenly and unaccountably before, and they will not be unprepared if the unexpected happens.

It is regarded as fairly certain that December will be a month of rather low activity, especially in sales of new cars. This condition has now become a familiar yearly action, but efforts are being made to bring automobile selling during the holiday season more into line with the brisk business done in other retail lines.

TUDOR NAMED RECEIVER

KOKOMO, Ind., Nov. 14.—Robert L. Tudor, of this city, has been appointed receiver for the Pioneer Automobile Co., the holding organization which owns the real estate and plants of the old Apperson Brothers Automobile Co., following the filing of a suit in Howard county circuit court by the National Lead Co. petitioning such action. The Apperson Automobile Co., which leased the plants in July, 1924, when it was formed by the Don C. McCord-Rothchild interests, is not affected by the action.

ERWIN LEAVES PARAFLECTOR

MINNEAPOLIS, Minn., Nov. 14.—W. B. Erwin has resigned as vice-president and director of the Paraflector Company. His resignation is effective December 15 and he plans to remain in the automotive industry.

First National Motorbus Show Opens in Detroit

DETROIT, Nov. 14.—The first motor bus show to be held by bus and accessories manufacturers opened this evening at Convention Hall under the title of the First National Motor Bus Show. At the originating of the show less than six weeks ago, it was planned to make it an annual event. The opening tonight, and the enthusiasm with which it was marked makes it an assured event.

Some of the more important manufacturers who are exhibiting are the Yellow Coach and Manufacturing Company, Graham Brothers, The Fageol Company, the Six Wheel Company, Commerce Motor Truck Co., Denby Motor Truck Company, Ruggles Motor Truck Company, Chevrolet Motor Company, Gotfredson Corporation, Reo Motor Car Co., The Studebaker Corporation, American National Omnibus Co., and Dorris Motors, Inc.

A. M. A. Holds Annual Dinner During A. E. A. Show Week

CHICAGO, Nov. 14.—The annual dinner of the Automotive Manufacturers' Association at the Auditorium Hotel Tuesday evening was one of the most largely attended dinners of A. E. A. convention week. About 400 members and guests of the A. M. A. were present.

Addresses were made by G. F. Disher, president of the association; Arthur Heath Onthank, chief of the domestic commerce division of the Bureau of Foreign and Domestic Commerce, and Pat Barnes, soldier of fortune and radio announcer.

Mr. Disher pointed out some means by which he believed the cost of distributing merchandise could be reduced. He said the manufacturers of automotive products have attained as great efficiency as the manufacturers in any other lines, but that the cost of distribution is abnormally high. He recommended that retail dealers buy stocks more often and in less quantity in order to keep down the investment in inventory. He also recommended that the buyer for the automotive wholesaler be in close touch with the sales department.

Mr. Onthank described surveys which the Department of Commerce has made in various sections of the country to determine buying habits and power of the people. He told how these surveys may be used profitably by the automotive manufacturers.

National Standard Parts Meeting and Show Opens

More Than Ninety Exhibitors Have Booths at Chicago Exhibit—1926 Course Planned

CHICAGO, Nov. 16.—The National Standard Parts Association today opened a convention and exhibit at Hotel Sherman which will continue through Wednesday. Delegates arrived early to register and indications point to a very interesting meeting and show. About 136 delegates are expected to have reported before the sessions close. Ninety-four exhibitors have booths in the show which is being staged on the mezzanine floor of the hotel. It is said that a large number of applications for exhibition space were rejected, all of these, of course, being non-members.

According to those close to the association's activities the thread of discussion in the convention will largely involve the future status of the parts jobber. How to put the parts jobber on a sound business basis will be the big thought. Approach to this problem was made by the association's merchandising committee by means of survey and study.

The exhibitors in the show are as follows:

Accurate Gear Co., Springfield, Ohio.
American Hammered Piston Ring Co., Baltimore, Md.
American Steel Export Co., New York City.
Automotive Gear Works, Inc., Richmond, Ind.
Bock Bearing Co., Toledo, Ohio.
Brodie Company, Ralph N., Chicago, Ill.
Buckeye Brass & Mfg. Co., Cleveland, Ohio.
Burd High Compression Ring Co., Rockford, Ill.
Burgess-Norton Mfg. Co., Geneva, Ill.
Cleveland Inner Ring Co., Cleveland, Ohio.
Cleveland Piston & Mfg. Co., Cleveland, Ohio.
Dall Motor Parts Co., Cleveland, Ohio.
Dalton & Balch, Inc., Cleveland, Ohio.
Detroit Steel Products Co., Detroit, Mich.
Elgin Machine Works, Elgin, Ill.
Fafnir Bearing Co., New Britain, Conn.
Federal Mogul Corp., Detroit, Mich.
Felt Products Mfg. Co., Chicago, Ill.
Fostoria Screw Co., Fostoria, Ohio.
G H Mfg. Co., Baltimore, Md.
G-H Tension Ring Co., Inc., Baltimore, Md.
Gill Mfg. Co., Chicago, Ill.
Hide Leather & Belting Co., Indianapolis, Ind.
Houpert Machine Co., Long Island City, N. Y.
Indianapolis Tool & Mfg. Co., Indianapolis, Ind.
W. H. Jahns, Inc., Los Angeles, Cal.
James Motor Valve Co., Detroit, Mich.
Johnson Bronze Co., New Castle, Penn.
Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich.
Kant-Skore Piston Co., Cincinnati, Ohio.
Keasbey & Mattison Co., Ambler, Pa.
King Quality Products, Inc., Buffalo, N. Y.
Lake Erie Metal Products Co., Bedford, Ohio.
Mackay & Austin, Inc., Oakland, Cal.
Mallory Electric Corp., Toledo, Ohio.
Milwaukee Die Casting Co., Milwaukee, Wis.
National Bushing & Parts Co., Inc., Minneapolis, Minn.
New England Auto Products Co., New Haven, Conn.
Ohio Piston Co., Cleveland, Ohio.
Orange Bearing Co., Orange, N. J.
Packer Auto Specialty Co., Chicago, Ill.
Parts Mfg. Co., Cleveland, Ohio.
Penn Rivet Corp., Philadelphia, Pa.
Pennsylvania Piston Ring Co., Cleveland, Ohio.
Republic Gear Co., Detroit, Mich.
Scully Steel & Iron Co., Chicago, Ill.
Smalley Accessories Corp., Chicago, Ill.
Society of Automotive Eng., Inc., New York, N. Y.
Spencer-Smith Machine Co., Howell, Mich.
Staff, J. Wadsworth, Saginaw, Mich.
Standard Sales & Service Co., Plainville, Conn.
Star Products & Machine Co., Cleveland, Ohio.
Swartz Mfg. Co., Freeport, Ill.
Thompson Products, Inc., Cleveland, Ohio.
Timing Gears Corp., Chicago, Ill.
Twentieth Century Brass Works, Minneapolis, Minn.
United States Asbestos Co., New York, N. Y.
United States Chain & Forg. Co., Pittsburgh, Pa.
Universal Drive Shaft Co., Cleveland, Ohio.
U. S. Bearing Co., Indianapolis, Ind.
Van Norman Machine Tool Co., Springfield, Mass.
Warner Gear Co., Muncie, Ind.
Wel-Ever Piston Ring Co., Toledo, Ohio.
Western Gear Co., Detroit, Mich.
Whitney Mfg. Co., Hartford, Conn.

A. E. A. Votes to Expand Its Activities

Show Declared Best Ever Held From Business View

More Orders, Better Contacts, and Finer Displays Are Features of Seventh Exhibition

CHICAGO, Nov. 14.—From a business standpoint the seventh annual show of the Automotive Equipment Association, which ended here today, was the greatest the association ever has held.

Manufacturers, particularly those who exhibited new or improved products, reported at the close of the exhibition that they had taken more orders than ever before at a like occasion.

More contacts were made, more inquiries received and more interest was shown on the part of the jobbers present than ever before in the history of the association.

One prominent manufacturer, who introduced a new product, reported that he had added more than 100 wholesale dis-



E. V. Hennecke, new vice-president of A. E. A.

tributors during the show, and that orders had been taken that would insure top production for the next six months.

A large amount of order taking was done, although ordinarily the A. E. A. show is more of a meeting place where lines may be shown and lasting contacts begun, than it is an order receiving department.

Nearly every manufacturer who exhibited declared that more actual business was written in the first day of the display, than had been done during the

(Continued on page 43)

Heard at and About The A. E. A. Show

The Bonney Forge and Tool Works of Allentown, Pa., held a special meeting of salesmen and a sales conference all day Nov. 8 in Chicago, the day before the A. E. A. show. All sales representatives with the exception of the export department were present at the session, at which it was announced that the system of listing Bonney products has been changed. The company now lists direct to the retailer.

* * *

Roland S. Boreham of Los Angeles has been appointed wholesale representative in the coast territory for the Ernest Holmes Co., Chattanooga, Tenn., manufacturers of wreckers and shop equipment. B. H. Dirks will travel the wholesale territory surrounding Salt Lake City for the Holmes company, it was announced. The Holmes concern has more than trebled its floor space in the last year to meet growing demand for its products.

* * *

R. W. Jones is leaving Frank Mossberg Co. after sixteen years of association with that firm, to become assistant salesmanager in the western sales district for the American Wire Fabrics Corp., with headquarters at Chicago.

* * *

Van Cleef Bros., Chicago, celebrated the close of the "Home-Coming Sales Contest" among field representatives of the company, with a dinner during the A. E. A. show.

* * *

Two general sales sessions were held Nov. 9 and 10 at the Hamilton Club by district and overseas representatives of Walden-Worcester, Inc., of Worcester, Mass.

* * *

The Gates Rubber Co. Denver, held its annual sales conference and banquet Saturday at the Hotel LaSalle.

* * *

The Cincinnati Victor Co., Cincinnati, held a sales dinner at the University Club Wednesday evening.

* * *

Fred Cole has been added to the directorate of the Romort Mfg. Co., Oakfield, Wis., succeeding Will Zinke.

* * *

The Kales Stamping Co. of Detroit, held its annual sales organization dinner Nov. 9 at the Congress Hotel.

* * *

The Manley Manufacturing Co. announces a reduction in price on the Manley Wrecking Crane No. 101, from $118 to $100. The No. 101 is a 2½ ton size.

* * *

All the field service men of the Lyon Metallic Manufacturing Co., Aurora, Ill., were called in from their territories to

(Continued on page 34)

Merchandising Program Is to Extend Throughout U. S.

Convention Also Votes to Merge With M. & A. M. A. if Latter Approves—Ozburn New President

CHICAGO, Nov. 14.—Renewal and expansion of the merchandising program of the A. E. A., which made the slogan "Ask 'Em to Buy" famous three years ago, was decided upon by the Automotive Equipment Association at its tenth annual convention here this week. The old slogan will be revived and a new one, "Show 'Em and Sell 'Em," will be used in promoting the campaign.

The association appropriated $50,000 for this work and authorized the merchandising department to employ two capable field men to assist in carrying the merchandising plan to all sections of the country.

This action was taken following a report read by Arthur R. Mogge, mer-



N. F. Ozburn, new president, A. E. A.

chandising director, outlining the plan to organize meetings of jobbers and their salesmen and dealers in all parts of the country to promote the better merchandising of accessories, equipment, service parts, and service. This plan was tried out early this month in New York state when a group of jobbers held three meetings at which speakers told them how to keep their places and dealers' places busy this winter. These jobbers were enthusiastic about the plan and declared it had already brought profitable results.

L. A. Safford, chairman of the merchandising committee during the past year, presided at the merchandising session and urged all members to support this campaign. W. T. Morris, retiring

president of the A. E. A., was selected as new chairman of the merchandising committee.

Another outstanding action of the convention was the voting of authority to the board of directors to consummate the proposed merger with the Motor and Accessory Manufacturers' Association provided the latter association approves the merger at its annual meeting in January. Thus there is presented the possibility of the two associations becoming one before the next annual convention and show are held. This action was unanimous.

It was decided to hold the convention and show next year at the Coliseum in Chicago the week of Nov. 8 to 15. There was some sentiment in favor of changing to a later date, but the majority preferred the early part of November. By vote of the convention, attendance at the show next year will be more restricted than for the last two years. It will be open only to members and invited guests, as this year, but invitations will be extended to jobbers only if they show enough interest to file applications not later than 30 days before the show opens.

The new president of the association, elected at the annual convention here this week, is N. F. Ozburn of Ozburn Abston & Co., automotive jobbers, Memphis, Tenn. The new vice-president is Earl V. Hennecke of the Moto-Meter Co., manufacturers, Long Island City, N. Y. The retiring president is W. T. Morris, of the American Chain Co., Bridgeport, Conn. Mr. Ozburn steps up from the vice-presidency of the association.

New directors were elected as follows:

District 1—Three year term: George W. Fleming, Fleming Machine Co., Worcester, Mass.; two year term: Charles S. Owen, Chapin-Owen Co., Rochester, N. Y.; one year term: R. P. Greene, Wetmore-Savage Auto Equipment Co., Boston, Mass.

District 2—Three year term: R. W. Shreiner, General Auto Supply Co., Harrisburg, Pa.

District 3—Three year term: D. S. Brisbin, Columbus-McKinnon Chain Co., Columbus, O.; two year term: B. N. McGregor, Packard Electric Co., Warren, O.

District 4—No election.

District 5—Three year term: F. H. Suter, Shadbolt & Boyd Iron Co., Milwaukee, Wis.

District 6—Three year term, F. J. Tenk, Tenk Hardware Co., Quincy, Ill.; one year term: H. E. Patterson, Warner-Patterson Co., Chicago.

District 7—No election.

District 8—Two year term: H. J. Banta, The Banta Co., Los Angeles, Cal.

District 9—One year term: W. P. Kearney, Dominion Chain Co., Niagara Falls, Ont.

New officers of the association were installed at the Saturday morning session, which was the concluding session of the convention.

The total number of exhibitors at the show was 225 and 212 of these were manufacturers of automotive equipment.

(*Continued on page 43*)

(*Continued from page 33*)

attend the A. E. A. show in Chicago. A sales conference was held in Aurora previous to the opening of the show and on the day of the show opening all automotive jobbers handling Lyon products were taken by automobile to Aurora where they inspected the Lyon plant, were served with dinner, and returned that evening to Chicago.

* * *

The Cuno Engineering Corp., Meriden, Conn., manufacturers of the "Electric Match" and other smoking equipment for automobiles announced at the A. E. A. show that a new factory building has been completed to increase the facilities of the plant.

* * *

Romort Mfg. Co., Oakfield, Wis., announced at the show a discount of 40 per cent to jobbers on their air tower, in place of the 30 per cent formerly prevailing.

* * *

Burgess-Norton Mfg. Co., Geneva, Ill., hereafter will mark all their piston pins with the size and stock number.

* * *

A dinner for distributors was held Tuesday evening by the Champion Spark Plug Co. of Toledo.

* * *

James Motor Valve Co. of Detroit, gave a dinner to representatives Wednesday evening.

* * *

An interesting entertainment was provided daily at the Illinois Athletic Club for the wives of distributors by the Lincoln Products Co., Chicago. Luncheon and bridge was the program.

* * *

Announcement was made by President C. M. Burgess of the Burgess-Norton Mfg. Co., Geneva, Ill., of the resignation of R. E. Espey as secretary and sales manager of the company and the appointment of F. E. Burgess as secretary. Mr. Burgess formerly was assistant treasurer of the company and will continue to discharge the duties of that office also.

* * *

The Indiana Piston Ring Co. has purchased the plant of the old Testor-Hartley Motor Corp. of Hagertown, Ind., and is remodeling it to form an addition to its own factory. The new plant is expected to be in full operation by Dec. 1, when it is hoped that the daily capacity will be about 100,000 Perfect Circle piston rings.

* * *

Automobile factory service managers and a number of other guests were entertained at dinner Wednesday evening of A. E. A. convention week by E. H. Spears, sales manager of David Lupton's Sons Co. of Detroit. Following the dinner a round table discussion was held on problems of servicing motor vehicles and the distribution of parts and supplies. Talks were made by all the service managers present, two representative jobbers, two manufacturers of shop equipment and three representatives of automotive business papers.

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A. D. Geiger has been made manager of the Boston branch of the Black & Decker Manufacturing Co., succeeding Dan G. Caywood.

* * *

P. M. Southworth has returned to "X" Laboratories, Inc., as advertising manager. He formerly occupied the same position with the Nestles Food Co.

* * *

The Canadian Auxiliary of the A. E. A. held a banquet Wednesday evening at the Chicago Athletic Association, at which W. P. Karney, vice president of the Dominion Chain Co., Niagara Falls, Ont., acted as toastmaster. About 25 jobbers were present and discussed problems for next year.

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The Apco Manufacturing Co of Providence, R. I., held its annual dinner and sales conference, the Sunday before the show opened, at the Congress Hotel.

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The Rees Manufacturing Co. of Pittsburg held a dinner for salesmen at the Congress Hotel Monday evening.

* * *

President C. M. Burgess of the Burgess-Norton Mfg. Co., Geneva, Ill., announced at the show the inauguration of a parts insurance plan whereby the company guarantees each B-N piston pin to be within .0002 plus or minus for diameter, 1/64 in. for length, and not more than .0002 out of round and with no taper. Hardness is guaranteed to be correct and the pin to be satisfactory in every way to the purchaser. If not it can be returned at the company's expense for exchange. A certificate is issued by the shop in which the pin is installed. The plan provides for compensation for damage incurred on account of a broken B-N pin installed by a competent mechanic, if the pin contained a flaw, providing the pin has not been altered in any way after leaving the factory. This plan was designed especially to appeal to those who demand only geuine parts.

* * *

Bert Close, for a number of years president of the firm of Berry & Close, Philadelphia, manufacturers' agents, has been made sales manager of King Quality Products, Inc., Buffalo, N. Y. Frank Berry will continue the business of Berry & Close with the same lines.

Automotive Division Gives Another Expert to Dodge

WASHINGTON, Nov. 14.—Homer E. Elder, statistical expert of the Automotive Division, U. S. Department of Commerce, has resigned that position to head the research department of foreign sales for the Dodge Brothers Motor Company, with headquarters in Detroit. Mr. Elder's successor in the department has not as yet been appointed.

The acquisition of Mr. Elder's services, marks the second official Dodge Brothers has taken from the department within the last six weeks, the first being Percy Owen, formerly chief of the automotive division who has been made director of foreign sales of Dodge Brothers.

Thompson Now Developing Carbon Monoxide Consumer

Device Also to Be Utilized as Automobile and Bus Heating Apparatus, Designers Say

CHICAGO, Nov. 14.—A carbon monoxide consumer, which can be utilized as a car or bus heater, is being developed and is said to be near perfection by the Thompson Research, Inc., Cleveland, O. Although the device is not in production as yet, and the company is unable to say when it will be, it has been tested on various cars at the laboratories, has been inspected by the Cleveland city engineer, and is declared to have been found very effective.

As is so often the case in chemical research, the product desired is secondary in importance to the by-product of the developed reactions.

The corporation began the development work with the intention of providing a carbon monoxide consumer for automobiles. The bureaus of health in various cities have found that life is being shortened by the inhaling of monoxide coming from automobile exhausts and lying close to the pedestrian level of the larger cities. It is reported that the city of Paris is to enforce the use of a recent French invention which prevents this condition.

Instead of developing a device to absorb the monoxide, which, by its nature, would require replacement of the absorbent substance at intervals, the Thompson laboratories studied the possibilities of burning the noxious gas, that is, convert it into carbon dioxide, a harmless vapor.

It was found, however, that by the time the exhaust gases reached the muffler their heat had so decreased, that the monoxide would not burn except under compression. Compression was out of the question because it would retard the power of the engine.

After prolonged tests, it was found that a certain catalytic agent would raise the temperature of the mixture of monoxide and air to a heat of sufficient intensity to allow explosion by an electric spark.

As soon as this was discovered, it was found that great heat was generated by the burning of the monoxide since it had no explosive power. The idea then was conceived, that the air used to cool the device might be pumped into the bus for heating purposes. This would obviate the escape of exhaust gases in the car interior.

A possible development of the principle, which the company has not lost sight of, is that the heat developed by the consumer might be used in large plants, for the formation of additional steam power, or the heating of factory buildings.

The apparatus is built to take the place of the ordinary car or bus muffler. It is to be compact in size and will have much the same appearance as the muffler.

Attached to the end of the exhaust pipe, is an expansion chamber, in which the carbon monoxide is mixed with inflowing air, regulated to the proper proportions by aerators in the front of the expansion chamber. The expansion chamber further serves the purpose of preventing compression of the mixture, which would decrease the engine's power.

From the expansion chamber, the mixed gas is nozzled down and passed into a cylinder which is drilled with tiny holes. Surrounding the inner cylinder is the catalyst, and extending into the firing chamber which surrounds the whole, is a spark plug, fired from the distributer and thus synchronized with the engine.

The carbon dioxide then passes out as exhaust.

Surrounding the combustion chamber is an air jacket, into which the air passes through venturi tubes, and after circulating through the jacket, is piped into the bus interior.

Selling Cars Too Slow For Him

OGDEN, Utah, Nov. 14.—Harbertson Brothers, automobile dealers of this city, are recovering from a shock. About six months ago they engaged James H. Carlson, 40 years of age and married with one or two children, to serve as a salesman. Carlson did well and was making many friends in the city when he suddenly left for parts unknown taking with him a Nash car belonging to the firm and about $2,000 in money and property obtained by means of forged checks, the victims being his employers, merchants and bankers of Ogden. The man is said to have a police record. He is believed to have acted as an automobile salesman in California and Detroit. He is of dark complexion, with dark hair though nearly bald and weighs nearly 200 pounds. His height is about 5 feet 10 inches. The serial number on his car, a 1920 model, is 136223, and the engine number is 219512. Police have started a wide search for the man.

SPACE DEMAND HEAVY

CLEVELAND, O., Nov. 14.—The demand for truck space in the Cleveland automobile show, January 23 to 30, is far in excess of the space available, it was announced today by the exposition management. It was pointed out, however, that arrangements for alloting additional space for commercial cars are under way. Drawing this week for passenger car space revealed a condition similar to the condition faced by the commercial car exhibitors. From every viewpoint, this year's show is going to be the biggest, by far, in the Fifth City's history.

Chrysler Insurance Plan Upheld in Federal Court

New York District Judge Enjoins State Superintendent from Revoking License

NEW YORK, Nov. 14.—The petition of the Palmetto Fire Insurance Co. for an injunction to restrain James A. Beha, state superintendent of insurance, from revoking the company's license in New York, was granted in a decision by Judge Rogers in the United States District Court this week. The petition had been filed after Beha had indicated that he would revoke the license on the ground that the Chrysler-Palmetto automobile insurance plan constituted a violation of the laws and public policy of the State of New York.

The court overruled Beha's contention that this was a suit against the state and could not be maintained in federal court without the state's consent. The court held that while the state had power to exclude a foreign insurance company from doing business within its limits or to impose on it conditions deemed proper as precedent to its right to do such business the state could not forbid contracts of insurance relating to risks within its limits from being made between a citizen and a corporation in another state since such an attempt would violate the citizen's liberty to contract under the Fourteenth Amendment to the Constitution.

Whether Chrysler-Palmetto insurance contracts made under the Michigan laws were valid in New York was not regarded by the court as within its purview, but merely whether the license of the Palmetto, if its business does not violate New York laws, can be revoked because of the manner in which it does business in a third state where that business is valid.

The Court held that the Ohio decision refusing to enjoin the state insurance commissioner there from revoking Palmetto's license hinged upon the Ohio resident agent law and New York has no such law. The Court held also that in making its contract with the Chrysler Corp. in Michigan and in acting under that contract Palmetto was not doing business in New York and that "where applications for insurance are obtained in a state by an agent of a foreign company and forwarded by him for acceptance or rejection to a company outside the state the company is not doing business in the state wherein the applicants reside."

WITHERS JOINS INDIA

AKRON, Nov. 14.—W. C. Withers has just joined the sales force of the New York branch of the India Tire & Rubber Company. Withers will cover the metropolitan territory. He has been in the tire selling field for 12 years. He formerly did special sales work for Goodrich out of New York and has represented Republic in and around New York City.

Exhibitors Now Plan Booth Decoration for Big Shows

Space Details Arranged, Arrangements Can Be Made as to Display Methods

NEW YORK, Nov. 14.—With space drawings out of the way and the dimension and shape of spaces available to each individual exhibitor, the decks have been cleared for action in final preparation for the National Automobile Shows in New York and Chicago, with which the New Year will be ushered in. For the cars and taxicabs only one such function was necessitated, but in the case of the accessory manufacturers, a supplemental drawing was held, disposing of the final remaining spaces.

The official figures show that 50 makes of passenger cars will be on display in Grand Central Palace, New York, during the week of January 9 to 16, and one less at the Coliseum in Chicago, January 30 to February 6. In addition, eight makes of taxicabs will be on exhibition at each show.

The accessory division of the New York show, as it now stands, will have on display the products of 156 accessory and parts manufacturers. In the same lines the Chicago exhibition will have a total of 117. These totals may be increased later if additional space can be provided.

With the single exception of the Du Pont Motors, listed only at New York, the same car makers will occupy spaces at both the national shows. This is not the case with the accessory exhibits, the divergence between the two lists being considerable.

With exact details of the spaces available, the car makers are now in a position to decide how many models may be displayed to advantage, and the accessory men to formulate plans for decoration of their booths. The general decorative scheme has not been disclosed for either show, but it is understood that most elaborate plans are being worked out.

The National Automobile Chamber of Commerce, sponsoring both the New York and Chicago shows, will pay particular attention to the trade periods at the coming shows. With the realization that much of the buying for next year's production will be completed at the two displays, exhibitors will be urged to have their displays as complete as possible by 10 o'clock on the Monday morning of each show. The trade periods will be from 10 a. m. to 1 p. m. on each Monday and Tuesday, during which hours the factory representatives, distributors and dealers will be at liberty to inspect everything and talk business without interruption.

NEW VELIE DEALERS

MOLINE, Ill., Nov. 14.—New dealers added to the organization of the Velie Motors Corp. include:

G. J. McMaster, Lanesboro, Minn., Gilbon Garage, Peekskill, N. Y., John H. Dennis, Albany, N. Y., Hester Motor Service, Henerson, N. C., Fred Cornall, Carbondale, Pa., Diffley Motor Company, Everett, Wash., Gregory Garage, Johnson City, N. Y., Minor Motor Company, De Witt, Ia., Rockwell's Garage, Elmira, N. Y., H. R. Eby, Shannon, Ill., L. H. & R. L. Robinson, Winters, Cal., A. P. D'Artenay, Dixon, Cal., Sorenson & Clariborne, No. Sacramento, Cal., Rutherford Bros., Oroville, Cal., Benicia Garage, Benicia, Cal.

FRESNO PLANS CONGRESS

FRESNO, Cal., Nov. 14.—The sales congress of the National Automobile Dealers' Association, which in the past has been held only in San Francisco and Los Angeles, in this state, also will be held in Fresno, November 30, this year. All dealers in the San Joaquin valley, and other territory tributary to Fresno, will attend this meeting and take an active part in it, while other dealers from any and all sections of California are invited as part of the audience.

TRUCK CO. SALE NOV. 23

SPRINGFIELD, O., Nov. 14.—Interest now centers in the sale and reorganization of The Kelly-Springfield Motor Truck Company at 2 p. m. November 23 at the plant by Receiver Pearl A. Lewis. It is expected that three bids will be submitted, according to reports, although it has been the understanding that an eastern syndicate will probably make the high bid. It is assured that the company will be placed on a sound financial basis and that the plant will be operated with a large force.

Moon and Diana Dealers See Big Southern Demand

ATLANTA, Nov. 14.—That closed car demand in the Southeast this year gives every indication of establishing the best winter record in the history of the automobile business in this district appeared to be the consensus among the dealers in Georgia, Florida and North and South Carolina, handling the Moon and Diana line, who attended a sales conference in Atlanta held by the southeastern branch of the Moon Motor Car Co.

The immense cotton crop in the South this season, sufficiently large to insure growers one of the biggest financial returns in the history of cotton growing in the South, is resulting in a brisk closed car demand in all parts of the Southeast which bids fair to continue unabated through the coming winter months.

MACK REPORTS PROFIT

NEW YORK, Nov. 14.—Mack Trucks, Inc., reports net profits of $2,614,205 for the third quarter of 1925, after charges. After allowing for dividends on first and second preferred stocks of $284,436, the balance equalled $6.86 a share on 339,750 shares of common. Total net income for the first nine months of the year, after charges, was $7,268,052, or $18.88 per share on the common. Net income for the first nine months of 1924 was $4,795,938, or $13.98 a share on the common.

Cram Sees More Buying and Greater Production in 1926

Economist Believes Present Owners Will Purchase Higher-Priced Cars Than Formerly

DETROIT, Nov. 14.—As excellent a business year as 1925, if not a better one, is looked for in 1926 by Benjamin H. Cram, nationally known automotive economist. Not only will general business be better, employment as widespread and wages better, Cram declares, but he predicts automobile production and sales will be larger than in this year; more new car owners will appear and better cars will be bought. He adds, however, that used car values will be lower than now and while this will help the used car buyer it will interfere with the man seeking to trade in his old car for a new one.

"With 1925 drawing to a close, after an excellent setting for all things automotive, thought is directed to 1926 and its potentialities," Mr. Cram declares. "Without question it will be an excellent business year, and as such, should carry with it another large volume of automobile buying. Money should be more plentiful than in the present year, and with more confidence in the business structure generally, should be more extensively employed. This means creation of business opportunities, general employment and increased incomes.

"There will be an increased volume of automotive buying, though possibly not a largely increased sale of units. We mean by this there will be an inclination to buy better cars on the part of those ordinarily buying in lower ranges. Manufacturers and dealers in the lower priced lines will probably see many of their present owners ascend into better grades—many more than in the ordinary business year. To compensate for these they must develop and sell a new group of owners—persons formerly without cars. More first buyers will buy in better grades because of improved economic status, but there should be a greater number of first buyers than ever before, the large percentage of whom will be in the lower grades.

"There will be a tendency to quicken the general automotive market through many buyers coming in with cars practically new which they seek to trade on better cars. The result of this will be a general lowering of used car valuations and prices. So many cars of one to three years' use will be offered on the used car market there will be practically no market for the cars older than this."

COOK TO KANSAS CITY

NEW YORK, Nov. 14.—Colin Campbell vice president of Durant Motors, Inc., announces the appointment of W. S. Cook as sales manager of the Kansas City wholesale office, vice W. I. Nelson, resigned. George Bandy, Jr., was appointed sales manager of the Memphis wholesale office, succeeding Mr. Cook.

Unusual Color Schemes Are Featured at Annual Salon

Natural Hues of Birds Used by Designers in Automobile Painting Effects

NEW YORK, Nov. 16.—Birds occupy an important place in the twenty-first annual automobile Salon which opened at Hotel Commodore yesterday and closes on the 23rd. The colors which Nature lavishes upon the feathered songsters have been adapted to motor car bodies and a stuffed bird from whose plumage the new shades have been designed is exhibited with each Lincoln car thus adorned.

Last spring Lincoln obtained from museums 60 stuffed birds distinguished for their beautiful color effects. Heretofore it has been unwritten law that two or multi-colored cars must harmonize. The stuffed birds were studied by experts in an attempt to adapt to car bodies those strongly contrasting colors which Nature paints without disocunting harmony of effect. Special paints were devised to approximate these clashing effects of colors new to automobiles, and Lincoln at the salon shows a dozen such bodies, the color design of each being after the bird shown with it.

Several other makes of cars are featured by new color designs. They are offered to the people who like to have their cars talked about and the makers anticipate little difficulty in selling such cars even to people already owning the more conventional models.

This Salon is the largest ever held. The 111 cars, each an individual job, occupy all the space on the ballroom floor except the kitchen. The exhibits fill three ballrooms, three private dining rooms, three foyers, the main lobby and two end rooms. This will be a million dollar Salon, since the average price of each car will amount above $8000.

One feature is a gold-plated Isotta Fraschini eight chassis. To finish this job Capt. Hugo V. D'Annunzio, son of the Italian poet and president of the Isotta Motors Co., importers here, spent 65,000 lire.

The Rolls Royce exhibit is distinguished by four cars whose coach work was done by New England concerns and modelled after the lines originated by Barker of London. Four leading coach builders also exhibit special Rolls bodies. This is said to be the first time that coach designers have been able to equip the Rolls chassis with bodies of their own design. Also there is one Rolls with needle-work upholstery, upon which two and a half million hand stitches were lavished.

The exhibiting carrossiers include Blue Ribbon, Brewster, Brunn, Derham, deCausse, Dietrich, Fisher, Fleetwood, Holbrook, Judkins, Le Baron, Locke, Merrimac, Rollston and Willoughy. The custom bodies of the designers are mounted on nineteen chassis representing six nations—Amilcar, Brewster, Cadillac, Cunningham, Duesenberg, Franklin, Isotta-Fraschini, Lancia, Lincoln, Locomobile, Marmon, Maybach, Mercedes, Minerva, Packard, Pierce-Arrow, Renault, Rolls-Royce and Wills Sainte Claire.

Firpo Gets Diana Franchise

ST. LOUIS, Nov. 14.—The company of Luis Angel Firpo, the noted athlete and pugilist contender for the heavyweight championship of the world and now a successful merchandiser of automobiles, has been granted the Moon Diana franchise for Northern Argentine.

It is well known that at the time of his departure from the United States after his famous battle with Jack Dempsey, Firpo's intentions were to devote his time entirely to the promotion of his automobile business, and at that time several manufacturers were anxious to have him take distribution of their cars for his home territory; where he enjoys a tremendous prestige and popularity.

Since that time, Firpo, with a ready supply of capital, has established a strong automobile selling organization with the finest sales room and service equipment in South America, handling a large volume of sales in the Argentine territory.

CHANDLER ASSISTS PRESIDENT

NEW YORK, Nov. 14.—Henry T. Chandler, who has been associated with the Vanadium Corp. of America since Jan. 1, 1923, as metallurgical engineer at the Detroit headquarters, has been appointed assistant to the president. Prior to his association with this concern he was engaged in research and development work in the automotive field. From 1914 to 1920 he was in charge of the research laboratory of the Ford Motor Co. and for the next three years he was with the C. H. Wills organization as metallurgical engineer. His headquarters continue at Detroit.

OVERLAND DEALERS MEET

DECATUR, Ill., Nov. 14.—W. C. Starr was host to 80 dealers and guests at the Orlando hotel recently at a Willys-Overland dealers' banquet. An eight-page booklet was issued to commemorate the evening and a program of music preceded the formal talks. Mr. Starr presided, B. A. McDonald, president of the Commercial Trust company of Chicago, spoke on "Automobile Financing" and T. E. Bennett, wholesale manager for the Starr company told of 1925 results and plans for next year. J. B. Dorris, district manager for Willys-Overland, discussed features of the factory franchise.

House Committee Votes to Reduce Car War Taxes

Would Repeal Excise on Truck and Accessories and Cut Levy on Automobiles

WASHINGTON, Nov. 14.—Repeal of the two and one-half per cent tax on trucks, tires, parts and accessories and reduction of the tax on passenger automobiles and motorcycles from 5 per cent to 3 per cent definitely has been decided upon by the House Ways and Means Committee.

The action of the committee will result in a saving to truck users of approximately $7,800,000 next year and to tire and accessory users will represent a saving of $22,737,000. As a result of the reduction from 5 to 3 per cent on passenger cars, it will mean a saving of approximately $40,000,000 to passenger car purchasers.

Under the new schedule the 1926 tax revision will mean roughly a reduction for the automotive industry of about 50 per cent. The automobile taxes of all kinds brought in $124,686,745 for the fiscal year of 1925, and it was estimated that the 1926 tax would net the government about $141,000,000. Under the revised schedules this would be cut during 1926 to about $71,000,000 for the automotive industry's share of excise taxes.

Florida Dealers Getting Cars from Georgia Town

ATLANTA, Nov. 14.—Two additional destination points for new cars intended for Florida dealers have been chosen as a means of overcoming the freight embargo existing in that state, Valdosta, Ga., and Madison, Fla., the two new points of destination selected. Northern and eastern manufacturers are therefore now consigning their cars intended for the Florida dealer trade to these two points and to Jacksonville and Sanford, Fla., and after unloading at these places the cars are serviced and sent under their own power to dealers in various towns and cities of Florida.

In this manner the freight embargo is being entirely overcome, and dealers in Florida are obtaining their new cars without difficulty.

Business in Florida this season is described as little less than phenomenal so far as new car sales are concerned. It is several hundred per cent better than last season at this time, and certain to establish a record this winter far surpassing any previous winter season in that state. In many instances, dealers advise, purchasers offer bonuses as high as $500 for immediate delivery of a new car.

HUDSON-ESSEX OUTPUT

DETROIT, Nov. 14.—October production of Hudson Motor Co. approximated 25,000 cars against 27,000 in September and 27,500 in August.

Necessity of Trade Interest in National Shows Is Urged

Sam Miles Leads Disscussion as to How Whole Industry Can Realize Exhibits' Importance

NEW YORK, Nov. 14.—The necessity of increasing trade interest in the New York and Chicago national automobile shows was emphasized at a luncheon given by Sam A Miles, manager of the show department of the N. A. C. C., at the Engineer's Club and attended by representatives of the Motor and Accessory Manufacturers' Association and various automotive trade papers.

Discusssion developed that with 1925 promising to be perhaps the largest production year in the industry's history, with motor stocks acting as the bellwether of the bull market on the New York Stock Exchange, and with many recently added models to be displayed at lower prices, interest of the public in these shows was expected to be larger than ever; but it was realized that there must be greater interest in the national shows on the part of the trade itself if the exhibitions were to attain and retain maximum value to the industry.

Various means of attaining this end were considered with special emphasis upon the value of the two trade days at the New York show, Monday and Tuesday. This year these days have been advanced from the latter to the fore part of the week to accommodate factory officials and others who find it difficult to leave their home offices for New York before Saturday or Sunday. But the conviction was expressed that the value of these trade days, even on Monday and Tuesday, would be somewhat discounted if what is called the "hotel headquarters" practice were continued.

It has become the custom among factory representatives and others to make their headquarters at hotels during the show, and for this reason it has often been difficult for dealers to find just the men they wished to talk with.

It is probable that the N. A. C. C. will take some steps to impress upon exhibitors the necessity of attendance at the show itself upon the part of their representatives. The opinion was expressed that at each booth at least one representative qualified to discuss the product technically, as well as a saleman, should be present at all times.

It was regarded as especially necessary that car engineers be present at the booths. At previous shows there has been considerable difficulty in locating representatives who are technicians in contradistinction to salesmen. In this regard the Society of Automotive Engineers will co-operate.

It is probable that at least one special meeting of the Metropolitan Section of the S. A. E. will be held in New York during show week. Efforts will be made, as far in advance as possible, to spread throughout the trade special information about the show which will emphasize the value of 100 per cent trade attendance, particularly on the Monday and Tuesday trade days.

Although the number of manufacturer exhibitors has decreased this year from 51 to 45, the number of models on display will be about the same as last year.

The importance of focusing the attention of the entire trade on the two national shows is illustrated by the recent action of the N. A. C. C. in declining to participate as an organization in the Philadelphia Sesqui-Centennial celebration. This action was based upon the conviction that the undivided attention of the association should be preserved for every effort toward making the New York and Chicago shows truly national.

The suggestion that exhibitors should refrain from soliciting orders during the show has been abandoned. The questionnaire sent to exhibitors by the N. A. C. C. show department evoked an almost unanimous disapproval of this suggestion as impractical and impossible of enforcement.

The show department is making every effort to emphasize the value of wholehearted trade interest in the two trade days. The suggestion was made that such interest would be encouraged by distributing among the exhibitors and their representatives badges which would classify the branch of the industry in which each individual is concerned. It was also suggested that some plan of registering trade attendance at the show might be worked out, but lack of facilities at both Grand Central Palace and the Coliseum in Chicago discouraged the carrying out this suggestion.

Mr. Miles solicits from all those interested ideas as to how the vital importance of trade interest in the national shows may be impressed upon the whole industry.

Dodge Brothers Sets New Mark in Sales and Profit

NEW YORK, Nov. 14.—New high records in the number of cars sold, gross profits, and net income for the first nine months of 1925 are announced by Dodge Bros., Inc.

Net sales were $175,284,031, against $155,170,714 in the corresponding period last year, and net income, after depreciation, but before interest on debentures, federal taxes and dividends, was $25,435,427, as compared with $14,642,055 in the same period last year

After all charges, earnings were equal to $6.33 per share on 2,434,524 shares. Third quarter earnings were $8,872,115, or $2.25 per share.

The report shows that the company sold 203,546 cars in the first nine months of this year, exceeding any previous like period since 1914, when the company sold 249,000 cars to Sept. 30. The company has sold 1,430,961 cars for a total price for cars and parts of more than $1,229,000,000. Loss from debts amounted to only $33,000.

Tire Makers See No Reason To Expect Decline in Prices

Additional Raw Material Release Has Little Effect on Market, Brokers Say

AKRON, O., Nov. 14.—Recent predictions that there would be a reduction in tire prices early in 1926 are not justified by the action of the crude rubber market within the past few weeks, it is pointed out by leading tire manufacturers. If any change takes place it is more likely to be an upward price revision.

Spot rubber has held firm for the last two months around $1 a pound. The future market also has been exceptionally strong, with heavy buying reported for months in advance. British and Dutch planters are said to have been able to contract for practically all of their 1926 output above 55 cents a pound, if they so desired.

The additional release of 10 per cent more rubber Nov. 1 under the Stevenson restriction act, making the total allowance for export 85 per cent of production, has had practically no effect on the market, Akron brokers state. The release has been counteracted largely by a shortage of labor in the rubber producing countries.

Before the last increase, Sept. 15, prices of tires were based on rubber costing 55 to 60 cents a pound, so that even a big drop in the rubber market would not justify an immediate lowering of tire prices. Rubber for immediate delivery has not been as low as 55 cents since the middle of May, and it went as high as $1.20 a pound in July.

Even with the series of price increases put into effect this year, manufacturers point out that tires are selling only slightly above the 1923 level. Economies in manufacturing and reduction in overhead have brought about large savings to the motorist.

Contrary to general expectations a revised report of the Department of Commerce, just made public, shows that dealers' average stocks of casings as of Oct. 1 are only slightly larger than a year ago. Inner tube stocks are heavier.

Returns from 35,331 dealers show 2,000,150 casing on hand, or 56.6 per dealer, and 283,552 balloon casings, or 17.5 per dealer, compared with 1,402,879, or 53.6 per dealer, and 135,366 balloon casings, or 16.3 per dealer a year ago.

200 HEAR N. A. D. A.

NEW ORLEANS, Nov. 14.—More than 200 automobile distributors, dealers and salesmen gathered in the Roosevelt Hotel in New Orleans, at the meetings of the "sales congress" team of the National Automobile Dealers' Association. The principal speakers were A. R. Kroh, sales specialist of the N. A. D. A., and H. D. Bullock, western sales manager for "System," who was borrowed from the publishing company by the N. A. D. A. for this special group of sales congresses throughout the country.

Oakland Breaks All Prior Output Marks in October

Production for Month Is 8,088 Cars and Shipments Total 8,003 During Period

PONTIAC, Mich., Nov. 14.—The Oakland Motor Car Company broke all previous monthly sales records during October when 8003 cars were shipped to dealers.

As the factory has not yet caught up with dealers' unfilled orders these figures are practically synonymous with retail sales.

The production at the factory was 8088 cars, a single car more than the production quota set for October. The factory sales for October beat the previous high monthly sales record of February 1924 by 14½ per cent. It also was more than 146 per cent greater than the sales in October of last year and represents a 63 per cent increase over September of this year.

The present daily production will be gradually increased through November, December and January, and to this end $750,000 has been spent in providing the necessary equipment to make possible the expanding Oakland Six production program.

Particularly impressive records of retail sales were made in the large metropolitan cities of the country where competition is keenest. Among the larger cities, where Oakland enjoyed the greatest October retail sales in its history and ranked exceptionally high in new car registration are included Chicago, Detroit, Cleveland, Pittsburgh, Indianapolis, Buffalo, Rochester, Syracuse, Youngstown, Wichita, and St. Louis.

Two Appointments Made to Distribution Meeting

WASHINGTON, Nov. 14.—The appointment of George A. Waddle, manager of dealers' relations of the Goodyear Tire & Rubber Company, of Akron, and F. B. Caswell, vice-president of the Champion Spark Plug Company, of Toledo, to represent their respective industries at the forthcoming National Distribution Conference, to be held here December 15 and 16, was announced this week by the Chamber of Commerce of the United States.

Representatives of the automotive industry, body builders and allied industries will also be appointed to participate in the conference.

The prime purpose of the chamber in calling the conference, as set forth in the agenda, declares: "As a means of eliminating trade abuses, and the establishment of standards of business practice to counteract business waste, the conference has been called. It is proposed to create a business tribunal to be known as a Joint Trade Relations Committee."

Ford First Car in Wisconsin

MILWAUKEE, Nov. 14.—Distinction of being the first automobile registered in Wisconsin goes to a Ford, a 10-horse power model, seating four passengers. This and other interesting facts have been brought to light by George A. Brown, chief of the division of records and elections in the office of the secretary of state of Wisconsin, who has been poring over the early records of the industry.

A. F. Zimmerman of Madison possessed the first automobile license issued in the state, the car being the Ford mentioned above. Early records are inaccurate and incomplete because until a few years ago, it was possible for an automobile owner to have the license on one car transferred to another without paying any additional fees. For this reason, there are shown many transfers of automobiles to different parties who then did not have the license renewed.

Illinois Car Titles Show Slight Decline in Month

CHICAGO, Nov. 14.—There was a drop of 2 per cent in total registration of new passenger cars in Illinois during October as compared with September. Had it not been for the fact that Fords gained 110 per cent over the preceding month, the loss, so far as total registration is concerned, would have been much greater, as there were declines in all other price divisions.

Low-priced cars (excluding Fords) were off 22 per cent while the decreases in the medium and high-priced groups were 26 and 6 per cent respectively.

Following are the detailed figures for the first ten months of 1925:

Month	Fords	Low, excl. Fords	Medium	High*	Total
Jan.	4,060	2,275	5,748	808	12,891
Feb.	3,424	1,718	4,977	612	10,731
March	5,714	2,729	6,416	784	15,643
April	9,010	3,755	8,801	861	22,427
May	8,751	3,644	8,014	899	21,308
June	6,473	3,400	6,383	828	17,084
July	8,499	4,305	8,787	1,035	22,626
Aug.	4,686	3,218	6,646	720	15,270
Sept.	1,831	3,145	6,292	661	11,930
Oct.	3,953	2,430	4,652	615	11,650
Total	56,401	30,619	66,716	7,823	161,560

*Includes miscellaneous cars not named.

The foregoing figures were compiled from statistics furnished to Motor Age *by Robinson's Advertising Service, Springfield, Ill.*

FLINT PICKS MORRIS

FLINT, Mich., Nov. 19.—W. O. Crabtree, salesmanager, Flint Motor Co., announces the appointment of George R. Morris as assistant sales manager. L. F. Barrett has been appointed regional manager for the Eastern territory with headquarters in New York.

U. S. Race Records May Be Given European Recognition

International Association Votes Change in Laws Allowing America to Present Marks

PARIS, Oct. 30.—(by mail)—American automobile records doubtless will obtain European recognition by reason of the action taken by the International Association of Recognized Automobile Clubs at its annual meeting held in Paris yesterday. This gathering voted a change in the statutes by which a national club will have the right to delegate any part of its powers to another club or association.

The United States has always been represented in Europe by the Automobile Club of America, which having no control over racing avoids discussion on this subject, and neglects to submit American records for European and world recognition. The rules of the Internationl Association having been changed, it is understood that the A. C. A. will transfer its sporting representation to the American Automobile Association, the practical outcome of this being that American speed records which at present have no standing in Europe, will obtain international recognition.

Colonel Drake, one of the European representatives of the A. C. A. has just left for America and is understood to be in favor of requesting the A. A. A. to take a position on the international association. William S. Hogan, also an A. C. A. delegate, is favorable to this transfer of power.

Germany was admitted to the International Racing Board at the recent meeting, but Switzerland and the Scandinavian countries, having no automobile industry, were merely admitted in a consultive capacity, without the right to vote.

Detroit Registers 7,366 Automobiles in October

LANSING, Mich., Nov. 14.—Seven thousand three hundred and sixty-six passenger cars were titled in Wayne county during the past month, figures just released by Secretary of State Charles DeLand Show. This is one of the best fall months that Wayne county has ever experienced.

Of the total, 5,353 were closed models, the remainder, 2,013 being roadsters and touring cars.

Ford gaining momentum after a slack period led the field with 3,421. Of this number 1,812 were open jobs and 1,609 closed models. It was the only make of cars in which the open cars sales exceeded the closed models.

A total of 876 new trucks were titled with Ford again in the lead with 577 trucks. Twenty-one new tractors were titled, 19 being Fordsons and two Gotfredsons.

Along Automobile Row

MONTREAL.—Chevrolet Motor Sales Co. of Montreal, Ltd., has incorporated here.

SPRINGFIELD, Mass.—Observing the fourth anniversary of the opening of the new Buick salesroom, the Springfield Buick Company threw open its latest addition, a two-story structure that will house the Buick car maintenance department on the second floor and the G. M. C. Truck and Yellow Cab salesrooms on the ground floor.

WILMINGTON, N. C.—M. C. Borst & Co., local distributor for the Chrysler automobile, will erect a new home here. The building will not only provide a home for the Chrysler agency but will be sufficiently large to take care of 100 automobiles for storage.

CINCINNATI. — Robert Puthoff, 1816 Freeman Avenue, one of the largest used car dealers of Cincinnati district and a sub-dealer of the Oakland and Studebaker cars, has leased his business for five years to Walter Schott, proprietor of the Schott Auto Company, and largely interested in the Wood Motor Company, distributors for the Auburn.

LOS ANGELES.—Walter M. Murphy Co., Hudson and Essex distributor, Los Angeles, announces the appointment of the Al G. Faulkner, Inc., as a metropolitan dealer in Los Angeles.

HENDERSON, N. C.—The Vance Motor Co. is a new corporation in Henderson, which has just been chartered and organized to handle selling of the Chrysler automobile. R. S. McCoin is the president, C. E. Winston vice-president, and A. B. Webster, secretary and treasurer.

ROCHESTER, N. Y.—G. F. LaFountaine and Company has opened a new automobile finishing plant occupying the entire third floor of the Cayford Garage, one of the largest in the city. The new automobile shop specializes in painting, lacquering, upholstering and body and fender repairing.

SEATTLE.—W. E. Navin, veteran automobile representative, has been named sales manager of Central Chevrolet Company, Inc. This company now owns Jackson Chevrolet, Westlake Chevrolet and Varsity Chevrolet.

BUNCETON, Mo.—Tom Etter of this city has accepted a position with the Cline Motor Company of Booneville, agents for the Chevrolet automobiles in this territory.

McMINVILLE, Ore.—E. M. Briedwell will open a new garage in the Woodmen Building and will handle the Star. Briedwell formerly had the Ford agency which he sold out to Gilbert and Tilbury.

DALLAS, Tex. — The Auburn-Dallas Company, organized for the purpose of handling Auburn automobiles in the Dallas territory was formed this week.

SEATTLE.—Ralph E. King, salesman for the William O. McKay Company, authorized Ford dealer of Seattle, is the possessor of a Fordor sedan presented to him during the last week by Branch Manager R. W. Hines, because of his success in winning a two months' contest held by 29 dealers in this territory.

VANCOUVER, B. C.—The Locomobile Sales, Ltd., of this city has incorporated.

DAVENPORT, Ia.—William Lane, for 17 years in automotive sales business in this territory, has joined the Neuman Machine Co., which lately took over the Studebaker agency, and Walter Gibbs, with the Western Motors Co. former Studebaker agency, has joined the Neuman staff.

MONTGOMERY, Ala.—A. S. Heilborn announces the formation here of the Alabama Acceptance Corporation, the purpose of the company being to specialize in the handling of automobile paper. The capital stock is $1,000,000, and is backed by prominent Alabama business men.

FOND DU LAC, Wis.—The Voell Auto Sales Co., Hudson-Essex and Cadillac dealers of this city has purchased a site on South Main Street and will erect a new garage and salesroom at once. The new home will be ready for occupancy by March 1.

LOS ANGELES.—The Lukavisky Motor Company, Gardner dealer, Los Angeles, recently occupied its new sales and service building in the heart of the residential district of Los Angeles.

CLEVELAND, O.—One of this week's announcements of interest along automobile row is the appointment of C. G. Powers as sales manager of the Stearns Motor Sales Company. For the last six years Powers has been sales manager for the Towell Cadillac Company here.

MILWAUKEE.—Walter Denchel, who has been identified with the automobile business here for the last eight years, has joined the sales force of the Kraatz Motor Co., Hupmobile dealer on North Avenue.

COLUMBUS, O.—The Miller-Main Nash Co., is the name of a new concern, a partnership composed of Fred W. Heiser and J. W. Stallsmith, to handle the Nash and Ajax lines. A service station and general repair shop is also operated.

BOSTON.—P. A. Williams, Jr., celebrated the first anniversary of his entering his new sales and service building at Springfield, Mass., last week with a luncheon attended by men prominent in business activities of all kinds. It was held in the showroom where he displays his line of Dodge Brothers cars and Graham Brothers trucks.

ROCHESTER, N. Y.—Archer R. White has been appointed dealer in Davis cars in this territory and has opened a sales and service station at 523 Court Street.

COLUMBUS, O.—The Columbus Bumper Sales Co., has been chartered with an authorized capital of $10,000 to take over the bumper and automotive accessory business at 389 Chapel Street, Columbus, which has been operated by L. T. McCann for three years under his name.

COEUR D'ALENE, Ida.—P. J. Broderick, Chevrolet dealer, has recently completed a new garage in the Lake City.

CHICAGO. — The Kullberger Motor Sales, Inc., Reo dealer, opened its new sales and service station at 1441 East Seventy-first Street with the presentation of a Reo brougham to Alderman Meyering on behalf of the business men of the ward, by Mayor W. E. Dever.

NEW YORK.—O. H. Pease, New York Willys-Overland service manager, announces the addition of an upper floor of 37,500 square feet at the factory branch service building, 521 West Fifty-seventh Street, and the addition of 20 mechanics to the service force.

SAN JOSE, Cal.—Cameron & Macdonald, who for some time past have handled the Star in this territory, have given up the line and now have the Hudson-Essex franchise. This gives Hudson two dealers in San Jose, the other being Normandin-Campen Co.

LOS ANGELES.—The Troy Motor Sales Company, Nash and Ajax distributors, announces the appointment of the Allan L. Leonard Company, pioneer automobile dealers of the city, as a metropolitan dealer. Until recently Leonard had a Hudson and Essex agency.

TOLEDO.—The Toledo Paige-Jewett Co., is the name of a recent incorporation, chartered with a $20,000 capital to deal in automobile parts and accessories.

TRAER, Ia.—The C. & L. Motor Company has acquired a lot adjoining the Ford garage and will erect a new garage and accessory shop. The C. & L. company has also acquired the Chevrolet agency for this territory.

NEW ORLEANS.—The New Orleans Buick Co., which recently opened a branch at 635 N. Rampart St., has sold the branch to the recently organized firm of Orleans Auto Co., which is composed of K. W. Chancellor and Waring Hamilton, the former secretary-treasurer of the New Orleans Buick Co., and the latter sales manager of the same firm. The new firm will sell Buicks.

ASHEVILLE, N. C.—R. L. Boland, distributor, of Waynesville, has opened an Oldsmobile agency here.

ALEDO, Ill.—Howard Steven has established a Hudson and Essex agency and service garage here. His son, Joseph, of Bloomington, and Ralph Hudson, formerly in charge of the Hudson-Essex agency, will be associated with him.

MADISON, Wis.—Capital City Tire Co. of this city has moved from its location on South Pinckney Street to the quarters formerly occupied by the Fox Motor Sales Co. at 107-11 East Doty Street.

SACRAMENTO, Cal. — Hudson-Essex now have two dealers here. In addition to Arnold Bros., who have represented the line for many years, Bagwill & McShane recently acquired the franchise. "Barney" McShane of the new firm relinquished his position as Sacramento's chief of police to enter the automobile business.

NEW YORK.—Van Alstyne Motor Corp., Hupmobile distributor, has opened a branch in the Washington Heights section at 1231 St. Nicholas Avenue with F. A. Blank as manager.

CHICAGO.—Leokady Tafel, Philip A. Tafel and Frank Tafel, Jr., have organized the Tafel Auto Sales, Inc., and will buy and sell used motor vehicles at 907 Diversey Parkway.

CLEVELAND, O.—O. N. Bashaw, president of the Bashaw-Oakland Company has just announced the appointment of H. A. Ruskin to the sales department of the company.

ATLANTA.—The Bay Tire Co., Inc., is a new distributing firm at Mobile, Ala., organized recently for the handling of tires and automotive equipment.

KALISPEL, Mont.—The W. B. Lewis Auto Company has moved into a new location in the Armory Building, and in addition to carrying a complete line of auto equipment is also agent for Overland and Reo cars.

CLEVELAND, O.—The Indiana Cleveland Truck Corporation, has been chartered with an authorized capital of $10,000 to deal in trucks and tractors.

DES MOINES, Ia.—The Overland Huntzinger Company has leased half the Payne Motor Building at 1312 Locust Street for display purposes and is showing its new models at that location.

DETROIT.—A. W. Handy is the latest Ford dealer to open in Lansing. Ground for a modern sales and service building has been bought at 1140 S. Washington Street that city, and construction is scheduled to start immediately.

SIDNEY, O.—The Hudson-Essex Sales Co., has been chartered with an authorized capital of $10,000 to sell Hudson and Essex motor cars and accessories, and operate a general garage.

ATLANTA.—R. L. Boland, of Waynesville, N. C., is a new distributor for the Oldsmobile line who recently entered the filed at Asheville, N. C., handling the Oldsmobile in that section of the North Carolina territory.

POMEROY, O.—The Pomeroy Chevrolet Co., to be located in Main Street, has been chartered with an authorized capital of $10,000.

KIRKLAND, Wash.—Ed Blau has taken the Chevrolet agency here which will be known as the Blau Chevrolet Company.

With the Associations

Burt Heads Race Drivers

CHICAGO, Nov. 14.—At the annual meeting of the Central Race Drivers' Association here, the following officers were elected for 1926: Andy Burt, president, J. A. Turner, vice president, M. A. Markham, secretary, and George Ketcham, treasurer. The board of directors now includes Harry Hienly, William Claus, E. E. Burback, Walter Martin, Kent Ramsey, D. D. Morris and Sonny Talamont.

All the elected officers have been connected with the racing game for a number of years. Andy Burt, as far back as 1909, drove under the A. A. A. colors against Burman, Dewitt, Buck and others. Claus was an A. A. A. driver in the days of the Brighton Beach 24-hour races.

The Central association controls nearly every dirt track in the central United States and numbers some 200 drivers in its membership. Until this year the membership was open only to drivers and mechanics but now any one connected with the automobile business will be taken in as an associate member.

The association is chartered under the laws of Illinois and is not for profit. Its object is to foster, encourage and conduct automobile races, to provide for the admission of persons owning or driving automobiles in such races, to maintain a social club for the benefit of such persons, and otherwise to promote the interests and welfare of its members.

The association maintains a benefit fund for its members who may be killed or injured while driving.

It sanctions and supports tracks and promoters who run only competition races, who keep track and stands in good condition, and who charge fair admission prices.

Paris Club Formed

PARIS, Oct. 30.—(By Mail)—On the initiative of George F. Bauer, foreign trade secretary of the National Automobile Chamber of Commerce, the American Automotive Club of Paris was officially constituted a few days ago with H. H. Kelly, assistant commercial attache, as president, Christian Lie of the Buick company as vice-president, and Charles Jeroche of the Goodyear company, as second vice-president.

Informal in character and broad in its scope, the American Automotive Club of Paris will meet monthly at noon luncheon, when it will entertain leaders of the American automotive industry passing through the French capital. General matters affecting the American automotive industry in Europe will be discussed and joint action taken when desirable. The temporary mailing address of the club is Office of the Commercial Attache, 5 Rue de Chaillot, Paris.

Leaders of the industry and prominent Americans in France who are charter members of the club comprise S. D. Briggs (Chrysler), Alexander Lie (Ford), Christian Lie (Buick), Arthur Lumsden (Goodrich), Charles Jeroche (Goodyear), and Keith Goode (Harley Davidson).

Three Associations Merge

CHARLOTTE, N. C., Nov. 14.—The Automotive Merchants' Association, the Automotive Service Association, and the Car Dealers' Association, the three automotive organizations of this city, Monday consolidated into one big organization to be known as the Charlotte Automotive Merchants' Association.

Officers of all three organizations resigned and new officers were elected for the new organization and a new set of by-laws were adopted. The new association will hold two meetings a month.

The officers elected are: K. A. Grice, who was president of the service association, president; Fred Anderson, who was president of the car dealers' association, and Caldwell McDonald an officer of the service association as vice presidents. Miss Francis Hendren, who served as secretary-treasurer of all three organizations will continue in that capacity for the new organization.

Six directors were also elected: Lee A. Folger, J. P. Harriss, J. H. Huntley, H. D. Horton, Tom Glascow and W. C. Montgomery.

Denver Dealers Elect

DENVER, Nov. 14.—At the last meeting of the Denver Automobile Dealers' Association the following officers were elected for the ensuing year:

Myron L. Smith, president of the Sharman Automobile Company, president Ralph Fischel, vice-president Norton-Buick Automobile Company, vice-president. Thomas Braden, secretary-treasurer.

The following board of directors was chosen:

H. E. Parkinson, Denver-Franklin Automobile Co.; Ray Young, vice-president O'Merra-Young Automobile Co., Vernard Mahoney, Murphy-Mahoney Motor Co., Tom Savage, Savage Motors Co., and Ward Thompson of the Cullen-Thompson Motor Co.

Service Stations Join

SPOKANE, Wash., Nov. 14.—Independent service stations here have been organized into a branch of the Independent Service Station Owners, Inc., for the purpose of maintaining prices of gas and oil. About 50 stations are represented and it was decided that competition of the large oil companies can best be met by maintaining their prices. Officers are John Bech, president; D. L. Andrews, secretary and manager; Earl Gatewood, financial manager; H. Sorenson, membership manager.

New Bureau Planned

ST. LOUIS, Nov. 14.—Preliminary steps to organize a Sales Directors' Bureau of the St. Louis Automobile Dealers' Association were taken at a meeting of five prominent directors of sales for St. Louis Automobile Dealers at a meeting held in the office of Robert E. Lee, manager of the association.

The purposes of the organization will be full discussions of sales practices and elimination of unethical methods, such as misrepresentation of competitors' cars by salesmen.

It is planned to have monthly meetings at which some prominent figure of the automobile industry will speak. Edward S. Jordan, president of the Jordan Motor Car Co., will likely be the speaker at the first meeting. Harry G. Moock of the Hudson Motor Car Co., of Detroit, will probably speak at an early meeting.

There is also to be a set program of addresses on specific features of automobile selling, handling of salesmen, compensation for salesmen and other matters of interest by members of the bureau.

Joseph N. Kellerman of Hudson-Frampton Motor Car Co., George T. Willett of De Luxe Automobile Co., Harry C. Herring of Cleveland Motor Sales Co., L. M. Stewart of G. M. Berry, Inc., and J. W. Richardson of the Mississippi Valley Motor Co., attended the meeting at which the plans for the bureau were formulated.

Winter Care Emphazied

ST. LOUIS, Nov. 14.—A bulletin on the winter care of automobiles has been sent to all members of the St. Louis Automobile Dealers Association by Robert E. Lee, manager.

In this bulletin Lee calls attention to the necessity at this time of the year of carefully going over automobiles that are to be used during the winter, which include about 99 per cent of the cars in St. Louis. The old practice of putting the car away for the winter is obsolete, he said.

The bulletin calls attention to the need of winter oil for the crank case, summer oil not being suitable when the thermometer is below 25 degrees. The same warning applies to the lubrication of rear axles and differential gear boxes.

The right proportion of radiator solution must be used when the temperature drops below 30 degrees and these proper proportions are definitely stated in the bulletin and on a card enclosed with it to be posted in all service stations.

Generators and batteries must be checked up and prepared for winter weather.

Owners are warned to have their gas lines cleaned, vacuum tanks freed from sediment and floats examined for corrosion or holes.

Delage Refuses to Race in Next French Grand Prix

1925 Winner Says 91½ Inch Car Too Dangerous to Drive and Serves No Good Purpose

PARIS, Oct. 30.—(by mail)—As a protest against the 91½-inch racing rule, which he considers has developed a dangerous and unsatisfactory type of car, Louis Delage stated yesterday that he would not compete in next year's French Grand Prix. The announcement was made in an after-dinner speech at the Automobile Club of France when the Delage drivers were presented with the first and second prizes won by them in this year's French race.

Delage states that he has not taken this decision because one of his drivers was killed this year, but in order to draw attention to the fact that modern racing cars are too fast for safety and no longer have any direct influence on automobile construction.

"There are not more than six drivers in the whole of Europe capable of handling a modern 122-inch racing car on the road at its maximum speed. As a consequence victory merely goes to the best driver or the one willing to take the greatest chances. Because there is more power than the drivers dare use, the cars are no longer tested to the utmost," says Delage.

Another reason for declining to start in the leading French event is that in France competition is practically confined to two firms and even the international field does not comprize more than four firms.

Delage maintains that speed should be cut down to a reasonably safe limit, the best way to do this in his opinion being to limit the cost of running—cost of gasoline and oil. Cars of 1400 pounds weight running only 7 miles to the gallon are not practical propositions, he affirms.

While not starting in the French Grand Prix, Delage will keep his racing and experimental department together and will compete in events he considers of sufficient interest. As Delage is the most important firm in France maintaing an active racing program, this decision and the criticism of the French Club which it embodies has caused a sensation.

Delivery Problem Aids Sale of Used Cars in N. Carolina

CHARLOTTE, N. C., Nov. 14.—The inability of dealers in numerous lines of motor cars to obtain supplies of new cars adequate to fill orders is a doleful situation which is developing a bright side in the continuing good demand for used cars. While the larger dealers here appear to have an average of from eight to twelve used cars on hand, it was generally said that this number is only a "satisfactory" stock.

The situation with respect to new cars is not expected to show much improvement until after the holidays, for almost all dealers are forecasting a substantial increase in buying as the Christmas season approaches.

The idea of an automobile for a Christmas gift for the family seems to be gaining in favor in this territory. Conditions in South Carolina are mixed, and ranging from fair to poor, with a few localities reporting a satisfactory demand for new cars.

Coming Motor Events

Automobile Shows

New York.....Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.....Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Ex ibition Co., Chamber of Commerce Building.

Bpffalo, N. Y.....Jan. 16-23
Buffalo automobile show by Buffalo Automobile Dealers' Association in 174th Regimental Armory, Carlton C. Proctor ,manager, headquarters, Hotel Statler.

Cleveland, O.....Jan. 23-30
1926 Automobile Show under auspices of Cleveland Automobile Manufacturers' and Dealers' Association, Herbert Buckman manager, in Public Auditorium.

Lowell, Mass.....Jan. 25-Feb. 1
Twelfth autmoboile show in Memorial Auditorium by Automobile Merchants' Association of Lowell, Inc., George R. Garmon, manager, 119 E. Merrimack Street.

Chicago.....Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Washington.....Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

San Francisco.....Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bdg., manager.

Denver.....Feb. 2-6
Annual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Providence, R. I.....Feb. 6-13
Providence automobile show under auspices R. I. Automobile Dealers' Association, Chester I. Campbell, manager, 617 Industrial Trust Bldg.

Toledo, O.....Feb. 8-13
Annual show by Toledo Automotive Trades Association in Civic Center Garage, T. J. Cooper, manager, 925 Jefferson Avenue.

Louisville, Ky.....Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Hartford, Conn.....Feb. 20-27
Automobile show by Hartford Automobile Dealers' Association in State Armory, Arthur Fifoot, manager, Hotel Bond.

Boston.....Mar. 6-13
Boston Automobile Show under auspices of Boston Automobile Dealers' Association, Inc., and Boston Commercial Motor Vehicle Association, Inc., in Mechanics' Building, Chester I. Campbell, manager, 329 Park Square Bldg.

Races

Los Angeles, Cal.....Nov. 26

Conventions

New York.....Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago.....Feb. 9-10
American Drivurself Association Annual Convention.

Galveston, Tex.....May12-13
Tenth annual convention of Texas Antomotive Dealers' Association in Galvez Hotel.

Foreign Shows

Berlin, Germany.....Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.

COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

January 1—National Shows Number—Automobile Trade Journal.

January 7—Motor Age—National Shows Number.

January 14.—Motor World Wholesale—New York Show Report.

February 4—Motor Age—Chicago Show Number.

February 4—Motor World Wholesale—Chicago Show Report.

February 18—Automotive Industries—Statistical Issue.

LUCAS HEADS FLINT BRANCH

ATLANTA, Nov. 14.—Changes in the personnel of the retail department of the Atlanta branch of the Flint Motor Co., 236 Peachtree St., have been recently announced. W. L. Shackleford has been appointed retail sales manager; George Kigler has been named service manager and J. H. Lucas general manager of the branch.

ST. LOUIS PLANS CONGRESS

ST. LOUIS, Nov. 14.—A sales congress will be conducted here by the National Automobile Dealers' Association for dealers in the St. Louis trade territory, including eastern Missouri, southern Illinois, parts of Tennessee, Kentucky and Arkansas, on December 14.

NEW GARDNER DEALERS

ST. LOUIS, Nov. 14.—New dealers added to the organization of the Gardner Motor Co., Inc., include the following:

Silver Beach Motor Sales, Chicago, Ill., Fetterman Bros., Washington Pa., Central Garage, Kingston, N. Y., Crossman Motor Co., Joplin, Mo., Daylight Garage, Chicago, Ill., Gillespie Motor Co., Springfield, Mo., Southern Garage, Bakersfield, Cal., E. E. Cronenweth, Glendale, Cal., Stagle & Rice, Pomona, Cal., Hickman-Gardner Motor Co., Miami, Fla.

All October Business Marks Are Broken in Cleveland

Increase in Sales Is 82 Per Cent Over Same Month Last Year, Report Shows

CLEVELAND, O., Nov. 14.—All October records for the retail automobile business in Cleveland were shattered last month, according to announcement just made by the Cleveland Automobile Manufacturers' and Dealers' Association.

As an indication of the large volume of business done 3,218 bills of sale for new cars were filed with the clerk of court during the month. This is an increase of 82 per cent over the number of bills filed during October last year. The number then was 1,766.

Used cars also moved with rapidity, seasonal factors being taken into consideration. In spite of weather in advance of the season 7,245 bills of sale for used cars were filed. In October, 1924, only 6,051 such bills were filed, while in October, 1923, the number of such documents was 6,251.

The October volume of business done by parts and accessories retailers and wholesalers likewise was good, although records in this phase of the industry were not broken.

PACKARD STOCK INCREASED

DETROIT, Nov. 14.—Stockholders of the Packard Motor Car Company in their annual meeting voted to authorize the increase in common stock from $30,000,000 to $50,000,000. Of the $30,000,000 common stock now authorized, only $23,770,200 has been issued. All of the present members of the board of directors were reelected. The officers of the company remain the same.

Show Is Greatest Ever Held

(Continued from page 33)

entire period last year.

Manufacturers and jobbers alike declared that 1925 had been a record year—that the only excuse for not getting business this year was the lack of aggressive effort. Nearly every manufacturer reported that he had been kept at top output to keep up with demand, while jobbers cited the number of dealers added to retail their products as the best indicator of a prosperous business.

Every manufacturer and wholesale distributor present at the show was optimistic for 1926. They are of the opinion that the coming year will set an even higher mark than 1925. The continued high production of automobiles and the ambitious plans of the motor car manufacturers for 1926 have fixed firmly in the mind of the parts and equipment makers and distributors the belief that 1926 is certain to be the high year of history.

REO MODEL REDUCED

LANSING, Mich., Nov. 14.—The Reo Motor Car Company has announced a price cut of $200 on the Sport Touring model on its "T-6" chassis. This model which was formerly listed at $1595 now sells at $1395.

New Steam Power Plant Is Developed for Automobiles

CLEVELAND, Nov. 14.—First traffic tests were conducted here this week of a new form of automobile steam power plant, built by a manufacturer of long established reputation and backed by ample Eastern capital which has not yet been interested in the automotive field.

The power unit when tested was installed in the chassis of a very well known make of taxicab, the name of which the engine manufacturers do not wish revealed.

When tests are completed the engine is to be manufactured in quantity for taxicab and bus operation by the Steam Appliance Corporation of America, which has been incorporated in Ohio. The engine was developed by W. E. Baker, formerly of Erie, Pa., and Harper, Okla., in the laboratories of Baker Motors, Inc., here.

A. E. A. Votes to Expand

(Continued from page 34)

The remainder were publications and special departments of the A. E. A. headquarters.

Thirteen new members were admitted to the association at a meeting just preceding the annual convention here this week, and these together with 27 others that have been elected since the summer meeting of the association, were introduced at the opening session of the convention.

The new members elected at this convention are:

Jobbers

Automobile Necessities Co., New York City.

Barker, Rose & Clinton Co., Elmira, N. Y.

Benton-Bailey Co., Richmond, Va.

Berner-Pease Co., Miami, Fla.

Canadian General Electric Co., Toronto.

Herman-Brownlow Co., Springfield, Mo.

Keith-Simmons Co., Nashville, Tenn.

Myers Tri-State Supply Co., Joplin, Mo.

Richard & Conover Hardware Co., Kansas City, Mo.

Van Zandt Leftwich Auto Supply Co., Huntington, W. Va.

Manufacturers

American Auto Lamp Co., New York City.

Hall Mfg. Co., Toledo, O.

Thompson Specialty Mfg. Co., Springfield, Mass.

Tom Milton Wins Armistice Day Race at Charlotte, N. C.

Harry Hartz Is 32 Seconds Behind Winner While Wonderlich Lands Third

CHARLOTTE, N. C., Nov. 14.—Tommy Milton won the Armistice Day classic at the Charlotte speedway by a demonstration of spectacular driving after gaining the lead when Earl Cooper went into the pits on his 131st lap of the 200 lap race around the mile and a quarter bowl. Harry Hartz was second and Jerry Wonderlich was third, 32 and 43 seconds, respectively, behind the winner, whose time for the 250 miles was 2:00:41.67. The average speed of the winner was 124.3 miles per hour.

Fouled spark plugs forced Cooper into the pits and caused him to lose the lead, which he gained from Bennett Hill early in the race, witnessed by approximately 40,000 persons.

Only ten of the seventeen starters finished. Others than the three winners dividing the $25,000 purse were Batten, fourth; Comer, fifth; Elliott, sixth; Hepburn, seventh; Duray, eighth; Evans, ninth; Shattuc, tenth.

McDonogh crashed into the inside railing on his 65th lap, the driver escaping injury, though his car was wrecked. DePaolo went out on his 75th lap; Hill, 109th; Reg Johnson, 53rd; Devore, 111th; Cooper, 180th; Kries, 135th. Twenty-one tire changes were made, of which Johnson made five. Milton drove the entire distance without a stop.

Vice-President Howard of Cadillac Company, Is Dead

CLEVELAND, O., Nov. 14.—Earle Clark Howard, vice-president of the Cadillac Motor Car Company, died here today at noon in the Cleveland Clinic Hospital after an illness lasting several months. Mr. Howard came here from Detroit hoping to restore his health.

Mr. Howard first joined the Cadillac organization in 1906, going to that company from the National Cash Register Company. He entered the sales department under William E. Metzger, advancing rapidly until he succeeded Ernest R. Benson as sales manager. In 1919, Mr. Howard left Cadillac to form the Lafayette Motors Corporation of which he became vice-president and general manager. Five years later he joined the Fisher Body Corporation in an executive capacity until January of the present year when he again joined the Cadillac organization as assistant to the president. Shortly afterwards he was made vice-president.

FERRIS JOINS ROAMER

LOS ANGELES, Nov. 14.—W. E. Ferris, who has had a broad experience in the automotive industry, has been appointed manager of the wholesale department of Mutual Motors, Inc., Los Angeles, Southern California Roamer distributors.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
2850	4-p	Sport-Roadster	1,495
2860	6-p	Touring	1,395
3020	5-p	Brougham	1,595
3070	5-p	Sedan	1,795
3070	.....	Wanderer	1,845
		"8-88"	
3180	3-p	Sport Roadster	1,975
3200	6-p	Touring	1,995
3380	5-p	Brougham	2,250
3450	5-p	Sedan	2,350
3450	.....	Wanderer	2,400
3750	7-p	Sedan	2,550
BUICK		**"Standard"**	
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
3350	2-p	Roadster	1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Brougham Sedan	1,925
3940	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line	
		(132 in. W. B.)	
4075	2-p	Coupe	$3,045
.....	5-p	Sedan	3,195
4155	7-p	Sedan	3,295
4240	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
.....	4-p	Victoria	3,095
		Custom Built (132 in.)	
.....	.....	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	.....	Phaeton	3,250
.....	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		**J. I. C.**	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"Y"	
3950	7-p	Touring	2,225
4820	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2800	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2415	5-p	Touring	$895
2565	5-p	Touring DeLuxe	1,025
2520	3-p	Coupe	975
2695	5-p	Sedan	995
		"43"	
2775	5-p	Touring	1,095
2950	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2890	3-p	Coupe	1,175
3120	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
3100	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
.....	7-p	Sedan (135 in. W. B.)	.....
DODGE BROTHERS			
2473	2-p	Roadster	$855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		**A-22**	
.....	2-p	Sp. Roadster	$900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,895
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$765
2395	5-p	Coach	795
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
		With Starter and Dem. Rims	
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER		**6A**	
3290	5-p	Brougham	$1,595
3070	5-p	Touring	1,395
3030	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	.....	DeLuxe Sedan	1,895
		8A	
3620	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3350	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		**D-1**	
3360	5-p	Sedan	$1,695
HUDSON		**"Super Six"**	
3400	7-p	Phaeton	$1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4 d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE "A"			
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		**"23-25"**	
3060	4-p	DeLuxe Road.	$1,500
3000	5-p	DeLuxe Touring	1,320
2990	5-p	Coach 2d.	1,245
3160	5-p	DeL. Coach 2d.	1,400
3325	5-p	DeLuxe Sedan	1,680
JORDAN		**"J"**	
.....	4-p	Playboy Road.	$1,695
.....	5-p	Sedan	1,845
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		**"55"**	
3130	2-p	Speedster	$1,795
.....	2-p	Sp'dster DeLuxe	2,085
.....	4-p	Speedster	1,895
.....	4-p	Sp'dster DeLuxe	2,185
3530	2-p	Enc. Speedster	2,085
.....	4-p	Enc. Speedster	2,185
.....	4-p	Enc. Spdstr. DeL.	2,685
.....	2-p	Enc. Spdstr. DeL.	2,585
3190	4-p	Tourster	1,795
.....	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
.....	7-p	Touring	1,685
.....	7-p	Touring De L.	1,885
3430	4-p	Coupe	2,085
.....	4-p	Coupe De Luxe	2,485
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,485
.....	5-p	Brougham 2 d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Berline Sed. DeL.	3,185
3530	5-p	Victoria	2,185
.....	5-p	Victoria DeLuxe	2,485
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster DeL.	2,585
.....	2-p	Enc. Speedster	2,485
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Enc. Speedster	2,585
.....	4-p	Enc. Sp'd'r DeL.	3,085
.....	4-p	Tourster DeL.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Duxe	2,885
.....	5-p	Brougham Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,095
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,885
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4460	2-p	Roadster	$4,000
4580	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	.....	Sport Touring	4,500
4750	4-p	Coupe	4,600
4885	4-p	Sedan	4,800
4960	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,300
LOCOMOBILE "48"			
5280	4-p	Sportif Tour	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Drive Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,785
3400	5-p	Sedan	2,285
3350	5-p	Brougham	2,285

MOTOR AGE

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LAMINUM

MOTOR AGE

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Summary and Index of Important Events in

This Week's Automotive News

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Automobile finance conference reaffirms stand on ideal installment terms. Page 33.

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N. A. D. A. arranges details for Chicago convention during National Automobile Show. Program for New York meeting announced. Page 38.

Cliff Durant is building a new car to enter in Memorial Day race at Indianapolis. Page 42.

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Used car market in Charlotte, N. C., is disturbed somewhat by low prices offered by finance companies on repossessed cars. Page 39.

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Fisher Body is expending more than $500,000 for additions to factory. Page 38.

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Prices of tires as original equipment are raised again, this time from $10 to $125 on cars and trucks. Page 38.

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Brilliant colors are principal features in New York Automobile Salon. Pages 34 and 35.

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Florida automobile dealers report phenomenal fall business. Page 43.

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General Motors sales in October gain over same month last year by 40,336 cars and trucks. Page 37.

Paris decides to hold 1926 automobile show. Page 37.

Cadillac is spending $3,000,000 in expansion of Detroit plants. Page 36.

Several personnel changes are announced in U. S. Automotive Division of the Department of Commerce. Page 36.

Registrations show trend of buying public toward established leaders in their classes. Page 36.

In Next Week's Issue—Two Pages of Christmas Window Photographs.



This nice line-up of new Oaklands was sold to individual buyers in one building by the Wolfley Automobile Co., St. Joseph, Mo.

Capitalize Your Plus Sales

Satisfied Buyer Is Big Help to Salesman In Getting New Leads —AND—a Big Help to Salesman's Competitors if Opportunity Is Neglected

BY CLARENCE PHILLIPS

IF the average automobile salesman could cash in on all sales of cars that really develop through the enthusiasm, favorable comment and influence otherwise of his satisfied owners there is one thing certain—

He would materially increase his commissions and have a much larger bank balance at the end of the year than he usually does.

Where he misses it is in the fact that most of the cars sold through the influence of his satisfied and enthusiastic owners—are sold by competing salesmen.

He hasn't been 100 per cent on the job.

The car he represents arouses initial buying interest which he fails in greater or lesser degree to capitalize, and into the arena romp competitors to take advantage of an opportunity which he has largely slighted or totally neglected.

Buying interest, to begin with, is a very fickle sort of thing. The fact that the buying interest in this instance originally centered about the make of car that our average salesman represented does not mean it was destined to stay put.

On the contrary buying interest often will shift with the frequency of the winds. What strikes the buyer as just what he wants right now may not make such a big hit with him a week or a month hence.

Leaving the Harvest for Others

There are many good automobiles on the market today and it is easy for the prospect to work up enthusiasm over a particular make—especially with the assistance of a clever salesman—and it often develops, as every salesman and dealer knows, that the car which the prospect first thought of buying is not the car at all he eventually purchases.

It is apparent, therefore, that a favorable selling atmosphere created by the boosting of an enthusiastic owner is something which only exists temporarily and that the salesman who would look here for additional commissions will have to work thoroughly and fast.

On the part of the man who makes his living by selling it is not good business to plant the seed and leave most of the field's cultivation to the other fellow—along with the big part of the harvest. Yet that is exactly what the automobile salesman does when he fails aggressively to follow the trail of the enthusiastic owner's selling influence.

That is assuredly what he does when he sells a car to a pleased buyer and then forgets all about him, as frequently is the case. When the salesman has a tough time delivering a car, due to the fussiness or argumentative nature of the buyer, his usual weakness is to avoid the buyer as much as possible on future occasions—which is a grave mistake.

In the first place if the buyer develops into a satisfied owner the salesman certainly wants to keep him in line for future business.

And again—it is a fairly safe bet that a buyer of that character will talk in a loud voice about the virtues of his automobile. He is the kind that speaks out in meeting and the kind it pays to follow up.

Underestimating the Opportunity

The complaint against the average salesman in this connection is not that he does not KNOW he should follow up one sale for further leads which the first sale might possibly develop, but rather, that ordinarily he does not follow up with sufficient system anl intensity.

While he realizes very well that there is a certain future-business possibility in the enthusiastic owner's influence he under-estimates the opportunity that the situation is capable of acually producing.

Were that not a fact he would spend more time and effort cultivating the ground about the initial sale—which was "plus."

A "plus" sale is one which opens possible avenues for further profits and commissions.

When the buyer of your automobile likes it well enough to talk about it favorably to others he has been sold

Sold 68 Cars in Same Neighborhood

It was super-service and intense cultivation of the field that enabled the Holzmark Motor Company, 826-28 Minnesota Avenue, Kansas City, Kans., to place 68 Overlands within three city blocks of their town. Their service was not only the talk of their customers but they made it the talk of the town by advertising it in the newspapers and by direct mail. The good will which was won among their owners was utilized by securing lists of prospects from them and vigorous campaigning among these prospects secured the sales. Their super-service was rendered possibe by the use of a card index system which with its "flags" told the managers just when to get in touch with the customers again, and this was done by 'phone, postcard, letter or personal visit, as the case seemed to demand



The satisfaction and enthusiasm of each new purchaser helped sell others until a score of cars was delivered. Left: Joseph E. Holzmark of Holzmark Motor Co., Kansas City, Kans., who kept service at such a high point that car owners helped him sell cars to their friends. Right: Irwin Holzmark, of the same organization, who hustled after prospects in work which sold 68 Overlands in three city blocks.

"plus," without a doubt. Factories and large dealers today are thinking more of the value of "owner satisfaction" than ever before. They are going to greater lengths than ever before to capitalize it wherever possible.

The manufacturer of any article wants nothing better than buyer satisfaction, for when the buyers are satisfied they compose the most powerful selling agency it is possible to place behind a company's merchandising efforts. Once winning this the manufacturer knows he is delivering goods which the public really appreciates and wants and he knows that the future prosperity of his company is fully assured.

It is the business of the salesman to seek out the indivdual case of owner satisfaction and follow its lines of influence for leads to further sales.

The value of capitalizing the favorable impression of one sale in the development of others was emphasized recently in a merchandising effort by the Wolfley Automobile Company, Oakland dealers, in St. Joseph, Mo. The experience of this company will serve to illustrate the point.

Within a period of ninety days this company sold 20 Oakland closed cars in one of St. Joseph's office buildings.

And each sale was made to an individual buyer. It was not a fleet deal.

As the story has been told, the first single sale was made to W. C. Fuller, of Swift & Company, which has quarters in the St. Joseph Stock Exchange Building. Mr. Fuller liked his buy and others in the building with whom he came in contact naturally were attracted by his new Oakland as well as by his enthusiastic comment.

Beginning with the capitalization of interest created by the sale of this one car Wolfley salesmen perserveringly "followed up," selling one car after another and taking advantage of the new boosting from each added buyer until a full score of Oaklands had been delivered to persons having business quarters in that one building.

It is easy to imagine the buying pyschology that operated in the Live Stock Building during the period of this interesting merchandising effort. To obtain new leads the salesman only had to camp in the building from time to time, ask questions and take notes. The new Oakland buyer, proud of his car and not hesitating to tell others about it, in addition to the appearance of his car parked near the building where acquaintances could see it—created an atmosphere highly favorable to further business for the salesman.

Providing—he watched his business and cultivated the soil.

It so happened in this instance that the salesmen did not neglect the opportunity and they cashed in handsomely for their efforts.

But on the other hand, just as a speculation, let us suppose these salesmen went after the situation in another manner. Suppose that after selling the Oakland car to Mr. Fuller they thanked him kindly for his patronage

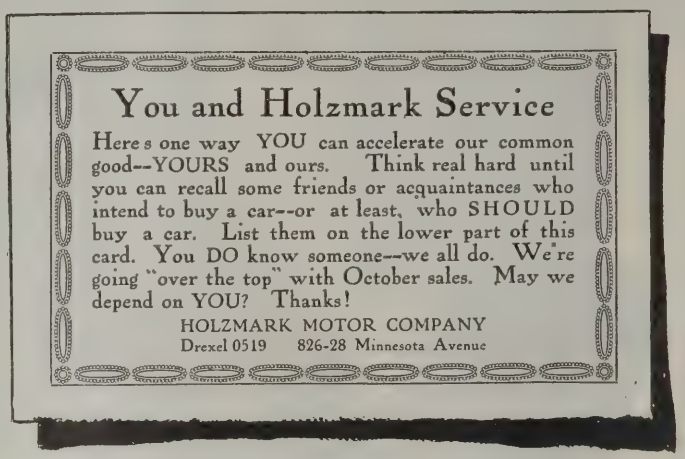
and, as salesmen sometimes do, made no special effort to hunt him up again soon thereafter and comb over his realm of influence for new leads.

The result would have been—ONE sale—and our story about the Wolfley feat would not have been told.

Bets of this sort are missed every day by automobile salesmen, not necessarily in office buildings but wherever they have delivered cars to satisfied or enthusiastic buyers. It is really not entirely necessary to the salesman's interest for the owner to *talk* much about his car. Its exhibition in the presence of friends and neighbors helps develop a favorable atmosphere for follow-up selling.

Others see the car and admire it, the salesman pays them a timely visit, they talked to the initial buyer and find he is highly pleased—and they are ripe for a direct purchase.

It is a pecularity of the human being anyhow to want the thing another has—or something like it. And it is a human trait when one has made a purchase, regardless of how much the salesman was fought and resisted, to want others to know the buy was a good one. Two forces, therefore, are at work in the interest of the salesman. That is, they are at work for him if he will stay on the job and not leave the opportunity for competitors to seize upon.



Satisfied customers furnished leads which resulted in sales for the Holzmark Motor Co., of Kansas City, Kans. This card helped provide many names for the prospect list

Our discussion touches on a phase of psychology that a subdivision salesman who has been highly successful in his line accepts as one of the first fundamentals of success in his activities. With him one sale of a lot is more than one sale—it is the open door to other possible selling opportunities. And as such he always deals with it.

In one week recently he sold subdivision lots to 18 individual buyers in a large business house whose outer guard he was fortunate through some hook or crook in passing.

Following his customary formula he capitalized the influence of each buyer to obtain additional leads.

He knew his buyers would be pretty apt to tell their friends of their investments and that some of these friends possibly would be interested in the lots, themselves. While all buyers did not always develop new leads the salesman found that persistently following up sales for new leads made lead-getting much more easier than had he left that area of effort for new fields.

This man's company furnishes its salesmen with leads obtained through advertising and otherwise but he uses fewer of the company's leads than any other member of its large selling organization.

He thinks much more of the leads developed through the influence and assistance of persons to whom he has already sold lots.

That the salesman's idea is sound cannot be denied. Prospects unearthed by his plan not only have been giving thought to his proposition already but there's a chance in each case that they already have been partially sold on the proposition by one of the earlier buyers. The scheme permits him to work under conditions where sales resistance is relatively low.

This is a plan which the automobile salesman can put to profitable use in his own operations. It is much the plan followed by Holzmark Brothers, Overland dealers in Kansas City, Kans., when they placed a total of 68 Overland cars within an area of three blocks. This result speaks sufficiently for its merit.

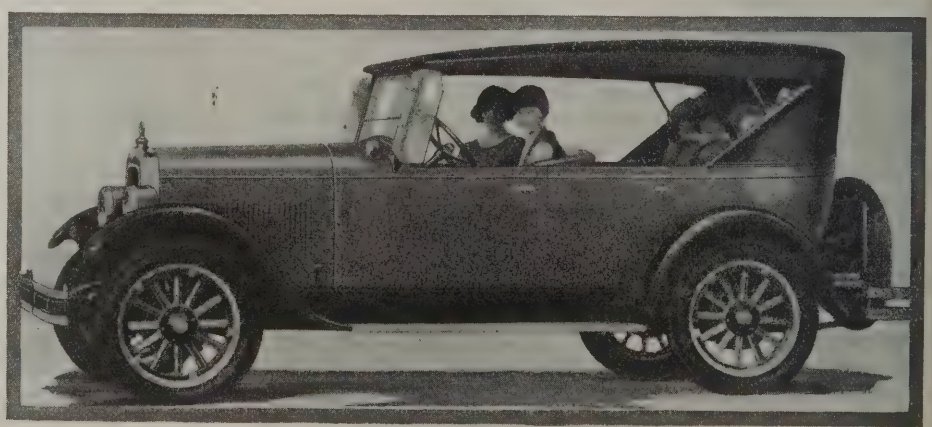
Many automobile salesmen are constantly permitting commissions to slip through their fingers and go into the pockets of competitors simply because they do not give enough attention to cultivation of opportunities growing out of the satisfied owners' favorable comment and influence in other respects.

It is not necessary to operate exclusively in office buildings or large business institutions in order to profit by this method of follow-up.

Every car sold to a satisfied customer opens the door of opportunity, for every buyer has friends, relatives and neighbors who might be favorably influenced by his boosting.

In fact, there is such a follow-up opportunity for the salesman when an individual buys an automobile of any make in the salesman's competitive class.

Even though a competitor did make the sale it is not impossible that the salesman who delivered that car will sleep at the switch and leave cultivation of the field for further business—to the other fellows.



The Cleveland Automobile Company has recently added a touring DeLuxe model listing at $1025. Finish is in two-tone sagebrush green Duco and upholstery is Spanish leather. The model comes complete with windshield wings, rear view mirror, windshield cleaner, nickel radiator shell, bar cap and motometer, front doube bar bumper, rear bumperettes, trunck rack, body bars and trunk guarded by a loek.



Play important roles in N. S. P. A. exhibit and convention (1) J. G. Winterfeldt, show manager and a new director. He is president of the Wel-Ever Chicago Sales Co. (2) A. T. Haugh, retiring president, who presided over general convention sessions. He is vice president of the King Mfg. Corp., Buffalo, N. Y. (3) W. D. Patterson, retiring vice president, who has been to the fore in all activities since the association was first launched. He is head of Patterson Parts, Inc., San Francisco. (4) C. B. Fraser, association secretary, and one to whom a large part of the credit for the success of the show and convention is due

Maintenance Is Great Theme of N. S. P. A.'s First Annual Show

Replacement Parts Have Big Inning When Chicago Attraction Brings Manufacturers And Many Jobbers Together

THE first annual exhibit of the National Standard Parts Association, held in connection with this organizations' convention at Hotel Sherman, Chicago, November 16, 17 and 18, presented a comprehensive and colorful display of units familiar to the replacement parts division of the industry. It was strictly a parts show to the extent of about 90 per cent of the display, an interesting and impressive collection of those items that must be supplied to the motoring public if the cars sold by dealers are to be kept on the road and in good running condition. Maintenance tools, which the association holds are essentially in the parts field, were also displayed.

Consequently this show was one related directly to the maintenance end of the trade's business and it was such an exhibit that the especially privileged shop man would have enjoyed inspecting. What there was "new" in the exhibition booths represented largely recent specification changes of the car munfacturers.

Keep Step with Car Makers

Study of these different replacement units offered the suggestion that the replacement parts manufacturer has not been slow to keep step with the changes in car design. Keeping up with the procession is vital to the replacement parts industry and consequently the change in specifications of the part coming originally with the 1926 car was swiftly followed by corresponding changes in the product of the replacement part manufacturer.

Although it required close inspection to find the "new" in many of these products on display, the "new" was there in samples of units that are ready for service in 1926 car models as replacements are needed by owners, in addition to some products that are "new" on the list of the exhibitors.

There were 94 exhibitors in the show and it was staged in the commodious Exhibition Hall of Hotel Sherman, the two divisions of this part of the hotel being necessary to house all the attractions. The space available was filled but not uncomfortably, and a large number of eleventh-hour applications were turned down. With the very favorable start of the show as an annual feature members of the association were in a highly optimistic mood and it was freely predicted that the exhibit to be held one year hence will take in a considerably larger list of companies.

Good Business Show

From a "business" standpoint the show seemed to be very gratifying to those who participated. This does not mean there was a deluge of orders, for relatively little actually spot business is written at any such exhibition. But factory representatives have learned how to recognize and appraise contacts and the opportunity in this connection was wide while a number of exhibitors interviewed said the amount of actual business done on the floor far exceeded expectations. All in all the National Standard Parts Association's first annual show passed into history as an entirely satisfactory and successful event.

On the following pages MOTOR AGE presents the impression of an observer who made the round of the exhibits analytically. What he found and what he has written will give a more detailed picture of what the buyer, who in this instance was the jobber, found there.

Maintenance Is Great Theme of

THE transmission of power without slippage is one of the achievements of this age that is accepted as a matter of course, but behind the spur or bevel gear is much engineering that makes it possible for our cars to be driven silently and powerfully. Not only in design where the spiral bevel leads the gear family but also in the field of materials we find new substances developed to co-ordinate with the gears of steel, while in various applications, notably in timing valves and ignition we find the drive accomplished by means of chains of various design.

Among the exhibitors of gears, were the Warner Gear Co. of Muncie, Ind., the Indianapolis Tool and Mfg. Co. of Indianapolis, Ind., the Automotive Gear Works of Richmond, Ind., the Republic Gear Co. of Detroit, Mich., and the Western Gear Co. of Detroit, Mich. In the field of composition gears of materials other than steel we find exhibited the products of Dalton and Balch, Inc., Chicago, Ill., the Timing Gears Corporation, Chicago, and Ralph N. Brodie Co. also of Chicago. These last named concerns also make silent timing chains, another well known concern in this field being The Whitney Mfg. Co. of Hartford, Conn. The flywheel starter gear branch of the gear family was represented by the Accurate Gear Co. of Springfield, Ohio, specialists in the making of this type, while the Ralph N. Brodie Co., previously mentioned also make flywheel starter gears.

In unexpected places we find the tendency of radio to invade the automotive field, the products of the Timing Gears Corp. including a ball and socket mounting for aerial masts as well as the more conventional line of gears and chains.

PISTON RINGS, PINS, INNER RINGS

Some idea of the volume of engine maintenance work needed by the eighteen million cars in operation is obtained by a survey of the exhibits which display pistons, rings and pins, and as stocks of standard and oversize parts become more and more available to the small town garage and country shop, the lot of the wayside repairman will be made lighter.

Pistons were displayed by the Cleveland Piston and Mfg. Co. of Cleveland, Ohio, with their line of Lynite pistons, a cast iron piston also being made by this concern. Houpert Machine Co. of Long Island City, N. Y., exhibited cast iron pistons, as did W. H. Jahns, Inc. of Los Angeles, Cal., the Accuralite Co. of Muskegon, Mich., the Gill Mfg. Co. of Chicago, Dall Motor Parts Co. of Cleveland, Ohio, Swartz Mfg. Co. of Freeport, Ill., and Spencer Smith Machine Co. of Howell, Mich. Lynite Ohio pistons were exhibited by the Ohio Piston Co. of Cleveland while the Kant Skore Piston Co. of Cincinnati, Ohio, showed its line of pistons as well as those of the Permite Piston Co., the latter also being an alloy type of pistons, but of different design.

J. G. Winterfeldt, president of the Wel-Ever Chicago Sales Company, is the man who managed details of the big job of staging the National Standard Parts Association's first annual exhibit.

What the membership thought of his success in the capacity of show manager was reflected in two tributes to Mr. Winterfeldt during the convention. For one thing he was elected to a position on the board of directors, while, again, at the banquet he was presented with a bale of $1 bills which someone had quietly gathered from the delegates. It was whispered that there were between 250 and 300 such items of currency in the roll.

Pistons rings and pins are also included in the line of the Gill Mfg. Co., while the Swartz Mfg. Co showed piston pins, in addition to its piston display.

Piston rings were presented to the trade by the Burd High Compression Ring Co. of Rockford, Ill., this concern also handling the Burd Gilman shock absorber, a steel cable rebound checking device especially recommended for use with balloon tires. Other piston ring displays were those of the Wel-Ever Piston Ring Co. of Toledo, Ohio, the Pennsylvania Piston Ring Co. of Cleveland and the American Hammered Piston Ring Co. of Baltimore, Md.

Piston Pins were shown by the Elgin Machine Works of Elgin, Illinois, and the Burgess Norton Mfg. Co of Geneva, Ill., while inner rings were exhibited by the G-H Tension Ring Co, Inc., of Baltimore, Md., the Parts Mfg. Co. of Cleveland, the Smalley Accessories Corp. of Chicago and the Cleveland Inner Ring Co. of Cleveland, the latter concern and the G-H Tension Ring Co. also having a line of piston pin retaining springs.

King Quality Products, Inc had a novel display which included not only their own line of piston pins, piston pin set screws, shackle bolts and bushings, but also displayed many other items, the whole layout representing a model parts store, with various types of parts systematically arranged in their proper classification and for ease in handling. On the counter were various small items such as shims, as well as cash register and sales slip machine, while at one side was represented office space and desk facilities for the manager.

BEARINGS AND BUSHINGS

"What's the cause of a knock after thoroughly overhauling an engine?", mechanics sometimes want to know, and the answer is that the job was not thoroughly done. Something was passed up as being O.K., a worn bearing that does not fit was roughly tightened instead of being replaced or bushings which looked good were taken at their face value. Bushings and bearings for the wide variety of cars which come into the service station are made by a number of concerns, the exhibits which showed bronze bushings and other parts of brass and bronze being those of the Johnson Bronze Co. of New Castle, Pa., the Twentieth Century Brass Works of Minneapolis, Minn., and the National Bushing and Parts Co., also of Minneapolis. Bearings were shown by the Milwaukee Die Casting Co. of Milwaukee, Wis., and the U. S. Bearing Co., Inc., of Indianapolis, Ind. Both bushings and bearings were included in the exhibits of the Federal Mogul Corp. of Detroit and the Buckeye Brass and Mfg. Co. of Cleveland.

Ball and Roller Bearings

In maintenance work attention is not always paid to the condition of bearings and poor operation after the job is finished is often the result. In overhauling a transmission or axle for example, the gears may be replaced if the teeth show signs of wear and yet this may not insure perfect operation if the balls or rollers of the bearings are pitted and the races worn. Excessive clearance in the bearings means that the gears can not be kept in line. Under certain conditions of load they may be satisfactory and howl under other conditions.

An appreciation of these facts as well as adequate service stocks should assist the shop to render the best possible service. Ball bearings were shown at the booths of The Fafnir Ball Bearing Co. of New Britian, Conn., and Standard Steel and Bearings, Inc., of Plainville, Conn., while roller bearings were displayed by The Bock Bearing Co. of Toledo and the Orange Bearing Co. of Orange, N. J.

STEEL MACHINE PARTS

Valves, tappets, bolts, nuts, shafts and universal parts

Pistons, bearings and gears are essential items in the overhaul of the car, but there are miscellaneous other items that are also important, the lack of which will make it impossible to do a complete job. Valves for example need replacement from time to time, these being exhibited by Thompson Products, Inc., of Cleveland and Mackay and Austin Inc. of Oakland Cal. Valve cages, guides and similar machined parts were included in the line presented by the G-H Manufacturing Co. of Baltimore, Md., the Fostoria Screw Co. of Fostoria, Ohio, the James Motor Valve Co. of Detroit and the Star Products and Machine Co. of Cleveland.

N. S. P. A.'s First Annual Show



Pioneer directors of N. S. P. A. who took important parts in first year's activities (1) Walter T. Mills, president Auto Parts Co., St. Louis, Mo., (2) E. E. Main, president U. S. Bearings Co., Inc., Indianapolis, Ind., (3) Robert M. Schnore, president Southern Bearings & Parts Co., Atlanta, Ga., (4) V. W. Olson, secretary Automotive Service Co., St. Paul, Minn., (5) T. R. Walton, sales manager James Motor Valve Co., Detroit, Mich., (7) W. C. Stettinius, president American Hammered Piston Ring Co., Baltimore, Md., (8) C. J. Peterson, president P-D Auto Parts, Inc., Meriden, Conn., (9) Sim T. Mee, president Mee-Oaks Co., Oklahoma City, Okla., (10) W. M. Albaugh, president Thompson products, Inc., Cleveland, O.

In the booth of the Parts Manufacturing Co., were connecting rod bolts and nuts, these being packed in individual cartons for ease of handling.

A complete line of axle shafts is offered to the trade by the Lake Erie Metal Products Co., these being made of heat treated manganese alloy or chrome nickel alloy steel while a line of smaller parts for servicing Hartford and Spicer Universals is offered by the New England Auto Products Corp. of New Haven Conn.

The Almetal Universal Joint Co. of Cleveland displayed drive shafts and universal joints, their products also including a complete line of flanges and bearing hangers.

Brake lining, clutch facing, rivets etc.

Friction materials are as much needed in their right place as are the anti-friction bearings, where freedom or motion is desired. Brake lining and clutch facing are used in considerable quantities wherever a shop specializes on thorough overhauling. The exhibit of the United States Asbestos Co. of New York City included clutch facings and brake lining, also water pump rings for making the water pump leak proof, other items being asbestos wicking and sheet packing. The products of the Keasbey and Mattison Co. of Amber, Pa., are also chiefly brake lining and clutch facings.

The G-H Mfg. Co., previously mentioned has a product in the above classification, a line of clutch plates, lined and ready to use, new items in this line including plates for Buick, Cadillac, Fuller, Overland and Willys-Knight clutches.

Rivets and brake band tools were shown by the Penn Rivet Corp. of Philadelphia, a demonstration machine being in operation, showing the time saving and hence the profit making possibilities of the right sort of equipment.

TOOLS

One of the displays where machinery was running, was that of the Van Norman Machine Tool Co. of Springfield, Mass., where a piston was being brought down to finish size as would be done in the automotive shop, the Van Norman display including a large piston grinder, a small piston grinder, a valve grinder and a number of smaller items.

The Scully Steel and Iron Co. of Chicago had a display of reamers of the expansion type, one adjustment advancing blades up a ground runway, the return being effected by a stiff spring. A tapered bushing for aligning the reamer when reaming piston bushings insures accurate work. A line of socket wrenches including a variety of assortments was shown by the Packer Auto Specialty Co. of Chicago.

ELECTRICAL

An interesting coil, the product of The Mallory Electric Corporation of Toledo, Ohio, was displayed in connection with a device for measuring the current in the spark. The coil in question uses an iron circuit which is nearly closed and makes for great efficiency. The testing device is a milliammeter which is connected in series with the wire leading from the coil to the center of the distributer. In this way the repairman can make a comparative check on various coils to determine which one gives the hottest spark.

MISCELLANEOUS ITEMS

A counter balanced crankshaft for Fords was shown by J. Wadsworth Staff of Chicago, this shaft weighing 8½ pounds and selling for $19, the model,

drilled for force feed oiling selling for $25.

Another item for Fords is the Gould double reduction axle made by the Gould Detroit Axle Co. of Detroit, Mich. This replaces the left half of the regular Ford axle and gives four speeds forward and two in reverse.

Products of the Holfast Rubber Co. of Atlanta, Ga., include endless fan belts, for all cars, tube patching kits, top patching kits and an endless flap for clincher rims, the latter being a new item, intended for use on rims such as Fords where the formation of rust on the rim eventually produces punctures where the tube chafes through on the sharp particles of rust.

Another concern making a complete line of fan belts is the Hide Leather and Belting Co., of Indianapolis, Ind.

Gaskets, a complete line of 'em, was shown by National Cork Products, Inc., of Newark, N. J., and the Felt Products Mfg. Co. of Chicago, these being available in various assortments to suit the needs of various localities and service stations.

The Cleveland Piston and Mfg. Co., previously mentioned, also have an aluminum welding rod which is said to make it possible to weld aluminum parts without preheating or danger of warping. The sample kit sells for $5.00.

Another product of the G-H Mfg. Co. is an assortment of brake springs for use in overhauling the brakes on the most popular cars.

In presenting the various products handled to automotive dealers, the jobber's salesman finds it necessary to carry quite an array of circulars, catalogues and descriptions of the items he sells and this necessitates some sort of carrying case. The Kalamazoo Loose Leaf Binder Co. specialize in leather goods for this purpose, their assortment meeting practically any requirement.

A ten leaf front spring for Ford cars is made by the Detroit Steel Products Co. of Detroit, a product recommended for use with the spring being a clamp plate design to be used with the regular Ford clip and capable of taking either nine or ten leaf springs.

The United States Chain and Forging Co. of Pittsburgh, makers of bumpers and tire chains exhibited a number of wheels with tires in which its various chains were shown.

N. S. P. A. to Restrict Show Attendance

Rules relating to exhibition by non-member manufacturers and attendance at the show of non-member manufacturers will be much more severe next year than at the show just held. Rules this year while restrictive were not carried to the point of exclusiveness.

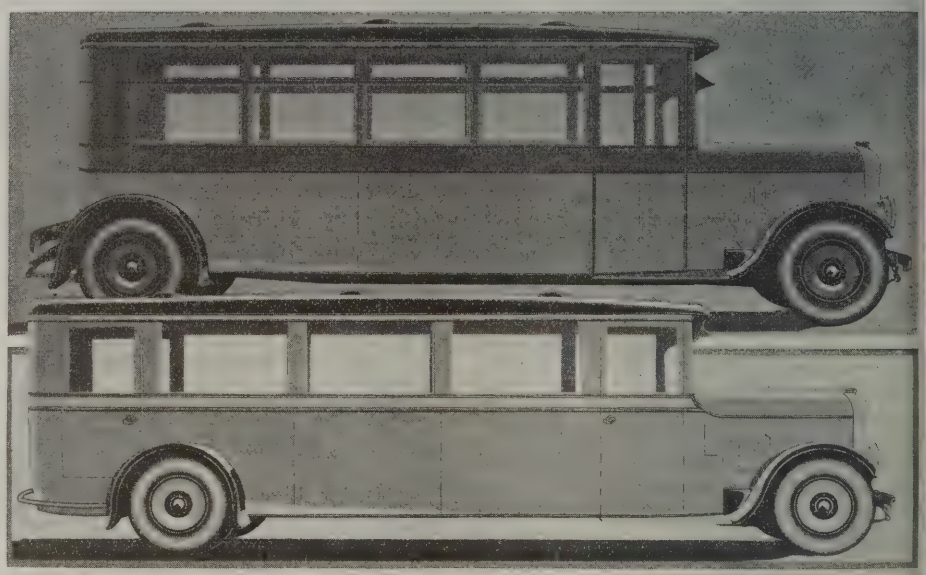
Next year, according to a decision reached in convention, no non-member manufacturer will be permitted to exhibit and no non-member manufacturer will be permitted to attend the show unless his application, unacted upon, is on file at the time of the show.

In 1926, therefore, the N. S. P. A. will stage what is popularly spoken of as a "closed" show.

Two Additions Made to Yellow Coach Line

TWO additions have recently been made to the line manufactured by the Yellow Coach Manufacturing Co., Chicago, Ill. These are designated as the "X" 21-Passenger Pay-Enter Coach, and the "X" 17-21-Passenger Parlor Coach. The Type "X" Pay-Enter Coach is designed for city service and short interurban runs. The Type "X" Parlor Coach is built specially for intercity transportation. The same chassis is used for both coaches, with suitable rear axle ratio to meet operating conditions.

The Type X-21 Pay-Enter Coach has eight double seats, four on each side and a cross-seat at the rear seating five. All seats are upholstered in genuine brown leather. Their arrangement permits all passengers to face forward. As there is no overhang to the body, the wheel housings come under the last cross-seat and do not interfere with the regular seating layout. The Type X-17-21 Parlor Coach has four rows of de luxe type double wicker chairs on the left side and four rows of single chairs on the right, all facing forward. Seat-back cushions and arm-rests are all upholstered in genuine brown leather. A cross-seat in rear accommodates four passengers and there is a hinged observation seat alongside the driver. Emergency seats in the baggage compartment accommodate four additional passengers. In both the pay-enter and the parlor coach, a buzzer-cord for signalling operator is located on each side of coach above windows.



New 17-21 passenger Yellow coaches recently added. At the top is the 21 passenger Pay-Enter coach and below the 17-21 passenger Parlor Coach

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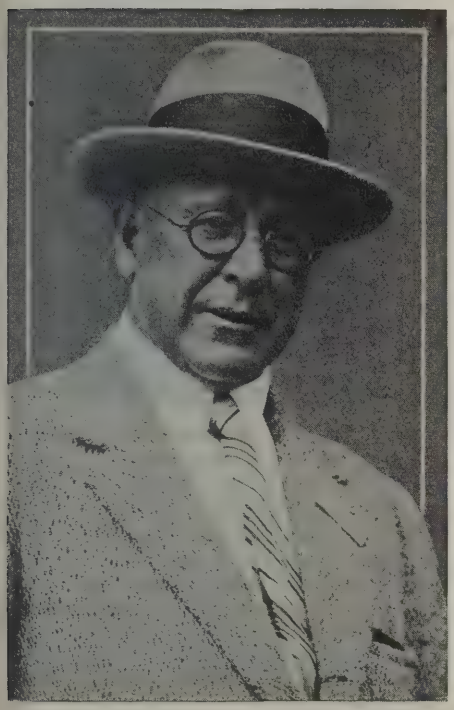
BUILDING STORAGE GARAGES

A 16 page booklet entitled, "Building Garages for Profitable Operation," has been published by the Ramp Buildings Corporation, 21 East 40th Street, New York City for general distribution. This booklet is devoted especially to the Ramp type of storage garage in which this company is interested. It takes up the subjects of location, design and business management, and gives several detailed examples of the earning power of various sized garages in cities of from 50,000 to 1,000,000 population. It is illustrated with photographs of successful storage garages and contains much information of value to prospective builders of garages.

ELECTRICAL TESTING AND REPAIRING INSTRUCTIONS

Users of Weidenhoff test benches and other equipment are supplied with very carefully compiled instructions. A copy of these instructions was recently sent to MOTOR AGE and it appeared to be so interesting that we inquired to know whether other copies were available. We were informed that this is the case and MOTOR AGE readers can obtain a set of these instructions by writing to Joseph Weidenhoff Company, 4352 W. Roosevelt Rd., Chicago, Ill.

E. P. Chalfant to Be Chief Force in Parts Association



E. P. Chalfant

Convention Names M. and A. M. A. Head Its High Commissioner — Moffett Elected President—Door of Next Show Closed Entirely on Outside Manufacturers.

CHICAGO, Nov. 20.

FOLLOWING were high spots of the convention of the National Standard Parts Association which was held at Hotel Sherman, Chicago, Nov. 16, 17 and 18, in connection with the association's first annual show:

Election as president of Charles W. Moffett, of Barney's Auto Parts Co., Inc., New York City.

Amendment of constitution to provide for the appointive office of executive vice president and the appointment to this office by the board of E. P. Chalfant, president of the Motor and Accessory Manufacturers' Association and an outstanding figure in the industry. He is to assume duties Jan. 1.

Adoption of a resolution to the effect that exhibition in next year's show shall be entirely "closed" to the participation of non-members.

Adoption of a resolution to the effect that no non-member manufacturer shall be privileged to attend the show unless his application for membership, unacted upon, is on file at the time of the show.

Adoption of a resolution on "obsolescence" similar to that adopted July 31, by the Merchandising Committee and Board of Directors.

Adoption of the same "cataloging" resolution that was adopted by the Merchandising Committee and Board last July.

Mr. Moffett, the new president, succeeding A. T. Haugh, vice president of King Manufacturing Corporation, Buffalo, N. Y., represents a jobbing organization. He has been an active member of the association, having been one of the organizers. Besides being in the jobbing field he was formerly on the manufacturers' side of the association as the representative of Warren Gear Products Co., Warren, Pa. Backed up by this wide vision of the replacement parts industry it was pointed out that Mr. Moffett was excellently fitted to shoulder the executive leadership.

Chalfant Given Free Hand

Active direction of the association's affairs and the campaign for its upbuilding will be in charge of Mr. Chalfant who is given liberal powers and a free hand in this work. Preceding the action which created the office of executive vice president, in addition to a secretary, speakers declared the organization required a leader who would be not only a directing executive, but a "Landis." The selection of Mr. Chalfant seems to have been the answer to this plea.

W. M. Albaugh was elected vice president. He is president of Thompson products, Inc., of Cleveland, Ohio.

New directors from the manufacturers' side elected by the convention were W. C. Stettinius, president of the American Hammered Piston Ring Co., Baltimore, Md., W. M. Albaugh, president Thompson Products, Inc., Cleveland, O., W. M. Smith, Spencer-Smith Machine Co., Howell, Mich., and D. W. Rodger, Federal Mogul Corp., Detroit.

From the jobbers' side new directors elected were Mr. Moffett, later named president, and J. G. Winterfeldt, president of the Wel-Ever Chicago Sales Company.

There are six holdover directors.

In addition to agreeing upon a new plan for the designation of jobbers who will be invited to next year's show it was decided again to interlock the show and convention, with compulsory attendance rules prevailing.

Future location of the association's national headquarters, now temporarily in Detroit, was another matter brought into discussion with the eventual vote to leave this decision to Mr. Chalfant, the executive vice president. Feeling was expressed that headquarters should be established in Chicago.



C. W. Moffett

One of the features of the opening general session was a report by Field Secretary L. H. Bennett of an investigation of the General Motors parts mechandising plan in Canada.

A banquet was held Tuesday night at which time Mr. Chalfant's appointment was announced.

With respect to the resolution on the subject of "obsolescence" there was the following important clause:

That "the responsibility for determining what parts are to be considered obsolete, and when they are to be first so designated, as well as the financial responsibility which may attach to such determination, lies with the manufacturer, since it can only be based on the intelligent analysis of national sales figures. The items in each line should be grouped according to sales volume and at suitable intervals declaration of obsolescence issued, after which the parts affected will be manufactured only as specials, the manufacturer to be the clearing house for obtaining them, and the list price to be in proportion to the service rendered."

The chief activity in the cataloging program will be the compilation of a master list of specifications which list is to be used by jobbers in compiling their catalogs. The plan will make possible more composite cataloging, with the elimination of much duplication necessary at present.

Tire Dealers Favor Fewer Sizes As



Herbert A. Ruhnke, President National Tire Dealers Association

National Association in Convention at St. Louis Hears Department of Commerce Survey of Retail Tire Trade Analyzed.

THE sixth annual convention of the National Tire Dealers Association held at Hotel Chase, St. Louis, Nov. 17, 18 and 19, was said by members of that organization to have been the most successful ever held, in point of attendance and in point of accomplishments. The tire dealers went on record as favoring many plans which are expected to strengthen their organization and help to put their industry on a higher plane. Between four and five hundred dealers attended.

Herbert A. Ruhnke of Milwaukee was chosen president for 1926; H. V. Eva, of Duluth, Minn., vice president, and George J. Burger, of New York, the retiring president, was named secretary and treasurer.

A change in the by-laws provided for a board of directors to be composed of the three officers of N. T. D. A. and six directors to be elected. It was explained that this method would always provide a more experienced board. For instance there was but one member held over from the 1925 board. He is Art Roderick of Akron, Ohio. He has one more year to serve.

To fill the other vacancies on the board, F. P. Harper, Ft. Smith, Ark., was elected to serve for one year. A. M. O'Leary, Chicago, and Victor Shaw, Charlotte, N. C., were elected for two years and A. L. Glick, Pittsburg and A. P. Woehrle, St. Louis, were elected for three years.

It was decided that the 1926 convention would be held in Memphis, Tenn., opening on the third Tuesday in November.

The adoption of a plan to finance the 1926 program of N. T. D. A., providing a minimum fund of $5,000, was considered the most important step taken at the meeting. Members were solicited to donate $100 each toward this chest and the amount was subscribed in a short time. However, there is no limit to the amount which may be subscribed and those members who did not attend the convention or who did not subscribe will have an opportunity to do so.

It is expected that N. T. D. A. will engage the services of a manager to devote his entire time to the building up of the organization and to the encouragement of state and local associations. Also it is planned to publish an official magazine to disseminate news of the organization.

That tire dealers favor the simplification of sizes of tires was shown by a resolution which was adopted expressing appreciation for the efforts of the U. S. Department of Commerce in behalf of tire dealers and thanking R. M. Hudson, chief of the Bureau of Simplification, and R. L. Palmerton, chief of the Rubber Division, of the Department of Commerce, for their addresses to the convention. Mr. Hudson's address concerned the simplification and standardization of sizes and types of tires and Mr. Palmerton discussed a survey of the dealers' tire stocks.

Mr. Hudson distributed to the tire men copies of his report on fewer tire sizes, prepared November 1, and then discussed some of the advantages of simplification in the varieties and sizes of tires. He showed how simplification increases the merchant's turnover, affording complete coverage of the market with smaller investment in stock. A digest of this report is published on the next page.

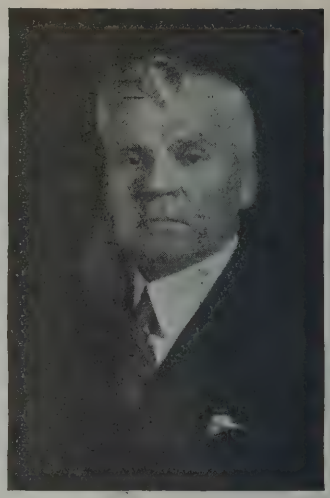
Interesting facts about the makeup of the retail tire trade were given by Mr. Palmerton as a result of his analysis of the survey made by his division of the Department of Commerce October 1.

Resolutions Adopted

At Thursday's session resolutions were adopted opposing the practice of manufacturers in printing and distributing suggestions as to retail selling prices.

Tire manufacturers and dealers, in another resolution, were urged to refrain from selling so-called automobile clubs and co-operative buying associations who re-sell such merchandise to their members, and likewise all so-called mileage contracts and rental service agreements were condemned as being detrimental to the interests of dealers.

A question which has been the cause of much conflict between tire manufacturers and dealers, the right of the manufacturer to retain for himself as a "national" such accounts as the large fleet owner, was attacked in a resolution which stated; "That we protest and oppose in principle, the practice on the part of the manufacturer in selling direct to the consumer, be it the so-called national or commercial account."



H. V. Eva, Vice-President National Tire Dealers' Association

Another alleged practice of manufacturers which drew the fire of the dealers was of setting up factory employes in retail businesses, the capital of such an establishment, or part of it, being furnished by the manufacturer.

Also the practice of manufacturers rebating to dealers 10 per cent on sales made by the manufacturers to certain select customers at the dealers' cost price was condemned.

Herbert Ruhnke, the newly elected president, stated in his opening address that he had not prepared a program of action for the coming year, but said he would work in harmony with the board of directors for the best interests of the tire dealer. He urged that members make their slogan for 1926, "2500 Members for Memphis in 1926."

An analysis of the report of the stock survey of the Department of Commerce, described by Mr. Palmerton was made by Mr. Burger, the retiring president, and showed that N. T. D. A. membership represented a class of dealers carrying from 201 to 1,000 tires in stock. He suggested that members again present what they considered to be a definition of a tire dealer and a committee was appointed.

This committee defined a tire delaer as follows:

A tire dealer is an individual, firm or or corporation: First—whose activities are principally directed towards the sale of new tires and tubes.

Second—who buys tires for the purpose of re-sale at a reasonable price.

Third—who carries in an established place of business, a representative stock of new tires and tubes and has adequate facilities for service.

Fourth—who has a sufficient moral and financial standing to enable him to properly conduct his business.

Government Urges Simplification

THAT a simplified list of tire sizes is greatly to be desired, and that something should be done to bring this about, is the practically unanimous agreement among the principal interests concerned with the production, sale and use of tires, as reported by R. M. Hudson, chief of the division of simplified practice, U. S. Department of Commerce.

Mr. Hudson regards the present tire situation as one of the most striking examples of economic waste prevailing in industry today. The current nation-wide interest in reducing waste in production and distribution of commonly used commodities, he says, is a challenge to all contributing to such wastes to prove the soundness of their position. He sees in the proposal for fewer tire sizes a further opportunity to demonstrate the tremendous power that exsists in co-operative action by all interests for the elimination of waste in typical American industries; and he adds that it is through the elimination of such wastes as the tire example affords that the automotive and related industries will find their greatest opportunities for future growth and development.

Diversity of Opinion

Those who are intimately acquainted with the joint efforts being made toward fewer tire sizes by committees of the Rubber Association of America, Inc., the National Automobile Chamber of Commerce, the Society of Automotive Engineers and the like, feel that progress is being made as rapidly as current conditions will permit. But others do not agree. A few even have questioned the possible value of the services which the Department of Commerce might render in bringing about the early establishment of a simplified line of tires, while a much larger number believe that action will be expedited if the department renders to the interests concerned the same service it is rendering to so many other industries having simplification problems.

Mr. Hudson has just submitted to the industry a summary of the whole situation in the hope that the several interests will soon co-ordinate their views, set up a tentative simplified line, submit it to all concerned and work thereafter to maintain that line at the minimum consistent with the real needs of the industry, the trade and the consuming public.

Practically all of the 24 prominent car manufacturers who contributed to this survey agreed that standard tires sizes could be established only as the several interests co-ordinate their views and co-operate in the application and support of whatever standards are ultimately set up.

All of the 21 truck and commercial car makers questioned agreed that simplified tire sizes would mean lower inventories, smaller investments, quicker turnover and greater economy.

Nearly all of the 47 tire manufacturers

Multiplicity of Sizes and Styles a Striking Example of Economic Waste, Declares Chief of Bureau of Simplified Practice.

represented in the survey felt that the solution of the problem rested mainly with the car manufacturers as the tire producers obviously make only what their customers demand.

Practically all of the nine wheel and rim manufacturers favored a greater degree of simplification than now prevails and were willing to co-operate to bring this about.

Fourteen manufacturers of chains favored simplification, nineteen cover makers were willing to co-operate toward fewer tire sizes, and trade and business papers as well as automotive associations generally favored the idea.

Mr. Hudson reports that one or two car makers point out that the car designing engineer should be free to specify a tire size that will fit in with the particular design of car he is bringing out. This freedom of choice, causing demand for odd or special sizes, is deplored by others who feel that selection from a well-thought out list of standard sizes is both possible and practicable. One manufacturer believes that the balloon tire is still in the engineering stage and that until more data are available on its performance it will be difficult to set standards for that class of tires.

Who Are the Tire Dealers?

The survey of the retail tire trade made by the Department of Commerce as of Oct. 1, 1925, revealed that out of approximately 37,000 retail sellers of tires responding to the Government's questionnaire only 16 per cent derive the major part of their business from sale of tires. In other words comparatively few dealers are in business primarily to sell tires, but a great majority of the merchants selling tires are engaged in other lines of the automotive business. The following figures were quoted by P. L. Palmerton, chief of the Rubber Division of the Department of Commerce:

Business Service of Tire Dealers

Selling automobiles ....39 per cent
Selling accessories .....77.9 per cent
Selling gasoline .....74.9 per cent
Operating air compressors .....53.7 per cent
Major part of business from tires .....16 per cent

It was found that only 29 per cent of the dealers operate tire repair departments.

Tire manufacturers, though enthusiastic for simplification, point out that a tire maker and a car designer are inclined to agree on a new tire size without much regard for the effect which the introduction of a new size will have on the general situation in the industry. This lack of a truly standard list and the consequent lack of regard for the dealer who has to service many different models is said by some to cause millions of waste in the tire industry. Reduction of inventories, idle investments tied up in slow moving stocks, quicker turnover, better service of supply and better quality are some of the advantages cited as coming from simplification.

Mr. Hudson reports that the production of 20 in., 21 in. and 22 in. diameter wheels, also 18 in. and 19 in. as experimental possibilities, together with the 23 in. and 24 in. diameters has thrown a great burden on wheel and rim makers, one from which they would gladly be relieved. One manufacturer questions whether the transition period is over and says time alone can tell what size is best to accept as standard. His belief is that it will be the 21 in. diameter.

"There was confusion enough in tire sizes prior to the introduction of the balloon type," says C. A. Vane, general manager of the National Automobile Dealers Association, "but since 1923 we have had the high pressure tire, the semi-balloon and the full balloon, each with a full range of sizes and models, and it is quite needless to say that only a very limited percentage of automobile dealers can stock enough tires of the different types and sizes to be able to simplification continues."

Burger Urges Relief

George J. Burger, president of the National Tire Dealers' Association, says:

"Our Association will lend any amount of assistance helping to eliminate the waste that exists in the industry. I believe, in the near future, when high pressure tires will be gradually eliminated, that some set plan should be adopted by rubber manufacturers and car manufacturers on whether at the outside one dozen tires should answer the requirements of all.

"Another feature which delays the arrival of complete simplicity is the failure so far of motor car engineers to be in complete accord in respect to proper sizes. Some of the engineers of the largest car producing units still insist on odd sizes and specifications for the new models. Their business is of such importance that the tire manufacturer cannot be adamant to their demands, so he bids for and gets the business. The other manufacturers, not being successful in getting the original equipment, have reached out for the replacement business on these models, and so have added to their sizes, and so the merry chase away from the first principles of simplification continues."

The New Model Ninety Locomobile

Chassis Includes Most Modern Features Known to Present Day Engineering; Prices Range from $5500 to $7500, Depending on Body Style.

By P. M. HELDT

THE announcement of a new Locomobile is an unusual event, for while changes in design have been made at frequent intervals, the "48" has been the one Locomobile for a great many years. The designation of the new model is based on the power it develops, it being known as Model 90, although the piston displacement is less than that of the "48."

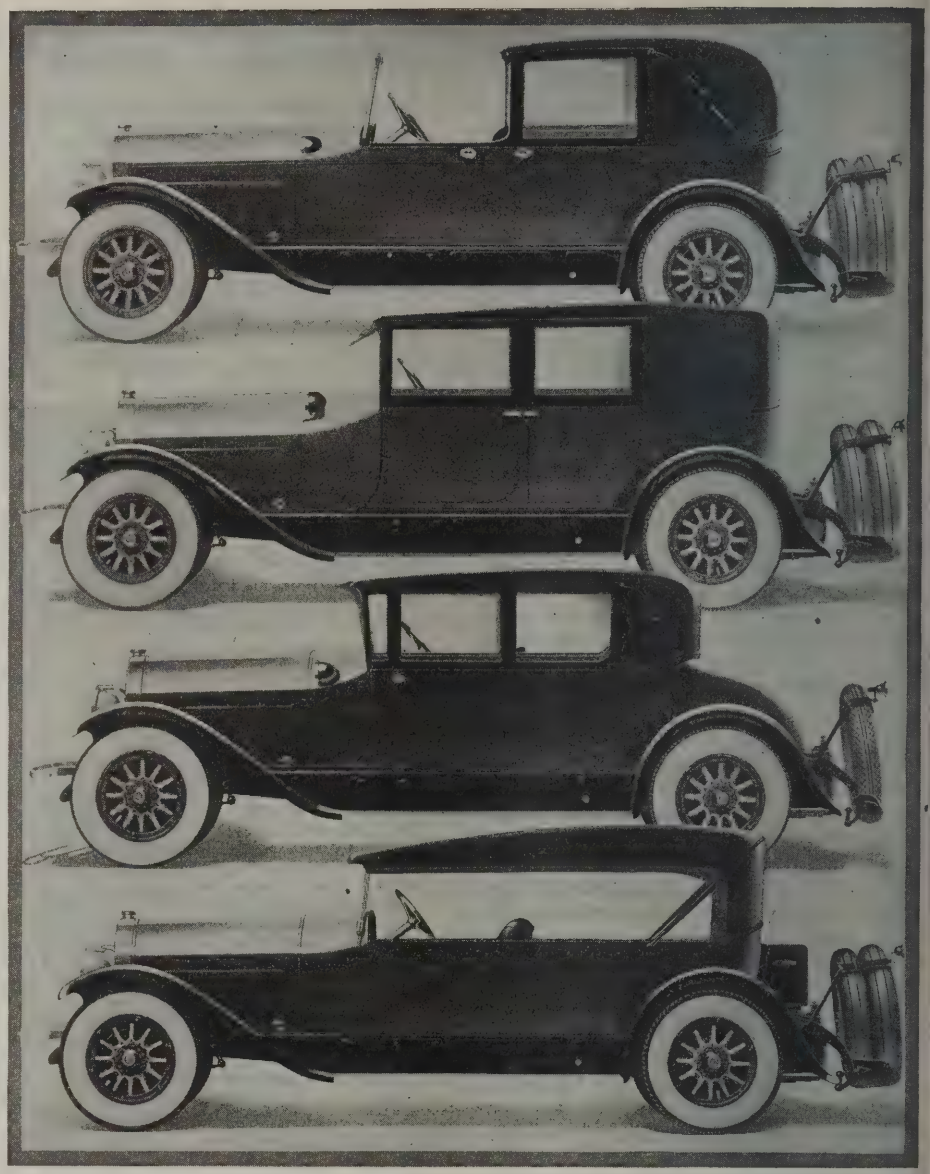
The engine is a high speed type with L-head cylinder, detachable head, light reciprocating parts, seven bearing crank finished all over, silent chain front end drive and pressure lubrication.

A single plate clutch is used, with molded asbestos lining, reliance for smooth engagement being placed on the spring action of the deformed disc. The transmission is a separate unit, with Maag-ground gears and with ball bearings throughout. Four-wheel brakes (Bendix-Perrot three-shoe) and balloon tires are standard equipment, and as the car has rear springs 60 in. in length and shock absorbers all around, it leaves little to be desired from the standpoint of riding comfort. The wheelbase is 138 in. and the tread 58¼ in.

The prices of the chassis and of the different types of complete car are as follows:

Chassis	**$5,000.00**
Touring Car	**5,500.00**
Roadster	**5,900.00**
Coupe	**6,950.00**
5-Passenger sedan	**7,300.00**
5-Passenger sedan with division	**7,450.00**
7-Passenger enclosed drive Limousine	**7,500.00**
Brougham	**7,500.00**
7-Passenger non-collapsible Cabriolet	**7,500.00**

The engine has a bore of 3⅞ and a stroke of 5¼ in., making the displacement of the six cylinders 371.5 cu. in. The compression space is 23.5 per cent of the combined displacement and compression volume, so that the compression ratio is substantially 4.25:1. Two large size openings are cast in the water jacket. These are covered by sheet steel plates, and a water inlet manifold is bolted to these cover plates. This promotes uniform circulation of the cooling water through the jacket.



New Locomobile "90" Models. From top to bottom: Cabriolet; four-passenger sedan on new chassis; Coupe with roomy luggage space; four-passenger touring car with trunk mounted over the gasoline tank.

A water outlet boss is formed on the cylinder head at the forward end, into which is set a bellows-type thermostat.

All valves are identical in dimensions and interchangeable. The clear diameter of the valve ports is 1-25/32 in. and the lift of the valves is a few thousands over ⅜ in.

Cast iron pistons of a light design are used. These carry three rings near the upper end and an oil scraper ring near the bottom.

The piston pins, which are tubular and case hardened, are secured in one of the piston bosses by a pin screw which extends entirely through the boss and piston pin. A bronze bushing is pressed into the upper end of the connecting rod and provides a bearing for the piston pin 1⅛ in. in diameter by 1¾ in. long. At the bottom end of the connecting rods the babbitt is cast directly into the steel and no shims are used. Two standard type connecting rod bolts hold the cap in place.

The crank shaft is a seven-bearing design and is finished all over. All bearings are of 2¼ in. diameter. Crankpin bearings are 2¼ in. long while the seven main bearings are of the following lengths (front to rear), respectively: 2⅛, 1-5/16, 1-5/16, 1-15/16, 1-5/16, 1-5/16, 3-1/16 in. As may be seen from the longitudinal section, end thrust is taken up on the front bearing. Diagonal oil holes are drilled through the crank arms through which the crankpin bearings are oiled from the main bearings.

At the forward end the crank shaft carries the driving sprocket for the Link-Belt silent chain "front end" drive, and

beyond this there is mounted upon it the Lanchester vibration dampener, which is entirely enclosed within the timing chain housing and runs in oil. At its very end the crank shaft carries a grooved pulley for the fan drive.

Camshaft Serves as Oil Lead

The camshaft is drilled from end to end to serve as an oil lead for its own bearings, and is supported in four bearings of the following dimensions (front to rear): 2-5/16 x 1-15/16 in. (long) 2-9/32 x ⅞ in., 2¼ x ⅞ and 2-7/32 x 1⅛ in. The valves are operated by tappets of the mushroom type, the guides for which are held in place in holes in the top wall of the crankcase in pairs by means of yokes. The guide at the top extends slightly above a shoulder on the tappet, thus forming a pocket which catches oil and ensures effective lubrication.

The crankcase consists of two aluminum castings, the parting plane being about 2½ inches below the crank axis, which gives a very rigid supporting member.

Fuel is carried in a 21-gallon tank carried at the rear of the frame, a screw filler cap being provided which is secured by a central locking screw. The fuel tank has a 3-gal. reserve compartment and the reserve is made available by giving a half turn to a lever conveniently located on top of the tank. An interesting feature in connection with the device is that even if the operator should fail to turn the lever back to its original position when he refills his tank, the fuel supply to the carbureter will cease when only 3 gal. remains in the tank.

Fuel feed is by air pressure, a gasoline gage being mounted directly on the fuel tank, no dash gage having been found satisfactory with the pressure feed system.

A "United" air cleaner is fitted to the air inlet of the 1½ in. Stromberg Model OX-3 carbureter.

The inlet and exhaust manifolds are separate castings but are bolted together. A jacket is formed on the inlet manifold where the vertical part joins the horizontal part, which jacket communicates freely with the exhaust manifold.

With the exception of the battery, the whole of the electrical system is of DeJon make. The generator is driven from an enclosed accessories drive shaft on the left side of the engine through an Oldham type coupling, and the same shaft drives the water pump, which is located in front of the engine. The starter drives to a flywheel crown gear, engagement being by foot-shifted gears actuated by the same motion which closes the starter switch. The battery is a USL of 166 ampere-hours capacity. It is located in a battery compartment under the right splash apron, and to make the filler plugs more accessible they are offset from the center toward the outer side. The ignition unit is driven through a vertical shaft at the middle of the length of the engine on the valve side, which shaft is driven from the camshaft through helical gears and drives the oil pump from its lower end. Spark control is partly automatic, manual control being provided for high speed work.

All wiring is carried in flexible metal conduit. The spark coil is mounted on the forward side of the dash and there are also two fuse blocks on the front of the dash. On the dash directly over the engine is mounted an "engine light" which facilitates inspection, this same light serving as a general trouble light. Ordinarily this cord supplies current to a cigar lighter.

Lubrication is by the now conventional pressure system with a direct lead to each main bearing connected to the bearing cap. Oil enters the camshaft at one of its bearings and is fed through it to the other bearings. A direct-reading float type oil level gage is provided. The float being located in a pocket at the side of the oil pump. In this same pocket and concentric with the float and its stem is located a handy crankcase oil drain valve of the conical type which is operated by means of a handle at the side of the crankcase. The oil pump is bolted against the main crankcase casting and carries the usual oil strainer and relief valve.

The radiator is of the cellular type, of G. & O. make, and has a detachable, pressed steel nickeled shell. The centrifugal pump has a shaft of stainless steel.

Owing to the fact that the transmission is a separate unit there is no bell housing and the flywheel is exposed. The engine is supported from the main frame at four points.

Four Speeds

Three forward speeds and one reverse are given by the transmission. All gears are of alloy steel, oil hardened, and the teeth are ground by the Maag generating grinding system.

The speedometer drive is taken off the rear end of the splined shaft of the transmission. At the left side of the transmission is a Kellogg tire pump which is started and stopped by means of a clutch lever located in a tool box located under the left splash apron. The gear ratios in the transmission are as follows: 3.32:1 (low), 1.82:1 (intermediate), 4.35:1 (reverse). A transmission lock is provided.

Three different final drive ratios are used. A 4.15 ratio (13 and 54 teeth) is used on the roadster; a 4.5:1 ratio (13 and 58 teeth) on all other models, while a 4.75:1 ratio (11 and 52 teeth) is offered as an option. Torque reaction of the rear axle is taken on a pressed steel torque arm whose forward end is supported between rubber cushions on a frame cross member.

Rear Axle

The rear axle is of Eaton make and is of the semi-floating type with pressed steel, welded housing. Taper roller bearings are fitted on both sides of the differential, annular ball bearings in all other places. The bevel pinion is straddle mounted.

Underslung mounting of the semi-elliptic rear springs serves to lower the frame and the whole car. These springs are 60 in. long and 2½ in. wide, and they are provided with the self-adjusting spring shackles which were developed for the Model "48" a year or so ago. The front springs are 40 in. long and 2 in. wide and also have self-adjusting cone type shackles. Lovejoy hydraulic shock absorbers are fitted all around.

The front axle is also of Eaton make, the front wheel being mounted on taper roller bearings.

Sixteen inch three shoe Bendix-Perrot brakes are carried on all four wheels, the actual internal of the drums being 15-21/32 in. and the effective surface of each brake, 98 sq. in.

The brakes are equalized in pairs. While the brake pedal applies the brakes on all four wheels, the brake lever, which is located to the left of the driver's seat, applies only the rear brakes, through a special equalizing mechanism.

Steering Gear

Steering is by a Locomobile Ross cam-and trunion type steering gear, operated by means of an all wood hand wheel. Provision made whereby any looseness at the upper end of the steering column can be readily taken up.

A combined dash and instrument board construction is used similar to that much seen on Europeon chassis and which is very handy where custom-built bodies are to be fitted. Thus all instruments can be mounted and all connections made before the body is put on.

The balloon tires are of the 33 x 6.75 in. size and are fitted to Firestone collapsible rims on artillery wood wheels.

All of the major tools in the tool box under the left splash guard are held by clamps or straps, so that each one is always in its proper position and can be reached instantly.

(*Continued on page* 36)

NATIONAL SHOWS ISSUE
And Specification Number
of
MOTOR AGE
Will be published January 7, 1926, and will contain descriptions of brand new 1926 models and about 40 pages of up-to-date specifications of passenger cars, trucks, taxicabs, tractors and motorcycles, and many other special editorial features.

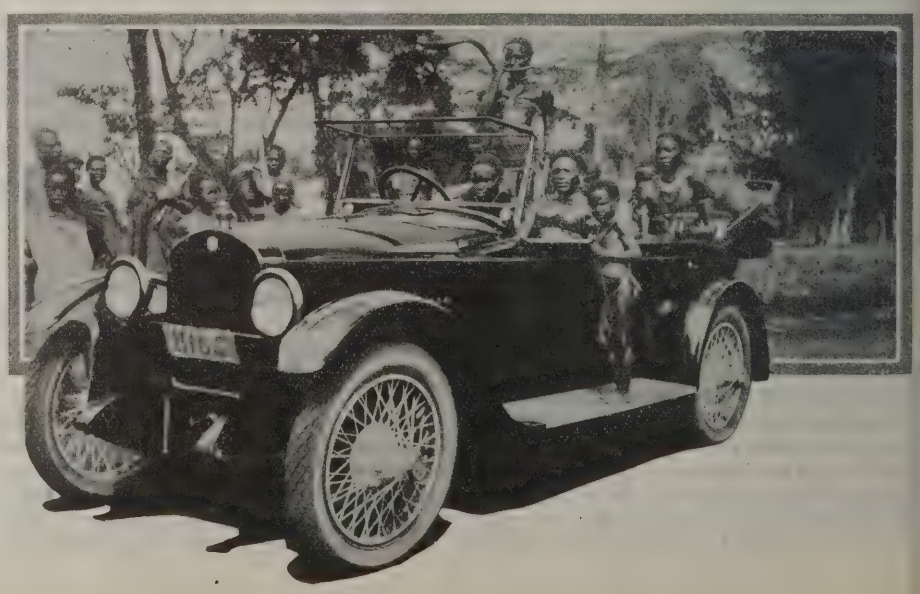
MOTOR AGE'S PICTURE PAGES



CLOSE TO NATURE. A vivid suggestion of the joys incident to autumnal motoring is contained in the display window of the Grand Rapids (Mich.) Flint Co., which portrays a portion of Kent County's woodland. Charles Kalder, the manager, has arranged a complete hunter's camp in which no necessary piece of equipment has been omitted nor any detail of the landscape overlooked.

DE LUXE SERVICE. The Yellow Taxi Co., Reading, Pa., uses the Nash seven-passenger sedan in its service. The cars are shown lined up in front of the display rooms of J. Miller Kalbach Co., Inc., Reading dealers.



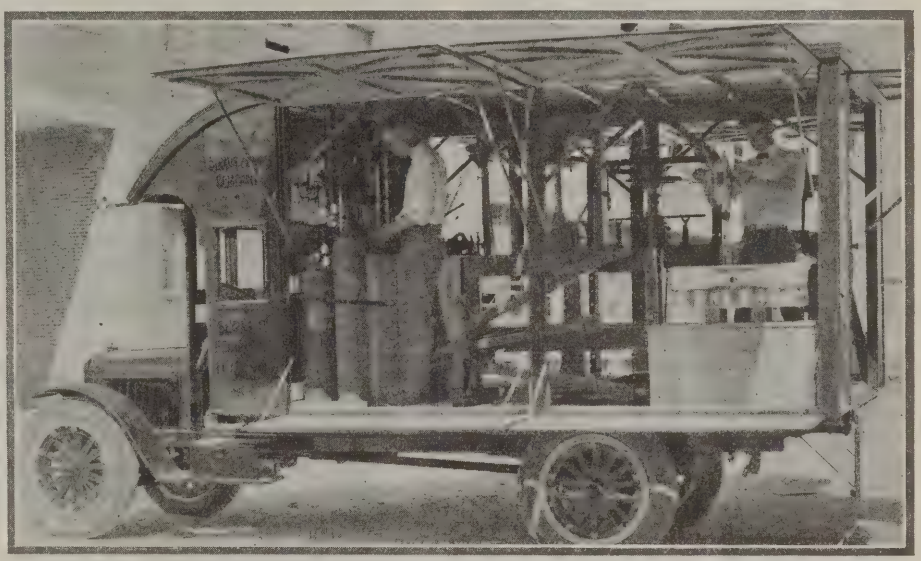


IN REGAL STYLE. A king driving his own motor car to an important court function almost upset the traditions of his people. He was King Magwa, head of the Kikuyu tribe of Kenya Colony, Zanzibar. He is shown here at the wheel of his Studebaker.

OF AUTOMOTIVE INTEREST



MORE WOE FOR THE TRANSGRESSOR. Cleveland police have adopted radio-equipped cars to aid in the apprehension of criminals. The department has eight 70-h.p. Peerless cars for squadron work, each of which will carry two receiving head sets and a loud speaker, in addition to batteries and other radio mechanism.



A SHOP ON WHEELS. The Straus-Frank Co., San Antonio, Texas, has increased its sales of shop and garage equipment 700 per cent by taking the equipment directly to the prospect by means of this truck and demonstrating at first hand the efficiency of its wares.



NEW ENGLAND'S BIGGEST AUTOMOBILE TIRE PILE. A veritable mountain of rubber tires is owned by the Fienberg Rubber Co., Cambridge, Mass.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ^ ELECTRICAL ^ FLAT RATES
SHOP ^ LEGAL ^ PAINT & TRIM ^ ACCOUNTING

Oil That Goes Up Must Burn Up

Q.—I would like your explanation as to why a motor with force feed lubrication that leaks oil in a stream instead of a spray at one or two bearings, consumes such an excessive amount of oil? (Taking for granted the motor does not leak oil on the outside.) I think that as long as crank case is oil tight it would not hurt if oil was streaming from one or two bearings, as is the case in a motor with splash oiling. I have had cases where I filled up the crankcase in a splash oiled motor way over the proper level after taking up all bearings and I did not notice any excessive amount of oil used, and this would be about the same condition as a motor with force feed oiling and some of the bearings leaking oil badly.—E. L. Chester, 4828 Fletcher Street, Chicago, Ill.

Apparently the two cases are similar. In the splash system however, we depend on the lower end of the connecting rod throwing enough oil so as to lubricate the cylinder walls and when the oil level is too high there is a chance that the cylinder wall will receive too much oil. In many cases this will occur with a splash system and excessive oil consumption will result.

If you found that there was not excessive oil consumption you may have had an engine with the rings very well fitted. Perhaps in the force feed system the oil comes with greater velocity and actually carries more oil to the cylinder walls than would be the case with a splash system and too much oil in the crankcase. We know it to be a fact that badly leaking bearings will cause excessive oil consumption and carbonization of the engine, so it must be true that the oil gets to the cylinder walls faster than the rings can scrape it down.

TWO CARBURETERS ON A CHEVROLET

Q.—We have just installed two 1923 Chevrolet Zenith carbureters on a 1923 Chevrolet. We are having trouble in getting it to hit evenly on all four cylinders. It hits all right on one and four, but two and three cylinders are very weak in idling. At speeds from 20 miles per hour and up it hits evenly. Have tried loosening the tappets on No. 1 and No. 4, but to no avail. We have a separate neck for each carbureter. We have not changed the jet in low speed but have made high speed jet smaller.—Clarance W. Keener, Miethe Motor Company, Georgetown, Ill.

In using two carbureters on the same engine, it is essential to have the throttles open at the same time. This means that there must be no lost motion in the rod connection from one throttle to the other. A type of ball and socket joint which has no springs and which is positive in action is recommended. It might also be advisable to replace the regular Chevrolet throttle lever with a universal clamp lever which is a standard Zenith part, this unit being somewhat stiffer and more positive in action.

The condition you are getting is a natural one for with two carbureters the velocity of the air is slight at low speeds. If you were using this engine in racing this would be no serious disadvantage for poor idling is characteristic of race car engines. The local Zenith representative recommends using standard jets, although you might use a slightly smaller choke or venturi.

Another possibility of getting better action is to connect the two intake manifolds above the carbureter with a pipe 1/2 inch in diameter or greater so as to equalize the pressure between them and compensate for any slight difference in the opening of the two throttles.

Another possible cause of unequal distribution is in the location of the throttle or butterfly valve. We understand that the shaft is crosswise of the car, so that when the butterfly valve or throttle is only partly open it sends the mixture either toward the front or rear of the manifold. If the shaft of this butterfly valve had its axis parallel to the center line of the car then there would not be this tendency.

The Readers' Clearing House

THIS department is conducted to assist dealers and maintenance station executives in the solution of their problems.

All questions are answered direct by letter, so the name and address should be given in full. This saves waiting for the answer to be published, which sometimes occurs several weeks late, depending upon the space available.

Readers' names will not be published with articles, if a request to this effect is received with the letter.

Inquiries not of general interest will be answered by personal letter only. Emergency questions will be replied to by letter or telegram.

Also state whether a permanent file of MOTOR AGE is kept, for many times inquiries of an identical nature have been made and these are answered by reference to previous issues.

Addresses of business firms will not be published in this department but will be supplied by letter.

Technical questions answered by B. M. Ikert and A. H. Packer; Legal, by Wellington Gustin; Paint, by G. King Franklin; Architectural, by Tom Wilder; Tires, by a Practical Tire Man; General Business questions, by MOTOR AGE organization in conference.

How Many Cylinders Makes a Motor and a Half?

Q.—We have had quite a debate in regard to four, six and straight eight motors. A claims that a six cylinder motor is a perfectly balanced motor whereas a four or eight is not. B contends that a four is a complete motor, and eight is two complete motors and a six motor being a motor and a half, which is the reason that practically all endurance races such as are conducted on Indianapolis Speedway have only four and eight cylinder entries. We would like to have your explanation.—East Chicago Auto Sales Company, 524 Chicago Ave., East Chicago, Ind.

While four and eight cylinder engines may have predominated at the Indianapolis races, we find that six cylinder engines were used as follows; in 1911 by Marmon and Knox, in 1912 by White and Knox, in 1913 by Sunbeam, 1914 by Sunbeam and Excelsior, 1916 by Sunbeam and in 1919 there were two Hudson cars and one Stickel.

The engines employed are chosen primarily on account of the power which they can develop whereas the choice of a four, six or eight for passenger car service, must also take into consideration, quiet operation and freedom from vibration.

The question of the causes of engine vibration is a deep one and we would recommend your getting a copy of the Gasoline Automobile by P. M. Heldt, volume one, which can be obtained at any large public library. Chapter five covers the question of engine balance. According to Mr. Heldt it is true that the six cylinder engine is theoretically perfectly balanced and where vibration does occur in six cylinder engines it appears to be due to the elasticity of the crankshaft which as the explosions occur tends to wind up and unwind which produces torsional vibration.

In recent years the racing engines have had to be designed for smaller and smaller cubic displacement. In order to get high power with small displacement, it is necessary to have very high engine speed. To attain high engine speed it is necessary to have light weight reciprocating parts and this factor has probably dictated the eight cylinder engine, for with the light weight parts in use a high speed approximately 5000 r.p.m. was attainable and this enabled the engine to produce a great deal of power. We do not know of any classification which makes a certain number of cylinders equivalent to a motor or two motors or to a motor and a half.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Suggestions for Spanish Style Automotive Buildings

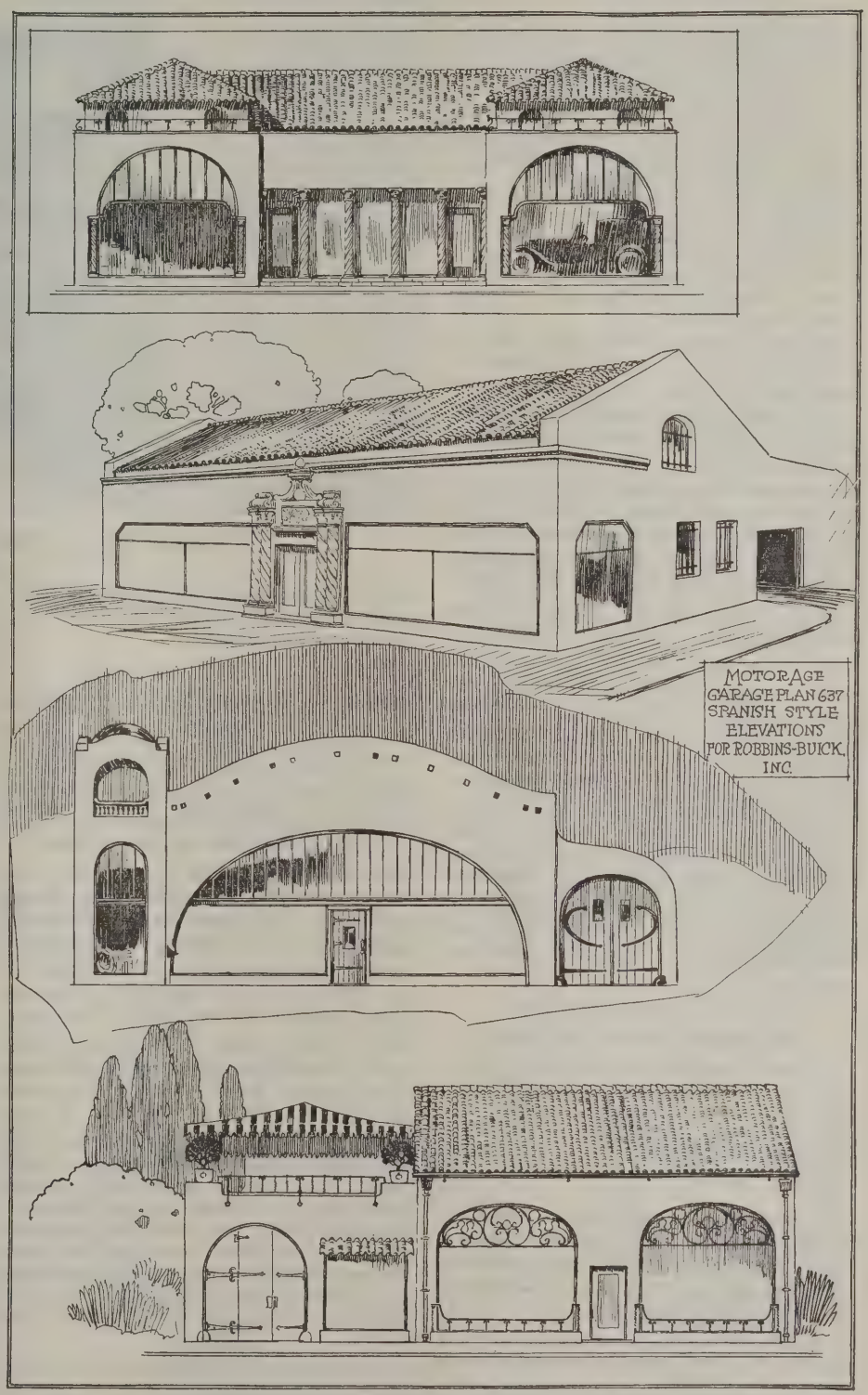
Q.—We are contemplating building a salesroom on a lot 58 by 93 ft., and wondered whether or not you might be able to offer some suggestions. The building is to be of Spanish architecture, of white stucco. We would appreciate anything you could do in the way of letting us have some sketches or photographs from which we might choose just what we want.—Robbins-Buick, Inc., Baltimore, Md.

As there seems to be a demand for the Spanish style of automotive building especially in the west and south where the early Spanish settlers left their imprint, we are publishing four elevations designed to help satisfy the demand. You could do well to go through a file of MOTOR AGE for the last two years as numerous pictures of buildings in this style have been published.

There is one great advantage in this style and that is that with the exception of the tile roof it is comparatively inexpensive. All that is usually needed is the frame-work of tile or even wood covered with metal lathe or some other approved frame-work upon which the stucco may be applied.

Regarding the stucco itself there is a wide variety of materials. Gypsum and lime plasters are used to a great extent both in the north and south, but the more durable cement stucco is to be preferred for nothern locations where frost and dampness are liable to damage the others. The magnesite cements are very durable for both north and south, but they are considerably more expensive and need only be considered where durability with elasticity is a desirable factor. A white stucco may be obtained by using white cements and by using considerable lime in ordinary cement for the finishing coat, or by using ordinary cement stucco and painting it white afterwards using an especially prepared cement paint.

The textures obtainable in the finish of stucco are almost innumerable. The United States Gypsum Company issues two booklets showing samples of finishes for their oriental stucco and also for interior plaster. The method of obtaining each effect is also described and you would do well to get these booklets.



Spanish architecture furnishes an infinite variety of forms and decorations that are limited only by the builder's pocketbook

SELLING CAR FOR STORAGE

Q—I would like for you to tell me how long a car has to be held before it can be sold for storage and what steps have to be taken before it can be sold.—Lawrence Harper, Valley Junction, Iowa.

In your state there are separate provisions for repair lien and storage lien. Sale of a car for storage may be made at public auction, after giving to the owner or claimant, if found within your county, ten days' notice in writing of the time and place of such sale, and also by posting written notices thereof in three public places in the township where the property was kept or received.

From the proceeds of the sale you can pay all the charges for storage and the cost and expenses of the sale, the balance going to the owner of the property.

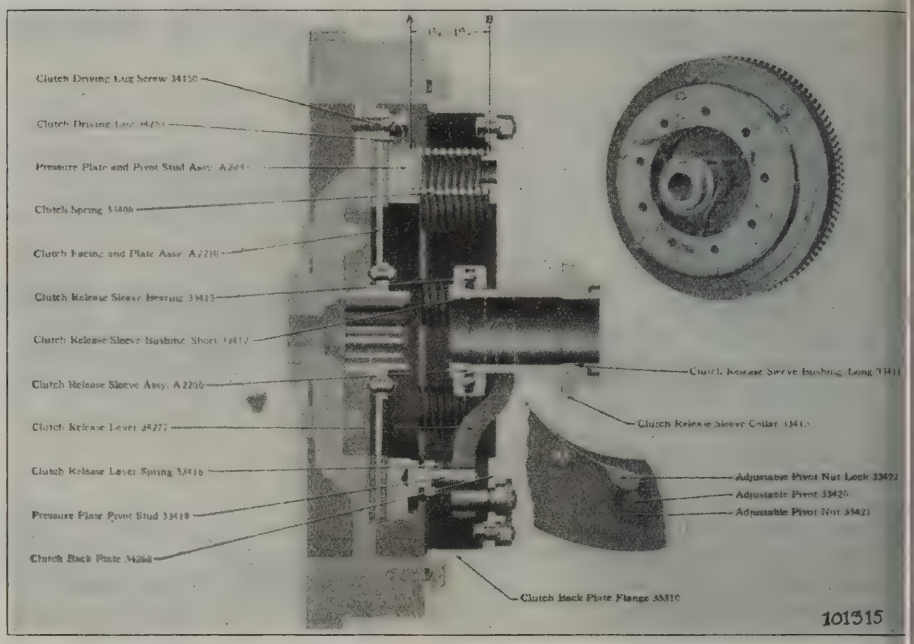
The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Bent Levers Gum Up The Works

Q.—We have had trouble with the clutch on a 1924 Maxwell. After it was adjusted it made a chattering noise and after driving 100 miles we took the cover off and found that the three clutch release levers were riding on the outer edge of the clutch release sleeve bearing, cutting a groove in the bearing and wearing the surface of the clutch release levers. The mechanic who adjusted the clutch said that the trouble was due to improper lubrication. It seems to me it was due to improper adjustment. Do you think it would be advisable to install new clutch release levers?—R. I. Pia, Park Garage, Cornwall-on-Hudson, N. Y.

We are showing illustration of the Maxwell clutch. The three clutch release levers should come within 1/16 inch of the clutch release sleeve bearing and the adjustment should be such that they all take hold at the same time when the clutch pedal is operated. The trouble you are having is apparently due to the clutch fingers being bent so that they slip off the edge of this bearing instead of making contact with the flat surface.

If the levers are not damaged to any extent, they can be used if bent back toward the center of the clutch, so that there is no danger of their slipping off. Lubrication for this bearing is 600-W which works in from the transmission through the hollow shaft. If insufficient lubricant is kept in the transmission or if the lubricant is too heavy and does not work through properly then the throw out bearings or clutch release bearings may suffer from lack of oil. Whether you need new clutch release levers or not depends on the condition of the old ones which only an inspection will determine.



Sectional View of Clutch Used on 1924 Maxwell

NEW TIMING CHAIN IS NOISY

Q.—We have a 1920 or 1922 Revere touring car which was overhauled lately and new timing chains and sprockets put on. They are noisy when the motor is running. They seem to be adjusted right. —D'Arcy Brothers, 7820 Langley Ave., Chicago, Ill.

It is possible that the chain was put on so as to run in the reverse direction. Most chains have arrows marked on the sides which show the correct direction in which they should be run.

Q.—Would like to know the correct timing for the valves and the correct way of timing the ignition.

The intake valve is supposed to open when the engine is 7 degrees past upper dead center and the exhaust valve is supposed to close when the engine is 11 degrees past top dead center. It would be near enough to have either event take place when the piston has gone up to top dead center and has barely started down again not more than 1/64 or 1/32 down.

Trouble Is Probably Due to a Leaking Cup

Q.—We have a 1925 Moon sport touring car with four wheel hydraulic brakes which leaks in the two rear brakes. Could we repair these without special wrenches and what do you think is causing the leaks as they are new brakes?

We understand that a new type rubber cup is now available which is not affected to any extent by the hydraulic fluid used in the system. The trouble you are experiencing is no doubt due to the old type which leaks on account of being affected by the fluid. New type rubber cups should be installed these being obtainable from any authorized Moon service station for approximately 55 cents there being two used in each brake cylinder. The pistons themselves have also been changed the later type being aluminum instead of cast iron and these may be obtained for approximately 88 cents each. The work of changing these can be done in about 2½ hours for each brake and no special wrenches are required, the conventional open end and socket wrenches taking care of the job.

Q.—Where can I get the mixture for these brakes and what kind of solution is used in making it?

The fluid used consists of a half and half mixture of commercial grade castor oil and denatured alcohol thoroughly mixed. Nothing else should be used. Castor oil commercial grade, can be obtained through wholesale paint or lead concerns.

Q.—The engine when it has new oil when the oil is cold seems to have a grin in it but when the oil is warm the grin goes away.

We do not believe the trouble is in th engine but rather in the transmission rear axle. 600 W should be used in th transmission and rear axle and if heavier lubricant is used it may be tha it does not cling to the gear teeth an when the car first starts up causes th noise to which you refer and which yo attribute to the engine.

LEAVIN' 'EM OUT TO RUST

Q.—Why do some large automobi concerns leave their engines out to rust where the air can get at them befor they are good enough to use?—Howar Scott, Willard, Ohio.

It is not the engine but the cylinde block which is left out. The reason fo this is that a casting when cooled con tains internal strains which in tim causes the shape of the casting to chang Accordingly if a cylinder block is bore immediately after it is cast and is bui into an engine it will be found that th cylinders will warp in time, causing poo operation of the engine.

For this reason it is customary t leave cylinder blocks out in the air fo awhile to give them time to change thei shape before being machined. In thi respect it corresponds somewhat t shrinking goods before making garment from the material. Where production i heavy, time is not available to use thi process so that instead of allowing th casting to age they are heat treated t remove the internal strains, this havin the same effect as the longer method.

Clearing Up Electrical Troubles

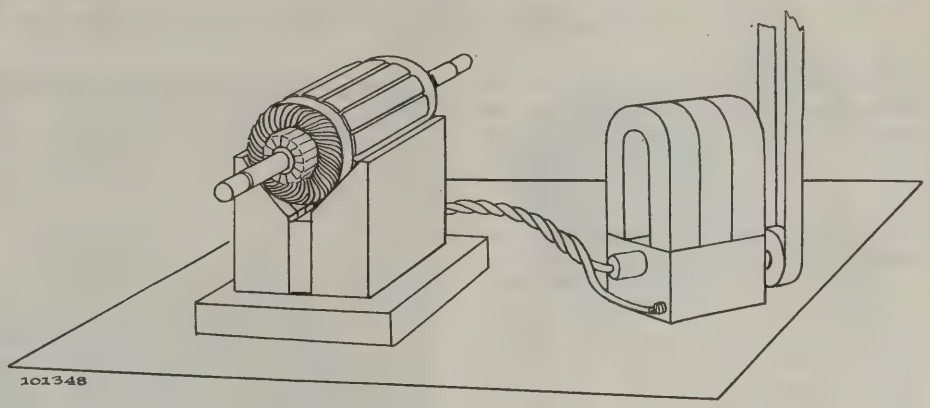
EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

A. C. For the Growler in D. C. District

In the MOTOR AGE Clearing House I have seen articles about garage men in small places where they only have direct current having trouble testing armatures, because they have no alternating current power available. I once saw a fellow use one of the old low tension magnetoes and driving it at pretty high speed to generate alternating current. I think this fellow had a Bosch magneto with 6 magnets on it, 3 side by side and the other 3 on top of the first 3. He had a wire connected from the center terminal at the end of the magneto to one wire of the growler and the other growler wire was connected to the frame of the magneto. Some of these magnetoes are for sale for $1 or $2 at wrecking houses and it occurred to me that this might be the solution of the problem in territories where only direct current is available. —Chicago Mechanic.

We assume that the wrecking concerns will soon have to employ detectives to find the cause of the heavy demand for the obsolete type of low tension magneto. The way the magneto would be used to supply growler current is shown by a sketch.



Using an old type low tension magneto to generate A. C. for the growler

Marine Engine Uses Dual Magneto

Q. I am in need of information regarding the ignition, timing and wiring diagram of a Murray-Tregurtha reversible marine engine manufactured in Boston, Mass. This engine is equipped with a Bosch dual magneto. Although this is not an automobile engine, I trust you will be able to give me the desired information, which I assure you will be greatly appreciated.—Clarence H. Briggs, 160 S. Hill street, Dubuque, Iowa.

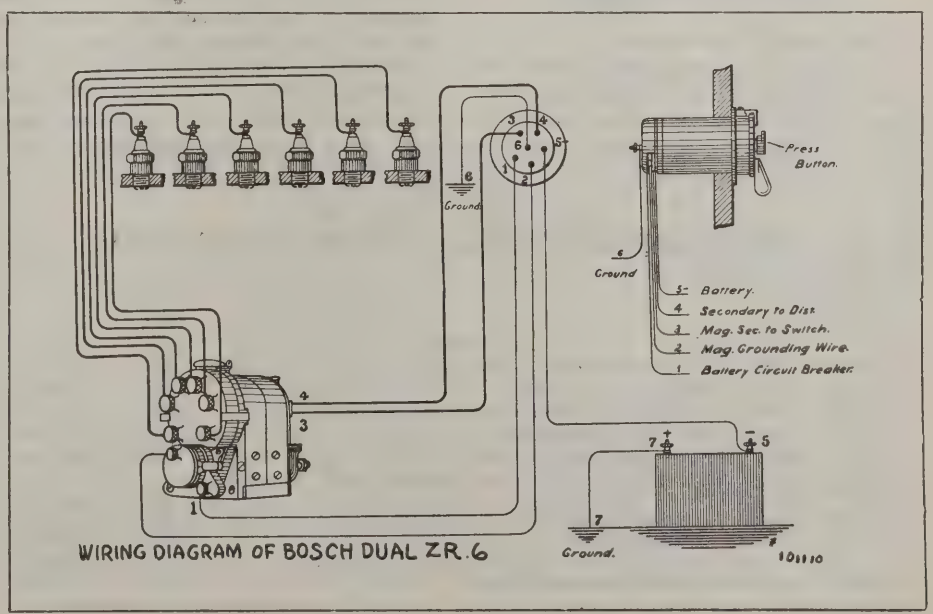
We are showing a diagram of the Bosch dual system. In this case it applies to the model ZR magneto, but the model DU is similar, in case that happens to be the type you are using. On the latter type, we believe that the connection to the center of the distributer is made at the front of the magneto instead of at the back. This magneto should be timed using the battery interrupter, for there are two separate pairs of points, one operating with the magneto current and one with the battery current. Their timing is not the same, one set being advanced somewhat with respect to the other. With the lever in the retard position, you can set the timing so that the spark in the battery position of the switch occurs when the piston has come to top center and has barely started down on the firing stroke. Shifting from battery to magneto will give a slight amount of advance, due to the difference in timing of the two sets of contacts, while shifting the interrupter housing by means of the spark advance lever will give additional spark advance. We do not have any detailed information on this engine, so if you require any other information which does not concern the electrical system would suggest writing direct to the manufacturer.

SOLUTION OF ELECTRICAL MYSTERY

An electrical mystery was published on page 25 of the September 24, 1925, issue of MOTOR AGE, the car in question, a Ford, firing on two cylinders after a new timer and roller had been installed.

Mr. Ray Linn of Shannondale, Indiana, believes that there may be a short in the coil box or wiring. Mr. Charles H. Conklin of Long Beach, Calif., thinks that the cover of the coil box may have been put on in such away that a short circuit exists. Mr. John W. Anderson of Fort William, Ont., is hot on the trail with the assumption that the shoulder to which the small spring is attached is too high and strikes one segment while the roller is on another segment. A letter from Toews Brothers Garage of St. Pierre, Man., gives us the suggestion that the hook on which the spring is caught is bent too far out and touches one segment while the roller touches another. Limpert Brothers Garage also sent us a letter in which they also expressed the thought that the hook end of the roller arm is touching one segment while the roller is on another segment.

The answer taken from Mr. Loring's letter shows that several of our readers were hot on the trail and would have been good trouble shooters on this job. Mr. Loring says "So after about an hour we put on another timer roller and the car ran fine. The little hook that holds the roller spring was too long, making a contact between the hook and one segment, while the roller was making contact with another segment."



Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Cooperation Makes Flat Rates Possible

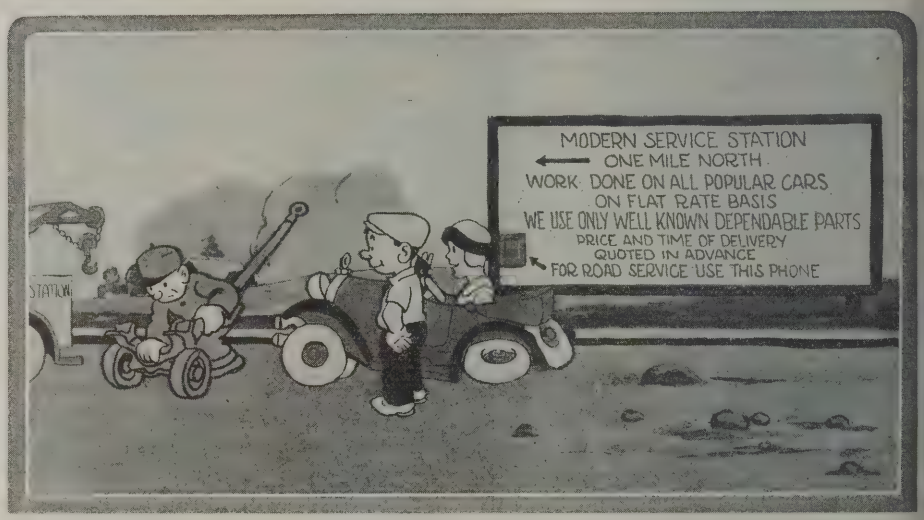
HOW did we ever get started on the flat rate or definite charge per job idea? The public demanded it, and efficient service was necessary if profitable business for manufacturer and dealer was to continue. The co-operation of dealer and car builder, however, is essential.

The car manufacturer is best acquainted with the car construction and should establish the flat rate charges. He is, however, less familiar with the difficulties encountered in the shop, due to circumstances which may or may not be determined by the car's construction.

One flat rate manual recently received at the MOTOR AGE office gives blanks to be used by the car dealer to report time allowances which may be too high or too low. This concern realizes that a start must be made, but that the first chart or flat rate table may not be perfect. If, for example, continued reports in regard to valve grinding indicate that the time allowance is too low, then a change would be in order.

In other cases it might be found that the time is too high, that the excessive price stirs up ill will and tends to send customers to independent shops operating on an hourly basis or on a lower flat rate basis. Under such circumstances a reduction in the time allowance would be desirable if the complaint appears justified.

The dealer does not have enough experience, time or clerical facilities, in most cases to develop his own flat rate tables, but he can be of great help to the factory in supplying constructive criticism.



THINGS THAT HELP FLAT RATE

Proper advertising boosts fixed prices for making repairs as much as anything and very often much originality can be displayed by the dealer, as shown in the above illustration. As long as the shop operates on a flat rate basis it is a good plan to let the world know about it

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Preserving Rate Tables

Chicago, Ill.

To the Editor of MOTOR AGE:

In one of your numbers I notice you ask for suggestions to make the Motor AGE Clearing House the best ever. If you will permit a suggestion I will tell you my system for keeping your weekly flat rates where I can get them at a moment's notice, the only way flat rate is of value. I use a thick 1920 260 page MOTOR AGE, labeled on the back Flat Rates—Car Classified.

The book is divided into sections, 10 pages for each letter of the alphabet. First 10 pages (A) cars. Pages 11 to 20 inclusive for (B) cars, pages 21 to 30 inclusive for (C) cars, 31 to 40 inclusive for (D) cars. I use a common ruler 1 in. wide and when I get the week's flat rate I insert the ruler in the book and with sharp knife I cut out the right page of MOTOR AGE and glue in the flat rate on the 1 in. marginal edge that I left in the book. These don't get any thicker as one replaces the other when removed. The other leaves I leave in and only cut out one at the time I get the new flat rate.

Now in doing this I find I destroy lots of valuable reference that you give in the Reader's Clearing House on account of it being on the reverse side of this flat rate sheet. I like to keep the Clearing House intact and read it at leisure as I can't always read MOTOR AGE the day it comes. Could we not have flat rate on the opposite side of the picture section sheets so they could be removed and I thought also if you gave in one week two pages of A car information on one sheet and next week also two pages on same sheet of B cars, as Buick, then we could file it alphabetically and have a ready reference in time. Motor Journal once published each week a full page wiring diagram of different car each week which we could cut out and file. I sure read with interest article No. 12 Bill Fixit radio test, page 14, October 22, 1925. It was in language I could understand. Give us some more.—G. I. D.

We think your system of filing the pages of the Flat Rate Forum is all right but so far as changing the make-up of MOTOR AGE is concerned we are very much afraid it cannot be done. If we rearranged the pages to put the Flat Rate Forum on the back of the second page of the picture section it would put two Reader's Clearing House pages back to back.

MOTOR AGE'S FLAT RATE FORUM

No. 41

FLAT RATES FOR CLEVELAND COOLING SYSTEM OPERATIONS

Manufacturer's Official Designation		Time Ov.	Sp.	St.	
1157	Flush radiator (chemical treatment)	⅝	⅝	⅝	hr.
1158	Clear radiator—Overflow tube	¼	¼	¼	hr.
1159	Renew radiator cap gasket	⅛	⅛	⅛	hr.
1160	Thaw radiator and refill with alcohol solution	⅝	⅝	⅝	hr.
1180	Renew one hose connection	¼	¼	¼	hr.
1181	Stop leak at hose connection	¼	¼	¼	hr.
1182	Install or renew spring in hose connection	¼	.....	.....	hr.
1183	Renew intake elbow	½	½	½	hr.
1184	Renew all hose connections	½	¾	1	hr.
1185	Tighten intake elbow	⅛	⅛	⅛	hr.

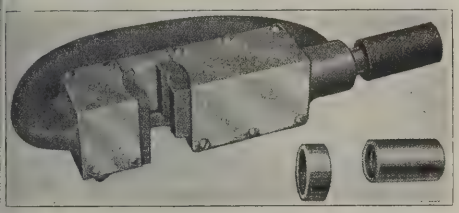
NOTE: Ov. is for models with overhead valves, Sp. is for the 1926 Special and St. is for the 1926 Standard model.

THE MARKET'S NEW OFFERINGS

The Items Presented on This Page Were Displayed at the Recent A. E. A. Show

WEAVER VISE

A PRESSURE vise for holding parts such as camshafts in a vertical position in order that gears may be pressed on was displayed at the exhibit of the Weaver Mfg. Co. of Springfield, Ill. This is intended for use with the Weaver Hi-Speed and regular presses. This vise accommodates work ranging from ⅝ in. to 2¼ in. in diameter and lists at $22.50. The Weaver display also included a new tire spreader designed to handle all sizes



Weaver Vise

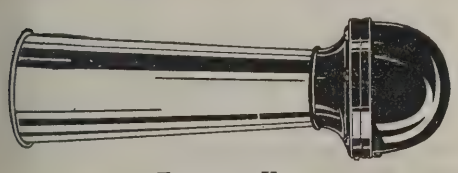
of balloon as well as high pressure tires, taking sizes up to the 7.3 in. diameter balloon as well as high pressure tires up to 5 in. The tire spreader lists at $28. Another item was a special garage jack, so constructed as to get below any point on the car which is 5 in. or more above the floor. The feature of having the front wheel steering controlled from the handle is incorporated in this jack.

WALDEN WORCESTER GENERAL SERVICE SET

WALDEN Worcester No. 39 general service wrench set, Walden-Worcester, Inc., Worcester, Mass., contains various types of speed wrenches to fit the following cars, Chevrolet, Buick, Chrysler, Durant, Hupmobile, Willys-Knight, Packard, Dodge Brothers, Essex, Hudson, Nash, Star, Peerless, Lincoln, Studebaker, Oldsmobile, Oakland, Overland, Reo and Jordan. All told there are 39 wrenches mounted on a board 6 by 2 ft. Price complete $40.20.

TOROVOCE HORN

THE Torovoce is the name of a motor driven horn made by the E. A. Laboratories, Inc., Brooklyn, New York. The name is intended to indicate that the tone is that of a Toro or Mexican wild



Torovoce Horn

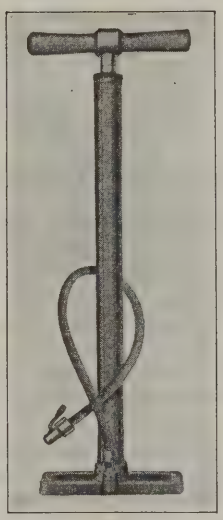
bull. The projector is nickel plated brass and the base is black enamel. It is motor driven with magnetically operated sound producing mechanism. The horn is supplied for either 6 or 12 volts and lists at $22.

LOCKTITE REPAIR KIT

IMPROVED Locktite Tube and Casing Repair Kit. Locktite Patch Company, Detroit, Mich. The Locktite Fabricback patch which goes with this outfit is said to have been greatly strengthened while a liberal piece of Locktite Plug Rubber to be used in connection with the patch is now included. The plug rubber is a chunk of specially prepared soft, pliable rubber, a piece of which is stuck into the hole. It works its way into all parts of the break before the patch is applied in several layers to repair the casing. The kits, 50 cents and $1 sizes, will include tubes of Locktite Rubber Cement.

NOERA TIRE PUMPS

COLORED automobile tire pumps. Noera Manufacturing Co., Waterbury, Conn. Here is a departure in hand pumps. By putting them out in different colors the makers declare car owners are

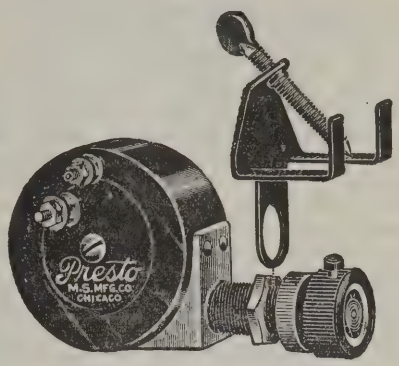


Noera Tire Pump

quicker to pick them up. The Noera company makes hand pumps in a wide variety of colors and color combinations in addition to still showing pumps in nickle finish. The colored pumps have full Noera quality in all respects. They will help brighten up the counter or window display. List price $2.50 each.

WILLIAMS SUPERRENCH

WILLIAMS Superrenches, J. H. Williams & Co., Buffalo, New York, are now to be had in chrome-molybdenum steel. Wrenches made from this material, though of lighter weight, thinner section, greater length and with narrower jaws than carbon steel wrenches with corresponding openings, naturally are far stronger. Aside from the different material used the Williams line of wrenches remains substantially the same, although the use of chrome-molybdenum steel has made possible a refinement in design and less weight.



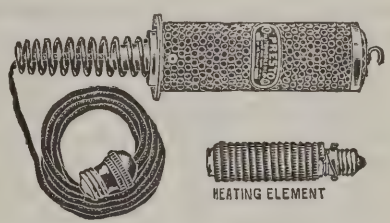
PRESTO MATCH-LESS CIGAR LIGHTER

(Cut shown above.)

PRESTO cigar lighter, Metal Specialties Mfg. Co., 338 N. Kedzie Ave., Chicago, can be installed either through a hole, through dash, or by clamping to bottom of same. Each lighter has all parts necessary for universal mounting. Has an automatic cord rewinder that is concealed behind the dash no matter which way lighter is mounted. Lighter has 5 ft. of cord and Presto switch tip. Made in 6-8 and 12-16 volts. Price $3.

VOORHEES WELDING HOSE

ACETYLENE Welding Hose, Manufactured by the Vorhees Rubber Mfg. Co., Jersey City, N. J. The new welding hose consists of this company's regular Conqueror hose tube and body with a special oil resisting cover. It is made in green with a white stripe. Deliveries will be made after the first of the year.



Presto engine and radiator heater

NEW HEATER SHOWN

PRESTO No. 2500 electric heater for engines and radiators, Metal Specialties Mfg. Co., 338 N. Kedzie Avenue, Chicago, is now made with a heating element which can be readily removed as it screws into a socket the same as an electric light bulb. This element can be purchased separately should it be broken by accident. Price of the extra heating unit is $1.50.

Additional descriptions of items at the show of the Automotive Equipment Association held at the Coliseum, Chicago, Nov. 9-14, will be found on the following page.

THE MARKET'S NEW OFFERINGS

The Items Presented on This Page Were Displayed at the Recent A. E. A. Show

CUNO ASH RECEIVER

A NEW ash receiver is being sold by the Cuno Engineering Corp., of Meriden, Conn., this device selling for $1. It is finished in black and nickel and attaches to the instrument board by means of a clamp. It can be attached to either wood or metal instrument board and when not in use it can be pushed back out of sight under the dash. This concern also had on display a jobber's sales kit containing one of the ash receivers, also one each of the $3, $5, and $7 cigar lighters, the latter being a combination unit which has a trouble light which can be applied to the same cord. A sample Christmas box is also included in this sales kit and shows the way these items are packed for the Christmas automotive trade.

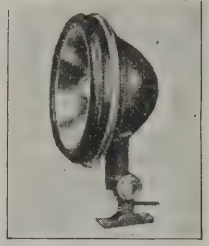
FARRAN-OID FAN BELT

FARRAN-OID Dual-flex molded "V" type belt, The Farran-oid Company, Akron, Ohio. This belt is now made with an endless stretch-proof core which it is claimed, will not break, stretch or deteriorate under any conditions.

(*Continued from page 29*)



Cuno Ash Receiver



S. & M. Road-Lite



Farran-Oid Fan Belt

S. & M. ROAD-LITES

NOS. 85 and 95 S. & M. Road-Lites. S. & M. Lamp Company, Inc., 118 West Thirty-sixth St., Los Angeles, Cal. No. 85 and No. 95 Road-Lites have been added by the S. & M. company to supplement the No. 75 Road-Lite. They are similar to No. 75 but in larger sizes. The light is installed on the left spring horn of the car and illuminates the edge of the road. Finished in black and nickel. The reflector is 5¾ in. in diameter.

GLOBE TOOL BOX

A TOOL box for use on motor coaches is made by the Globe Machine & Stamping Co. of Cleveland, Ohio, it being known as model 8-88. It rests half on the running board and half on the front fender, being bevelled off at the forward edge so as to fit the fender and running board. The price is $7.50 list.

Chicago's Fourth Annual Radio Show Displays $250,000 in Sets

CHICAGO, Nov. 23.—Latest and most complete developments of the present-day radio industry were presented to the public beginning Tuesday of last week, at the fourth annual Chicago Radio Show in the Coliseum. The exposition continued up to 11 o'clock last night. More than 200 American and foreign exhibitors installed more than $250,000 worth of radio apparatus in the booths, including every device and form of device used in reception of wireless.

About 90,000 square feet of space on the main floor of the Coliseum, its annexes and balcony was used to exhibit the marvelous growth of the industry in the last five years.

Special entertainment features exclusive of the show proper, were arranged for each day. Scientific demonstrations and lectures were given, and stunts such as lighting by radio of an ordinary electric bulb held in the hand; frying eggs on a cake of ice by radio and brewing tea in the same manner, were shown.

An amateur set building contest was staged, for which prizes totaling $1,000 were awarded. A complete radio broadcasting station was operated in the balcony of the Coliseum throughout the week, some of the best known radio performers in America taking part in the afternoon and nightly programs.

Miss Rena Jane Frew of Beaver, Pa., winner of the Radio Diana contest under the auspices of the Radio World's Fair, New York, conducted by the same management as the present show, was presented to the public. Mrs. Flossie E. Erickson of Bloomington, Ill., was announced as winner of the Radio Diana contest for the states of Indiana, Wisconsin and Illinois.

Special features of the show opened Tuesday night when Mayor William E. Dever of Chicago, Lieutenant-Governor Fred Sterling and other prominent officials assisted at the opening ceremonies. An elaborate musical program followed.

Wednesday afternoon the Chicago Rotary Club broadcast a special program. Thursday afternoon a Kiwanis Hour was the feature. The Lions Club took charge of the Friday afternoon program.

The exposition was open to the public from 1 to 11 p. m. daily. A private session of radio dealers was held each day from 11 a. m. to 1 p. m. Conferences between dealers, jobbers and manufacturers of radio apparatus were arranged during these periods.

The exhibit was the official show of the Radio Manufacturers' Association, Inc., and those who were in charge of the management of the show included:

U. J. Herrmann, managing director; G. Clayton Irwin, general manager; Charles Glaser, executive assistant; A. Ries, in charge of registration; Charles H. Porter, director of publicity; A. Foster George, assistant director of publicity, and J. Elliott Jenkins, technical director.

Three hundred silver cups and awards were given by the management to the winners of the various contests.

Radio Battery Chart

A CHART which gives the correct type and size of battery to be used with every make and model of radio set as recommended by the set manufacturer, is published by U. S. Light & Heat Corporation, Niagara Falls, N. Y., and will be sent free on request.

For years while radio experts were working on the development of tubes, hook-ups and tuning devices, USL engineers devoted their attention to the correct battery for best reception. The correct battery balanced with a set is as important as the correct grade of oil used in automobiles.

King Neutrodyne Receiver

THE King Neutrodyne Receiver is designed and built by the King Quality Products Co., Buffalo, N. Y. This is a five tube set and a plunger type switch permits the use of four or five tubes as desired. There are three separate tuning controls and in the model 25 S an Amplion reproducer is a built-in part of the receiver. A double metal panel and condenser shield eliminates capacity effects between the condensers and between the operator and the instrument.

EDITORIAL

Tires in 1926

THE price of crude rubber remains high and the supply of the product is said to be inadequate. The British restriction policy at last has begun to restrict and from present indications the automobile industry will be confronted with a serious situation in regard to tires in 1926. American interests that have set out to grow their own rubber will not get into production on an appreciable scale for some years. Meanwhile it will pay the industry to do all in its power to conserve tires. Casings should not be too quickly discarded. An inexpensive repair frequently will greatly prolong the life of an otherwise good casing. A tube frequently is discarded as leaky when what is needed is a new valve core at a cost of about six cents. New tips, boots and other accessories can be used to advantage in getting the utmost mileage out of tires. And drivers should be urged to use care in driving over rough roads so as not to unduly damage their tires. The hoarding of tires by consumers is not to be encouraged. It merely serves to increase the apparent shortage of the product and tends to drive prices upward. Conservation of tires will go a long way toward relieving any threatening crisis in the tire supply.

Just because 1926 promises to be a year of grand opportunity—don't roll over on the other side now and sleep until Jan. 1.

Get Your Share

NEXT year is to be a year of much educational campaigning in the automotive field. Associations will strive to educate merchants as well as ultimate consumers and factories will concentrate efforts along several avenues—education for their merchandising forces and education for the person who eventually takes their products off the hands of the retail dealer.

All signs indicate that 1926 will be a year in which much money will be spent by the American public and the industry which sleeps little at the switch is the one which will come in for its due share of the profit distribution.

Automotive retailers will share in 1926 profits in proportion to their individual alertness. There is plenty chance for the dealer to tune in locally on national advertising campaigns relating to his products and now is the time that he should begin to think about his plans in this connection. Advertisements in the dealer's local newspapers will put extra emphasis on the national advertisements and remind the public that those items dealt with in the national advertisements are to be found at his place of business. Educational promotion is "advertising" in one form or another and the advertising copy which "informs" and enlightens is a type that gets results. The big thing next year will be to cash in to a maximum extent on the big volume of general public buying and good promotional effort is an effective route to this end.

The same knife which prunes the needless overhead is the one which cuts the melon.

Motorized Prosperity

STUDEBAKER'S president, A. R. Erskine, set forth some facts in an address before the recent convention of finance companies in Chicago which may not set well with the long-faced alarmist who is inclined to believe the automobile has come into our economic life as an unfortunate curse of extravagance. You meet this type of citizen every once in a while. He tells you the country can not possibly hope to thrive and continue diverting so much of its wealth to the purchase and operation of what he persists in calling "pleasure cars." He will tell you that too many people are giving up actual necessaries of life to keep their cars going. He wonders shudderingly "how they get by." MOTOR AGE's readers, alas, know this type of citizen well.

Then from Mr. Erskine:

"The post-war prosperity of the United States has amazed the world. We are getting along pretty well today. Savings bank figures disprove claims that the automobile is absorbing all the money in the country. Figures supplied by the Controller of the Currency show for the decade from 1914 to 1924 the number of savings banks decreased from 2,100 to 1,603, but the number of depositors increased from 11 to 14 million, the total deposits from 4.9 to 8.4 billion and the average amount per depositor from $444 to $605. Life insurance policies outstanding increased during the same decade from 39 to 86 million, the amount of insurance from 21 to 64 billion, and the average policy from $545 to $724."

Prosperity is more evenly distributed in America than in any other country of the world and people on the whole are more comfortable than ever before. The masses are enjoying conveniences unheard of, in a popular sense, in previous times. More people are being added to the long list of car owners day by day and more people day by day are putting surplus money in savings banks and profitable investments.

We might tell our long-faced friends that the automobile has been one of the foremost agencies in bringing about this happy condition. From time immemorial the big economic problem has been that of speeding up transportation and inter-communication. The motor vehicle has speeded up and greatly enlarged the nation's earning capacity and the additional wealth has made it possible for still others to own automobiles as well as improve the financial status in other respects.

Production Continues at High Rate

Stocks of Cars on Dealers' Floors Are Gaining Rapidly

Volume Fails to Reach Point Where it Becomes Unwieldy, However

PHILADELPHIA, Nov. 25.—Dealer stocks of new passenger cars have been increasing steadily the last two or three weeks but they have not yet become unwieldy. Production is still at an unusually high rate for this time of year and sales have not held up correspondingly.

There are indications that the stock on dealers' floors increased more than 100,000 during October and that at least as large an increase can be expected in November provided production maintains its present pace until the end of the month.

These increases are in line with sound practice thus far as dealers always have stocked extra cars in the winter months so that they may give immediate delivery on any model called for. The dealer is in a better merchandising position that he would be otherwise.

Manufacturers are expected to shut down production in time to prevent any serious overstocking. The retail financing situation is causing concern particularly on the Pacific Coast where extremely liberal terms are being extended in the case of one popular line of cars at least, despite efforts of several large manufacturers and some of the banks to keep credit terms on a sound basis. Local competitive conditions still rule

The next thirty days will see even more strenuous competition in this field. The effect of liberal new car instalment terms on used car buying is beginning to become more pronounced in some sections with manufacturers and dealers giving serious thought to disposition of the used car problem in the next six months.

One price cut was announced last week and rumors of several others are going through the industry despite the fact that material prices are on the upgrade and that wage rates have not fallen. Materials such as sheet steel and hardwood are higher now than they were a month or two ago and tires are considerably higher, though most of the manufacturers have their current commitments covered by contracts made at lower levels than are now in effect.

G. M. BUYS VAUXHALL

NEW YORK, Nov. 21.—Alfred P. Sloan, Jr., president of General Motors Corporation, announces that negotiations between that corporation and Vauxhall Motors, Ltd., of Luton, Eng., were finally consumated November 16, through the approval of the plan by Vauxhall stockholders and that the board of directors was increased from four to seven, the additional three representing General Motors. Mr. Sloan added that the English company would continue exactly as at present, under the same management. with no change in general operating policies.

DENIES PARTS RUMOR

NEW YORK, Nov. 21.—The rumor that United Motors Service would shortly take over the distribution of parts for General Motors passenger car units was officially denied by John Pratt of United Motors Service, Inc.

DODGE BROS. BUYS GRAHAM

NEW YORK, Nov. 23.—Clarence Dillon of Dillon Read & Co. today announced that the Dodge Brothers Motor Car Co. has purchased, for cash, Graham Bros., truck manufacturers. The amount of cash involved was not made public. Ray A. Graham confirmed the announcement. No change will be made in Graham Brothers personnel and distribution will continue through Dodge Brothers dealers. Graham has been steadily purchasing Dodge Brothers common stock and has declared intention of increasing his investments.

Frederick J. Haynes, president of Dodge Brothers, has been made chairman of the executive committee, succeeding Edwin G. Wilmer, who has been named chairman of the board. Ray A. Graham, secretary of Dodge Brothers, is now general manager and Joe B. and Robert C. Graham, president and vice president respectively, of Graham Brothers, now become members of the Dodge Brothers board.

Mack Trucks Declares 50 Per Cent Stock Dividend

NEW YORK, Nov. 21.—Mack Trucks, Inc., has declared an extra dividend of 50 per cent in common stock payable Dec. 31 to holders recorded Dec. 15 and Chrysler Corp. has called a stockholders' meeting for Dec. 18 to ratify the propsal to split up its common on a four for one basis.

Mack directors took no action as to the probable cash dividend policy after the increase in capitalization nor did the Chrysler directors inaugurate cash disbursements on its common.

The Mack dividend of $1.50 payable Dec. 31 applies only to common now outstanding. After the 50 per cent stock dividend is paid there will be about 673,000 shares outstanding. With no departure from the present dividend rate of $16 per year stockholders on the enlarged capital would receive $9.

A. E. A. Opens Merchandising Campaign in New Englan

Three Meetings Are Held Durin Week, With Prominent Speakers Taking Part

CHICAGO, Nov. 23.—The first big effo in the Automotive Equipment Associa tion's new merchandising campaign de signed to keep dealers busy this winte was carried out last week in New Eng land and in New York State. Thi campaign, with "Show 'Em and Se 'Em," as its slogan, was announced a the A. E. A. convention in Chicago earl in November.

Three meetings with the A. E. A. battery of speakers on the platform mad up last week's campaign.

The first meeting, for jobbers and thei salesmen, was held Thursday night a Hartford. The committee in charge wa composed of J. P. Sprague of L. L. Ens worth & Son, Hartford; L. H. Woodru of C. S. Mersick & Co., New Haven, an Frank Waters of Tarbell-Waters Co Springfield, Mass. The speakers wer Arthur R. Mogge, merchandising directo of the A. E. A.; R. W. Proctor, sale manager of Black & Decker Mfg. Co. George W. Fleming, president of Flem ing Machine Co., and A. V. Coming editor of Automobile Tsade Journal.

At a meeting at Boston Friday nigh the speakers were Mr. Mogge, Mr. Proc tor, Mr. Fleming and Ray W. Sherma editor of Motor. The Boston meetin also was for pobbers and their salesme and the attendance was over 200. Th committee in charge of this meeting wa composed of Elmer Littlefield of Wet more Savage Automotive Equipment Co. A. S. Hunt of Linscott Supply Co., an Frank Murray of Post & Lester Co., al of Boston.

The third meeting was held at Syra cuse, N. Y., Saturday night and was fo retail dealers of whom 75 were in at tendance. It was arranged by the Ona daga Auto Supply Co. The speaker were the same as at the Boston meetin with the addition of Ralph C. Rognon proprietor of a large independent repai shop in New York City.

From start to finish there was no ap plesauce or hokum handed out at thes meetings. And the listeners seemed t appreciate the points brought out by th speakers. The program was so wel balanced there was nothing tiresome o monotonous about it, and each speake talked quickly and carried his audienc along so that they got the points.

In his talk Mr. Mogge brought ou many interesting things, but one in par ticular stood out. Taking some recen advertisements of leading car manufac turers, he showed that at last the bi

(*Continued on Page* 33)

N. A. F. C. Reaffirms Stand on Ideal Car Financing Terms

Delegates Bring Up Subject of Rates, Some Declaring Unfair Competition Is Rife

CHICAGO, Nov. 21.—Members of the National Association of Finance Companies, at the convention held in the Hotel Sherman here Monday and Tuesday, reaffirmed the resolutions of a year ago expressing the conviction that automobile retail times sales should be on the basis of one-third down and the balance in twelve equal monthly instalments. This action was taken after efforts to modify the resolutions to cover some of the practices now widely in effect had failed.

The delegates to the convention were much more eager to discuss rates than terms. It was brought out that the new arrangements made by several automobile manufacturers with finance companies carried rates that the majority of the companies felt they were unable to meet. Declaring that this situation was one that would in the long run have a bad effect on automobile sales, the delegates passed a resolution calling for the appointment of a committee to call upon manufacturers and set before them the factors entering into financing rates and the results that might be expected to follow from the establishment of unprofitably low rates.

Something of a sensation was caused when E. S. Hare, vice-president, Hare & Chase, Inc., said:

"The vital point today is the question of rates. In most cases where factories are advertising low financing rates they are deceiving the public because they are subsidizing the finance company and absorbing part of the cost in the list price of the car. We know the factors that go into financing rates and we know what are fair rates."

No reply was made to these charges, but inquiry developed that by no means all the companies not allied with factories believed that subsidies were granted. However, the statement was generally made that even the big financing companies could not make a legitimate profit and obtain the necessary capital for expansion on the rates under the factory plans.

Among the speakers who strongly urged adherence to the standard of one-third down and the balance in twelve payments were Henry Ittleson, president, Commercial Investment Trust, Inc., New York; C. E. Gambill, president, National Automobile Dealers' Association; A. W. Newton, vice-president, First National Bank of Chicago, and A. R. Erskine, president, Studebaker Corp. of America, Mr. Erskine adding that what the manufacturer was interested in was low rates to the consumer, which entailed standard terms and only a fair profit to the finance company. Mr. Gambill favored no-recourse plans as fairer to the dealer and Mr. Newton and Mr. Erskine were inclined to favor recourse.

A discussion on used car paper was held, with A. J. Morris, president, Industrial Acceptance Corp., New York, taking the recourse side and Mr. Hare the no-recourse side.

New directors elected were: Mr. Hare; F. R. V. Williams, Finance & Guaranty Co.; V. G. Dunnington, Manufacturers' Finance Co.; A. E. Holton & Co.; D. L. Barnes, American Investment Co.; E. W. Carter, Carter Guaranty Co.; L. M. Rocreford, Northern Finance Corp., and O. Rey Rule, Pacific Finance Co.

The membership now stands at 265, as compared with 155 who signified their desire a year ago to join the new association.

A. E. A. Opens Big Campaign

(*Continued from Page 32*)

men were thinking of something besides beauty and speed. He read extracts to show that the something else was service. Tying this up with his talk he outlined why it seemed a good thing to have the jobbers and salesmen carry the idea out to the dealers to make them see how they can sell service on a profitable basis. He drew a chart of 27 service shops covering a period of 12 months and showed that the peak time for keeping the place going 100 per cent was less than three months. From that he deducted that there was something wrong fundamentally in their operation, and that they were not reaching car owner readily.

Mr. Sherman dealt with the orgy of Christmas buying. It was interesting all through because he showed the senseless plans of millions of people who begin December 1 with a list of names and pocketful of money, fighting and worrying until Christmas Eve, when they ejaculate, "Thank God, that's done!" and wonder how they are going to meet their bills when the New Year arrives.

Then he explained that for about the same price buyers paid for useless gifts they could get the practical automotive articles—if the dealers taught the buyers to do it.

Some interesting comparative figures were given by R. W. Proctor. He showed, for example, how Packard after investigating New York, Philadelphia and Springfield branches as to service had jumped the profits from six tenths of one per cent to more than 6 per cent in a couple of years.

Mr. Fleming summed up some of the points brought out by the other speakers. Then he stated that the salesmen should be more than mere order takers. He advised them to become salesmanagers for their groups of dealers by sitting down and analyzing their problems.

Mr. Comings gave many examples of how dealers have increased their business in the winter months.

Arrangements Started for Detroit's Automobile Show

Spaces Already Reserved for 34 Makes of Passenger Cars and 12 Commercial Lines

DETROIT, Nov. 21.—Preparations for Detroit's Silver Anniversary Automobile Show to be held from January 23 to 30 have started with the signing for space reservations by representatives of 34 different makes of passenger cars and 12 lines of commercial vehicles and buses. The demand for space for the 1926 show is far in advance of any previous years. The show will be under the auspices of the Detroit Automobile Dealers' Association, and will be held in Convention Hall.

Arrangements have been made for 50,000 additional square feet of space which brings the total combined area up to 200,000 square feet.

Besides showing passenger cars and buses, commercial vehicles, accessories and other equipment pertaining to the automobile trade will be on display. Motorboats will be an added feature as will a model repair shop in full operation.

During the show, the annual convention of the Society of Automotive Engineers and of the Michigan Automotive Trades Association will be held. Other organizations directly connected with the automotive industry are expected to hold meetings during show week.

The makes of passenger cars for which space has already been reserved include: Ajax, Buick, Cadillac, Chandler, Chevrolet, Cleveland, Chrysler, Dodge, Flint, Ford, Franklin, Hupmobile, Jewett, Jordan, Kissel, Lincoln, Locomobile, Marmon, Nash, Oakland, Oldsmobile, Overland, Packard, Paige, Peerless, Pierce-Arrow, Reo, Rickenbacker, Rolls Royce, Star, Studebaker, Wills Ste. Claire, and Willys-Knight.

Space reservations for the following commercial vehicles have been made: Autocar, Chrevolet, Denby, Dodge, Ford, Federal, G. M. C., Gotfredson, Graham, Kelly, Pierce-Arrow and Reo.

NEW HUPP FINANCE PLAN

NEW YORK, Nov. 21.—The Hupp Motor Car Corp. of Detroit has completed arrangements with the Commercial Investment Trust Co. of this city for a plan to finance Hupp sales to the plan recently announced with reference to Dodge Brothers cars. Details as to the rates which will operate under this plan are not yet available but they are described as low in comparison with prevailing rates. One feature of the Dodge Brothers plan, which is understood to apply to the Hupp plan, is that in contrast to the Chrysler-Palmetto plan purchasers are not required to finance their purchases through the Commercial Investment Trust Co. or to restrict themselves to the insurance arrangement provided by the plan.

Brilliant Colors Are Principal Features of New York Salon

Plumage of Birds Used by Coach Builders in Development of Distinctive Hues for 1926 Custom-Built Cars—Interiors Harmonize

COACH builders exhibiting at the New York Salon in the Hotel Commodore which closed November 23, used colors in more profusion than ever before. Reds, greens, blues and yellows in all their combinations made the show the most colorful of its kind ever held.

Three, four and more colors were used on the same body in ground colors, moldings, stripings, and trimmings in a manner that a few years ago would have been declared revolutionary. Coach makers have been trying for individuality in their jobs, and if appearance counts for anything, they have attained it.

Ninety-seven cars were on display representing the work of 13 body builders and chassis makers. Body builders displaying were: Brewster, Brunn, Derham, De Causse, Dietrich, Fisher, Fleetwood, Holbrook, Judkins, LeBaron, Locke, Rollston and Willoughby. Chassis exhibited include Amilcar, Brewster, Cadillac, Cunningham, Duesenberg, Franklin, Isotta-Fraschini, Lancia, Lincoln, Locomobile, Marmon, Maybach, Mercedes Minerva, Packard, Pierce-Arrow, Renault, Rolls-Royce and Wills Ste. Claire.



Interior View of New York Salon.

Cabriolets or town cars were the most popular models for display, there being 25 of these shown. Limousines came next, with considerable numbers of coupes, sedans, roadsters and phaetons—the latter being mostly of the so-called sport type.

A distinct trend was shown toward more originality in color effects. Many fenders were colored to harmonize with body colors, and colored tops were quite numerous. The upper structures were given more color than ever before. In a number of cars the window frames were painted the same color as the body. Wheels, in many cases, were colored, sometimes in a harmonizing shade of the body color and sometimes in a contrasting color.

As might possibly be expected in cars whose owners can well afford to have them refinished frequently, varnish finishes predominated although there were a number of pyroxylin jobs, either dull finish or polished, on display. Glossy finishes evidently are still in considerable demand.

An interesting development in body work was the treatment of belt lines and moldings on the Salon exhibits. Some body builders, notably Fisher, still keep to the double belt line in which the upper belt ends at the winshield, while the lower one extends to the radiator. A large number of other makers, however, have given the belt a different treatment, if not eliminating it entirely.

Several jobs extend the belt line into a raised panel over the top of the hood, ending in an arrow effect at the radiator, following the practice introduced in this country by Duesenberg several years ago. At least one builder followed this practice, but ended the raised panel at the rear of the hood. Many cars had the windows outlined in molding but used no horizontal lines. Either one or two lines of striping, usually in light color, were generally used on moldings.

Wire wheels were furnished as standard equipment on about 50 per cent of the cars shown with artillery type on 33 per cent and disk on the remaining exhibits. Although a considerable number of cars carry spares at the rear, an increasing number utilized the space directly behind the front fenders for this purpose. As mentioned before, black wheels were comparatively few, nearly all jobs having colored running gear. The fenders were much wider than before. This, of course, is due, to some extent, to the use of balloon tires, but many jobs were fitted with fenders wider than would be necessary under usual practices. Metal used for fenders was of much heavier gage than before.

Upholstery materials were varied, with broadcloth predominating. Leather in the soft finishes which have been developed by tanners for automotive upholstery was used considerably both in open and closed models. One car, a Pierce-Arrow, had fabric upholstery with leather binding and edges, the first time this practice has been used by American manufacturers.

A number of coupe, sedan and limousine bodies were without outside sun visors, the roof ending abruptly and giving the job the appearance of a cabriolet or town car.

All the Cadillacs displayed had two interesting chassis features. Radiator shutters were painted the same color as the body. On either side of the body, just behind the front fenders, where many cars carry spare tires, was a box sunk into the running board. On one side the battery was carried and the other box served as a tool contained.

The use of several steps in the construction of the window frames was another feature used on a number of cars. This method graduates the jump between the thickness of the body below the window and the window itself, and makes a very pleasing change. In a number of cars the hood louvres were formed in a panel raised above the surface of the hood. Many of the louvres were striped.

Roadsters and the front doors of cabriolets were, in many instances, fitted with windows which could be lowered entirely out of sight. Side screens to operate with the front doors were furnished on many jobs. Nearly all cars

were fitted with distinctive radiator caps, while heat indicators were placed on the instrument board.

Considerable effort has been expended, apparently, in an attempt to decrease the size of body pillars. De Causse bodies on Franklin chassis had a front door and body pillar arrangement which was noticeably narrower than is ordinarily found in composite body construction. Much the same end was achieved by several other builders, the bodies by Brewster being particularly satisfactory in this respect.

Although some attempt has been made in the past to have the upholstery match the body colors, much greater progress was evident in this direction this year than ever before. Some of the colors with which bodies were painted must have been particularly hard to duplicate in fabrics, but with few exceptions all upholstery either matched or was in very close harmony with the principal body color used.

A Brunn-Cadillac cabriolet had wine-color body below the belt and same color for window frames. A vermillion belt ended in an arrow head at the rear of the hood. A Dietrich town car on Packard chassis was finished with bright green body and window frames, black molding and white striping. A Willoughby-Wills Ste. Claire town car was painted cerise with vermillion stripes.

A sport phaeton by Fisher on Cadillac chassis was painted a bright red with black molding, fenders and trim. A Holbrook cabriolet on Packard chassis was painted maroon with bright red wheels and black fenders. The lower part of the inclosed portion of the body was covered with wicker.

In a LeBaron roadster on Mercedes chassis the body was cream with green fenders and green belt ended in a raised hood panel and vermillion striping. A Cunningham limousine was painted a bluish gray with black fenders, cream wheels, black top and molding and light colored stripes. A Fleetwood body on Isotta-Fraschini chassis was painted gray-blue with cream striping below the belt and with the portion above the belt finished in polished aluminum.

A Rolls-Royce sport phaeton was solid black below the belt line and polished aluminum above. A Minerva brougham had cream-colored body, green fenders, top and trim, black wheels and polished aluminum cowl and hood. Another Fleetwood body with Isotta-Fraschini chassis had blue body, window frames and wheels, black fenders, top and molding and polished aluminum hood.

An interesting body was shown by Brewster on a Rolls-Royce chassis. The windshield was divided vertically with only the left half adjustable. Instead of an outside sun visor, and adjustable curtain mounted on a rigid frame was placed on the inside where it could be easily operated from the driver's seat. Leather was used on the inside of doors for trim and also for facing the seats. The roof structure was open, this last item being also used on several other bodies. Adjustable front seats were furnished with the adjusting levers projecting between the seats.

Twelve Lincolns were shown, in all of which very striking color effects have been obtained. It is said that the color schemes used are based upon the work of Mother Nature, the master artist, and each car reflects the colorful plumage of a bird.

The twenty-first annual Automobile Salon closed with a new sales record in excess of $1,000,000 for the full week. Nearly 60 per cent of the total represents coachwork as distinct from the sales of chassis.

In a large measure this remarkable sales record is attributed to the new designs in custom bodies and especially to the combinations of brilliant colors which are so effectively used both for exterior finish and interior decorations. Prosperous conditions, so general in all lines of business, were, of course, an important factor.

As a result the demand for exhibition space at the forthcoming Chicago Automobile Salon far exceeds the capacity of the Drake and a limit has been set on the number of cars each exhibitor may show. This is the first time this has been necessary in the case of the Chicago Salon and attests the increased interest in that territory for high priced chassis and fine custom coachwork.

That the year 1926 will be a banner one for motor cars de luxe was the prevailing opinion of the salon exhibitors when they gathered at a dinner on Thursday evening given by President Charles M. Fleischman of Locke & Co. Plans for increasing factory capacity was the main topic of discussion, and the spirit of co-operation was more pronounced than ever.

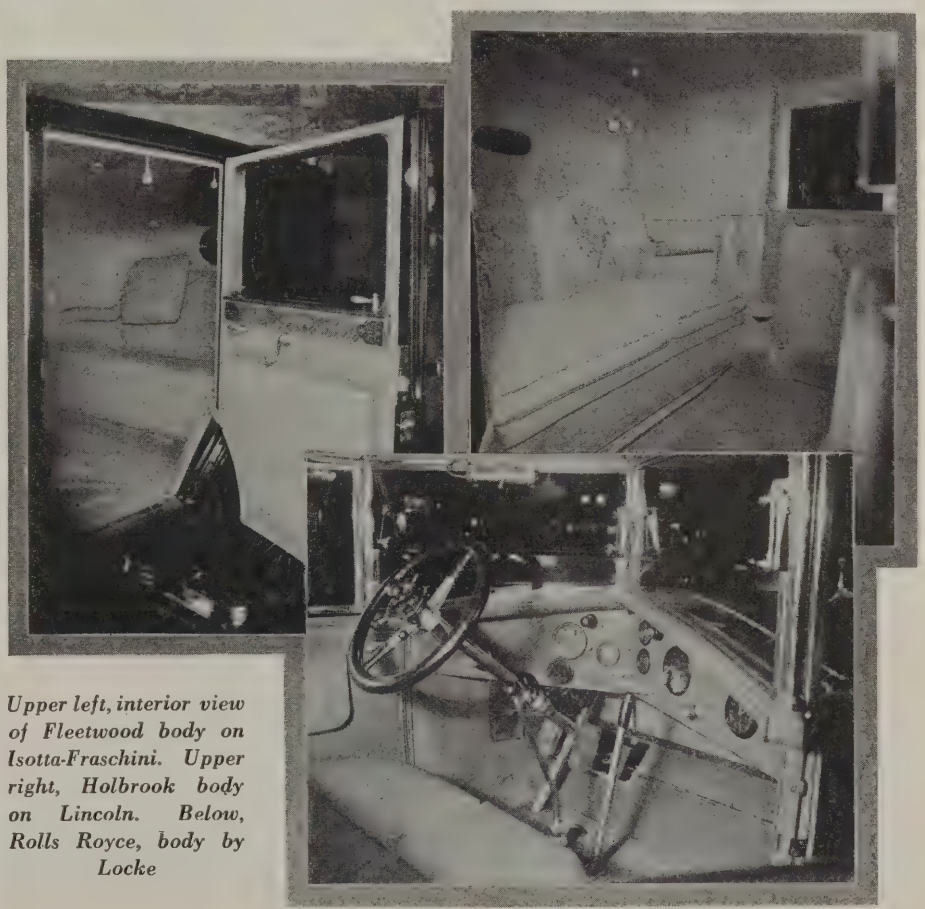
While excellent business was done by all the salon exhibitors it seemed that the higher priced cars were more eagerly sought after and the importers of European cars were particularly pleased with the results of this salon.

INSPECTS U. S. ROLLS-ROYCE

NEW YORK, Nov. 21.—Claude Johnson, managing director of the English Rolls Royce Co., has come to the United States to discuss with his associates the possibility of their entering actively into the airplane production field and to make his periodical inspection of the American works of the company at Springfield, Mass. He said that the new types of airplane engines to be produced by Rolls Royce in England would be revolutionary in design and performance.

THORNE MADE SALES HEAD

KOKOMO, Ind., Nov. 21.—C. J. Thorne, who has been connected with the sales departmeint of the Turner Manufacturing Co. for the last four years, has been appointed general sales manager of the concern, according to an announcement from Earl Turner, president. The new sales manager first became connected with the Turner company in the capacity of traveling sales representative, later taking a position at the plant at Kokomo.



Upper left, interior view of Fleetwood body on Isotta-Fraschini. Upper right, Holbrook body on Lincoln. Below, Rolls Royce, body by Locke

Cadillac Is Spending Three Million in Plant Expansion

New Project Will Make Total of $5,000,000 Spent for Recent Developments

DETROIT, Mich., Nov. 21.—Three million dollars is being spent by the Cadillac Motor Car Company for additions to its manufacturing and retail facilities in Detroit. Ground was broken yesterday at the company's Clark Avenue plant, as the first step in preparing for the present expansion. Announcement of the plans was made by Lawrence P. Fisher, Cadillac president.

The new developments will include assembly and administration buildings at the plant and additions to its retail and maintenance buildings on Cass and Jefferson Avenues. Previous developments in the present schedule have been the completion of the new brass, aluminum and iron foundries and the installation of manufacturing equipment. Together the improvements will cost $5,000,000.

Completion of the new administration building will release space in the manufacturing buildings now occupied by the general offices. The assembly unit 750 ft.x125 ft. will necessitate a complete rearrangement of the interior of the manufacturing buildings for increasing production. In October, 1925, production amounted to 3200.

The present plant when completed will be in remarkable contrast to the Cadillac plant of 1921. Then it was scattered throughout the city located in 77 buildings.

RUBBER CO. TO RESUME

AKRON, O., Nov. 21.—Completion of a $1,000,000 new financing program will enable the American Rubber & Tire Co. to increase its tire manufacturing operations, it is announced by President F. C. Snyder. Operations were resumed last week after a shut down of the plant for the last four months. Orders on hand are sufficient to enable the company to run for two months, Snyder stated, and preparations are being made to increase working forces.

Several Changes Are Made In U. S. Automotive Bureau

WASHINGTON, Nov. 21.—Several important changes in the automotive division of the U. S. Department of Commerce were announced here this week by Acting Chief I. H. Taylor.

F. W. Barker, who has been with the division for about a year, has been appointed to succeed Palmer Elder, as chief of the research department, Mr. Elder resigning to go with the Dodge Brothers Motor Company.

N. C. S. Schuette, a graduate of the foreign service school of Georgetown University, will be added to the automotive staff, as assistant to both Mr. Barker and to T. Houghton, of Grand Forks, North Dakota, who has been appointed to direct the work of the foreign trade manual.

The appointment of a successor to Percy Owen, formerly chief of the division, who resigned to take over the foreign sales of Dodge Brothers, has not as yet been decided upon by Assistant Secretray J. Walter Drake. The appointment is not looked for, according to Mr. Drake, until about the first of January.

New Model 90 Locomobile

(*Continued from page 21*)

A line of two open and six closed body types is being offered. The open models have hand-buffed leather upholstery and Pantasote tops, while the closed models are all trimmed in broadcloth.

All bodies are of composite construction, with ash frames and sheet aluminum paneling. All doors are of the flush type, in both the open and closed types.

One feature of the closed models is the windshield, which is divided along the vertical center line so as to make virtually two individual shields. Very light frames of bronze are used for the glasses, so as to detract as little as possible from the field of vision. These frames are countersunk or tongued and grooved on the edges to give a rain proof effect.

On the closed models, instead of having the conventional vizor in front of the windshield, a movable vizor is provided back of the shield. This rolls up like curtain when it is not needed.

BUICK PLANS EXPANSION

FLINT, Mich., Nov. 21.—Two million dollars has been appropriated by the Buick Motor Car Company to increase the daily output of Buicks to 1,200, President Harry M. Bassett announced today. The additions to the plant and the installation of the equipment will begin immediately.

MOON CORRECTS PRICE

ST. LOUIS, Nov. 21.—Moon Motor Car Co. announces a correcton in the price quoted on the new seven-passenger De Luxe Diana sedan recently introduced. The price of the sedan is $2695, f.o.b. St. Louis, but it was announced as $2685, f.o.b. St. Louis.

N. A. D. A. DATES SET

ST. LOUIS, Nov. 21.—The following dates for sales congresses have been assigned by N. A. D. A.

St. Louis, Mo., Dec. 14.
Milwaukee, Wis., Dec. 15
Chicago, Ill., Dec. 16.
Indianapolis, Ind., Dec. 17.
Columbus, Ohio, Dec. 18.

C. A. Vane, Lynn M. Shaw, A. R. Kroh and H. D. Bullock of the N. A. D. A. staff will be on all of the above programs.

Registrations Show Trend Toward Established Makes

Factory Analyses Demonstrate That Public Is Buying Less of "Miscellaneous" Class

DETROIT, Nov. 21.—From November 1924 up to the present time, the automobile buyer has shown a decided trend toward purchasing passenger cars manufactured by companies which are regarded as the leaders in their respective fields. The car which in registrations is labeled as miscellaneous is gradually losing out, the percentage being quite noticeable as compared to a year ago.

November, 1924, the buyers of these miscellaneous makes in the various states were considerable, enough so as to cause the manufacturers to lay plans to get their patronage. Today they have started to swing over so that the lesser known makes are not enjoying the volume of sales they did in 1924.

This trend may be summarized as follows; the buyers in each class have selected what they consider the leaders in that class and are buying accordingly, other makes which are in the same class are gradually losing out. This is not only true of the lower priced field but of every field.

This trend is shown quite accurately in reports gathered by the various factories and accounts to some degree for the unusual success that certain companies have had this year. What the ultimate outcome may be is a debatable question but there is no denying that the trend is definitely towards the more established makes.

Limousine Body Co. Is Given Auburn Contracts

KALAMAZOO, Mich., Nov. 21.—The year 1926 promises to be the biggest in the history of the Limousine Body Company from the standpoint of production. A minimum average of 35 bodies a day for the next 12 months is the program laid out and the entire equipment of the plant is being entirely rearranged and realigned for that purpose.

J. D. Bobb, president of the company, reports that a contract has been closed to build exclusively for the Auburn Motor Car Company, Auburn, Ind., sedan bodies for the new Auburn "4" and brougham bodies for the Auburn "6" and "8" models.

KENNEDY BUYS PLANTS

STREATOR, Ill., Nov. 21.—Following negotiations lasting several weeks, the buildings occupied for many years by the Halladay automotive accessory manufacturing company and which have been idle since that concern moved to Decatur because of labor troubles, have been purchased by the Kennedy Manufacturing Company, maker of automobile and truck bodies. The price for the land and structures was said to be $40,000.

New Development in Car Lighting Shown to S. A. E.

General Motors Official Explains to Detroit Section His Device for Stopping Glare

DETROIT, Nov. 21.—While a new development in headlamp engineering was disclosed and other methods of combatting the menacing glare of headlamps were discussed at the Detroit section meeting of the S. A. E., the consensus indicated that present forms of headlamps when properly adjusted were satisfactory and that rigid enforcement of the headlamp law was the best solution of the problem at this time. More than 200 were present at the meeting and demonstrations which were held in the General Motors Building.

Henry M. Crane of the General Motors Corp., in presenting the paper of the evening entitled "A Possible Solution of the Headlight Problem," demonstrated the practicability of his scheme by having two automobiles, one mounting the conventional lamps and the other the suggested type, facing each other in the meeting hall.

The salient feature of Mr. Crane's device lies in its low cast, which is no greater than the simplest forms of headlighting now employed. Furthermore, it is possible to install the arrangement on any cars now in operation.

Using Crane's arrangement, the driver has the road illuminated in front of him when he responds to the dimming signal of the approaching driver, giving him full vision ahead and without causing discomfiture to the operator. This is accomplished by rotating the right hand lens nine degrees in the proper direction to give a low light on the left and a high light on the right, and the mounting of special switch for heavily dimming the left hand light.

Thus when two cars equipped with this system approach one another with their left lights dimmed there is plenty of light on both sides of the road furnished by the two right lamps respectively. More than 50 per cent of the glare is reduced with this arrangement, it is claimed. It was also suggested by Mr. Crane that to prevent the direct rays from the filament striking the eyes that the conventional type of bulb should be frosted over in the front. One of the bulbs of this type was installed on the cars and others were available for inspection.

Car Builders in Germany Arrange Payment Terms

WASHINGTON, Nov. 21.—Negotiations are going on between the Reichsbank and the German automobile industry for the use of Reichsbank credit accounts in selling German automobiles on the installment plan, the Automotive Division of the Department of Commerce is informed through consular advices.

It is stated that 80 per cent of the automobile industry has concluded an agreement with a German-American Sales and Finance Company whereby this company takes over the financing of automobile sales.

The total sales price will be paid to the delivering manufacturers and the risk of payment taken by the financing company. In accordance with this agreement, the individual manufacturers have agreed to a certain production syndicate on the basis of which credit extension will be apportioned.

First New G. M. Car Sold

PORTLAND, Ore., Nov. 21.—To H. R. Taylor of the R. Knox Roberts Company goes the honor of making the first sale in this territory of the new car built by General Motors. The purchaser is E. C. Lewis, 2102 Sandy Boulevard, Portland, who bought a coach model without knowing the name or price but is satisfied that his confidence and expectations will be fulfilled.

HIBBARD JOINS RICKENBACKER

DETROIT, Nov. 21.—J. L. Hibbard, formerly foreign sales manager of the Studebaker Corp. of America and foreign and district sales manager of the Cleveland Tractor Co. has been appointed assistant sales manager of the Rickenbacker Motor Company. He will also have charge of export sales. Mr. Hibbard was with the Studebaker Corp. from June 1913 to 1918, resigning to go with the Cleveland Tractor Company. He was at one time general manager of the Maxwell-Chalmers Company of Canada.

DENNY INSPECTS COAST

SAN FRANCISCO, Nov. 21.—M. R. Denny, assistant general service manager of the Studebaker Corporation, spent part of November in San Francisco, on an inspection trip of west coast dealers and distributors.

MURPHY IS PROMOTED

ST. LOUIS, Nov. 21.—William P. Murphy has been appointed retail sales manager of the De Luxe Automobile Co., Oldsmobile distributors in the St. Louis district according to an announcement of George T. Willett, general manager. Charles E. Moore, who succeeded Murphy several years ago as head of the parts department has been appointed head of the used car department.

ZINTL JOINS DU PONT

WILMINGTON, Del., Nov. 21.—William M. Zintl, of the advertising sales department of the Curtis Publishing Company, has been appointed director of sales of the paint and varnish division of the paint, lacquer and chemicals department of E. I. du Pont de Nemours & Company. He will assume his new duties shortly.

General Motors October Sales Gain by 40,336

Total of Passenger Cars and Trucks Delivered by Dealers Is 86,339 in Month

DETROIT, Nov. 21.—Sale of General Motors passenger cars and trucks by dealers to users in October totaled 86,339, as compared with 48,003 in 1924, an increase of 40,336.

The sales of passenger cars and trucks to dealers by the different manufacturing divisions during the past month totaled 95,703, almost double that for October 1924. It created another new sales record. The following tabulation shows monthly sales of General Motors passenger cars by dealers to ultimate consumers and sales by the manufacturing divisions of General Motors to their dealers.

Dealers Sales to Users

	1925	1924
Jan.	25,593	33,574
Feb.	39,579	50,007
Mar.	70,594	57,205
April	97,242	89,583
May	87,488	84,715
June	75,864	65,224
July	65,872	60,836
Aug.	78,638	54,842
Sept.	83,519	48,565
Oct.	*86,339	46,003

Divisions Sales to Dealers

	1925	1924
Jan	30,642	61,398
Feb.	49,146	78,668
Mar.	75,527	75,484
April	85,583	58,600
May	77,223	45,965
June	71,088	32,984
July	57,358	40,563
Aug.	76,462	48,614
Sept.	89,018	51,955
Oct.	*95,703	49,552

**These preliminary figures include passenger car and truck sales in the United States, Canada and overseas by the Chevrolet, Oldsmobile, Oakland, Buick and Cadillac manufacturing divisions of General Motors.*

Paris Decides to Hold 1926 Automobile Show

PARIS, Nov. 5.—(by mail)—Paris will hold an automobile show in 1926, declares Henri Cezanne, general manager of the annual French exhibition. "The efforts now being made to get an extension of the Industrial Arts Exhibition, which occupies the Grand Palais and the adjoining river bank, need not be taken seriously," says Cezanne.

It appears that the Government is not favourable to an extension of this exhibition, and that as a consequence the Grand Palais in the Champs Elysees will be available as usual.

No details have been decided on regarding the show. The probabilities are that it will open the first Thursday in October, thus preceding the London show by one week. This, however, is subject to approval by the English industry. whether there will be a single show for passenger cars, trucks, motor cycles and accessories will depend on the entries received.

N. A. D. A. Arranges Details For Chicago Convention

Meeting to Be Held at La Salle Hotel During National Automobile Show

ST. LOUIS, Nov. 21.—Officials of N. A. D. A. have announced that the Ninth Annual convention of the Association will be held at La Salle Hotel, Chicago, Monday, Tuesday and Wednesday, February 1, 2 and 3. And should the dealers demand it the meeting will be carried over to Thursday morning when, as was done last year, an open forum on dealer problems will be held by the six members of the N. A. D. A. staff.

The first day of convention, Monday, Feb. 1, will be given over entirely to a meeting of the board of directors of N. A. D. A., the first such session ever held in the history of that organization. It was decided to hold the all-day meeting because of the many matters which are to be placed before the directors for their decisions. What these subjects are has not been divulged nor will they be in advance because of the importance which attaches to them.

As Monday and Tuesday mornings are to be dealer days at the automobile show, there will be no meeting on Tuesday morning and the convention will really get under way Tuesday afternoon at 2 o'clock.

James H. Collins, research director of the Chilton Class Journal Co., will deliver the first address. His subject will be "Business Possibilities for 1926." It is expected that his discourse will consume about two hours. For the rest of the afternoon there will be other speakers, not as yet designated who will speak on subjects similar to that of Collins.

The whole of Wednesday's sessions will be devoted to business. There will be addresses on sales analysis, market analysis and kindred subjects by many of the noted men of the industry.

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N. A. D. A. headquarters also has announced the program for the third annual convention of the Atlantic Coast District of N. A. D. A. to be held in the east ballroom of the Commodore Hotel, New York, January 11, in conjunction with the National Automobile show.

The program follows:

10 a. m. "Where Are Profits in 1926," James H. Collins, Director of Research Bureau, Chilton Class Journal Co.

11 a. m. "Fix Your Own Profit Goal for 1926," Harry M. Fancher, Secretary-Treasurer, Tom Botterill, Inc., Denver, Colo.

2 p. m. "Who Will Buy Cars in 1926," Edward Peyton, market analyst, N. A. D. A.

2:45 p. m. "Can the 1920 Salesman Close a 1926 Buyer," H. D. Bullock, sales specialist, N. A. D. A.

3:45 p. m. "Dealer Dollar and Used Car Sense," A. R. Kroh, merchandising specialist, N. A. D. A.

The convention will be an all-day meeting.

Fisher Body Is Expending $500,000 for Additions

PONTIAC, Mich., Nov. 21.—In order to meet the demand for an increasing number of bodies for the Oakland Motor Car Company and to provide adequate facilities for producing bodies for the new six cylinder car to be introduced early next year as a companion to the Oakland Six, the Fisher Body Corporation is expending approximately $500,000 in additional building and equipment at its Pontiac plant.

The present Fisher Body Corporation's $2,000,000 plant has been devoted exclusively, beginning two months ago, to building Oakland bodies. The building additions will add 60,000 more feet of floor space.

This enlargement for body building requirements follows closely the appropriation of $750,000 for equipment in the Oakland factories to increase production on the Oakland Six and $3,000,000 for tools and equipment to build the new six cylinder car which will be produced and distributed by the Oakland organization.

St. Louis Men Purchase Plant of Laurel Motors

ST. LOUIS, Nov. 21.—Arthur S. Sinclair, former promoter of automobile races at the Creve Coeur track, has announced that he is president of a company of St. Louisans which has purchased the Laurel Motors Corporation and its plant at Anderson, Indiana.

The Laurel Company manufactures a special cylinder head with 16 overhead valves and other parts with which Fords are turned into powerful and speedy automobiles. The cylinder head was invented by Robert M. Roff in 1917.

Sinclair stated that other St. Louisans who were officers of the Laurel Corporation were Charles Teutenberg, Norman H. Winter, B. J. Herman and William Schnarr. A St. Louis factory branch of the company has been opened at 4432 Olive street with Herman as manager. Sinclair stated that the Laurel factory at Anderson is to be enlarged.

NEW DURANT DEALER

SPOKANE, Wash., Nov. 21.—The new eastern Washington and Idaho sales zone of the Durant company has been put in charge of Harry Trueblood, formerly connected with the Durant organization at Portland. Mr. Trueblood will make his headquarters in Spokane with March-Strickle company, distributor for Star and Durant cars.

Price of Tires as Original Equipment Raised Again

Announcement Comes at Same Time As Further Advance in Crude Rubber

NEW YORK, Nov. 21.—Advance in prices of original tire equipment to automobile and truck manufacturers ranging from around $10 on small cars to from $25 to $40 on medium class machines from $110 to $125 on trucks, announced as an effort to bring the price of original equipment into line with prevailing retail tire prices, was accompanied by a further advance of crude rubber to $1.10.

London rubber stocks despite the recent increase of 10 per cent in production permitted under the Stevenson act declined 402 tons last week or 4,503 tons compared with 5,589 a year ago.

The Rubber Association of America, Inc., reports September production and shipment of high pressure inner tubes as declining from August with inventories increasing. The same is true of cord pneumatic casings and solid and cushion tires. Balloon inner tube inventories, production and shipments increased, balloon casing inventory and shipments increased while production declined.

Harvey Firestone, Jr., is quoted as saying in London that the present spread between production cost and selling price cannot last long, this opinion being opposed to that held by London stock exchange and rubber experts.

NEW JORDAN DEALERS

LOS ANGELES, Nov. 14.—The Lord Motor Car Company, Jordan distributors in Southern California, has conducted an extensive campaign to increase its dealers organization since the advent of the new Jordan models. Recent dealers appointments include the D. R. Tompkins Motor Car Company of Glendale, Advanced Motors, Huntington Park, Omer Brubaker, of San Bernardino, Wilshire Motors, of Los Angeles.

Star Plans Production of 300,000 Cars in 1926

ST. LOUIS, Nov. 21.—Colin Campbell, vice president of Durant Motors, Inc., and operating and merchandising head of the Star car factories said here last week that the Star Company expected to build and market 75,000 new Star six-cylinder cars in 1926 and about 225,000 four-cylinder cars, a total production of 300,000 automobiles. Campbell was in St. Louis in the course of a tour of inspection of the district of E. D. Knowles, Star and Durant middle west regional manager with headquarters at Kansas City.

Campbell said that average production during the ten first months of this year indicated a total output of 130,000 Star fours in 1925.

Tentative Tax Reduction Is Taken as Encouraging Sign

Industry Believes Excise May Be Removed Entirely When Bill Reaches Congress

NEW YORK, Nov. 21.—Reduction of the excise tax on passenger automobiles from 5 to 3 per cent, as tentatively planned by the House Ways and Means Committee, is regarded by the industry as an encouraging sign that before both houses of Congress finish deliberations on the bill the complete removal of these taxes will be granted.

Nothing short of complete removal will satisfy the industry's conviction that, since the automobile is no longer a luxury but a necessity, it should not be subjected to such taxes.

The decision of the committee to recommend complete removal of excise taxes on trucks, parts, accessories and tires is hailed with satisfaction by the manufacturers of these necessities. The opinion is expressed generally that if the committee, as an initial suggestion, is disposed to go as far as this complete removal and a reduction of 2 per cent on passenger cars, it is not improbable that a further reduction will be made, especially since it is understood that the Senate finance committee is inclined to grant additional hearings on the subject when the bill reaches the Upper House.

Automobile taxes in 1925 amounted to $124,686,745. Of this about $94,000,000 represented the taxes on passenger cars and trucks. Reduction of the tax on passenger cars from 5 to 3 per cent would amount to about $39,000,000. Complete removal of this tax thus would result in a saving to purchasers of new passenger cars amounting to an average of $29.

If the 5 per cent tax is reduced only to 3 per cent the average saving would be $17.40. The tax on trucks is estimated to yield about $31,000,000, which in turn, if completely removed, would revert to purchasers at least so far as members of the N. A. C. C. are concerned.

Whether the tax be only repealed in part, or in toto, there will arise to the industry—and chiefly to the 40,000 dealers—a problem the solution to which is now being attempted by R. A. Brannigan, attorney for the National Automobile Chamber of Commerce, who has been in Washington the past ten days.

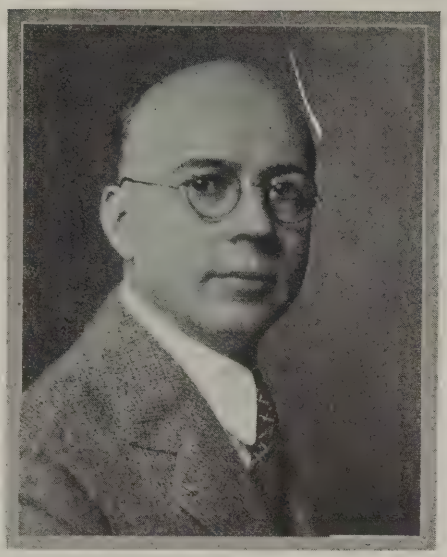
The problem is this:

Who's to pay the tax on passenger cars, trucks, tires and accessories which the 40,000 dealers will have on stock the day the law becomes effective?

Admittedly the purchaser will not pay it. So far as he is concerned the tax is repealed and if he can't purchase a car for future delivery after the tax is repealed he will wait until that date and get it tax free.

The answer to the question, according to Mr. Brannigan, can only be met by a retroactive clause in the measure which will permit a rebate to dealers of the stock on hand the day the new tax law becomes effective. Efforts to have this retroactive clause written into the bill are now being urged on the committee by representatives of the automobile industry now here working on the problem.

New Reo Sales Manager



C. A. Triphagen, who has succeeded R. W. Rueschaw as sales manager of Reo Motor Car Co.

HUPP EIGHT SALES GAIN

DETROIT, Nov. 21.—Sale of Hupp Eight for the first eleven months of this year will be approximately 13,500, according to O. C. Hutchinson, general sales manager of the Hupp Motor Car Corp. Since the reduction in price, the sales have continued at a higher rate than they did shortly after the car was introduced. Hupp officials claim that the number which will be sold up to the end of the month will make the Hupp Eight the largest selling eight-cylinder car in the world. The sales of Hupp Six have been showing a continued and steady gain since their introduction.

India Reports Net Profit of $27.70 on Common

AKRON, Nov. 21.—The sales of India Tire & Rubber Company, for the first six months of 1925 were $2,220,221, or 89 per cent greater than for the corresponding time past year, according to J. M. Alderfer, president, in a letter to India stockholders.

"Despite the fact that our plant ran to its fullest capacity from January to September, we have been constantly behind on orders for the last seven months," Mr. Alderfer stated. "Our daily production has increased far beyond anything that has ever before been necessary."

Net profit after taxes, for six months, ending June 30 was $314,655, which, after preferred dividends, was equivalent to $27.70 a share on the common stock.

Charlotte Used Car Market Disturbed by Repossessions

Stocks Are Low but Dealers Fear Effect on Volume of New Sales Involving Trades

CHARLOTTE, N. C., Nov. 21.—Serious disturbances of the used car market here and at other important points in this territory were attributed by dealers and distributors here to offerings of repossessed cars by finance companies. This situation developed in the middle of November, and, though expected in a measure, has become more serious than the dealers say they expected.

Some of the larger dealers of Charlotte reported that the market has been upset, while others indicated that conditions with them were not quite so gloomy.

The Charlotte Automotive Merchants' Association, car dealers' division, at its last meeting, engaged in a general discussion of this problem. The tacit decision of the membership was that nothing immediately can be done to remedy the situation.

Stocks of used cars in this city are low, and the dealers are not apprehensive of loss from that source, but the condition of the used car market may have some important bearing on the volume of sales of new cars through trades involving used cars, according to several dealers.

Eldridge-Buick to Occupy New Spokane Home Dec. 1

SPOKANE, Wash., Nov. 2.—On December 1 Eldridge-Buick company will occupy their $150,000 three-story and basement home which is now under construction, A. S. Eldridge of Seattle, president, has announced here. The building is one of the few strictly Class A structures in the city and has several features not found in many auto homes in the Northwest.

A spiral ramp leads from the street to the roof where storage space is made available. The ramp is on a 7 per cent grade and 20 feet wide to the second floor where the service department will be. Light is provided by the absence of columns and steel sash; columns are more than 40 feet between spans.

An elevated driveway from the third floor, across an alley and a vacant lot to the Northern Pacific Railway tracks, will make unloading a car of machines a matter of two hours for two men while it now takes four men to unload and put into the warehouse a car of machines.

C. G. ELECTS OFFICERS

DETROIT, Nov. 21.—At the annual meeting of the stockholders of the C. G. Spring & Bumper Company of Delaware, the board of directors was reelected. At a subsequent directors' meeting the following officers were elected for the ensuing year: Chirtsian Girl, president; Charles Getler, vice-president; Fred A. Cornell, vice-president and secretary; M. D. Harrison, treasurer.

Along Automobile Row

BUFFALO, N. Y.—The Leffl Motor Sales Co., has completed alterations in its showroom and service station costing about $10,000. This company deals in Hudson and Essex.

ST. LOUIS.—A branch to be devoted exclusively to Lincoln sales and service has been opened by the Owen-Baskey Motor Co., Ford and Lincoln dealers, at 3333 Washington Boulevard, adjoining the company's main quarters. Albert L. O'Neil is in charge. A used car department will be opened of which Lyman B. Yancey will have charge.

HOOD RIVER, Ore.—The Twin Peaks Motor Company has been incorporated by E. E. Elliott, P. S. Riffe and S. S. Paxon. This company will handle the Star and Durant.

WATERLOO, Ia.—The H & M Chrevolet Company, C. J. Halverson and W. F. Marshall, has purchased the new garage at Fifth Street and Rock Island Lines tracks, now under construction.

COLUMBUS, O.—The Bill Orman Company has been chartered with a capital of $20,000 to take over the sales and service business of Henry & Tetlow, agent for the Hudson and Essex.

MEMPHIS. — The Price-Barwick Co., Ford dealer, entertained 50 employes with a banquet to celebrate the most successful month ever experienced by the firm.

SAN ANTONIO, Tex.—The Barry Motor Company has been appointed distributor and dealer for the Paige-Jewett lines in San Antonio and Southwest Texas. Mr. Barry was formerly with the Paige-Jewett firm in Colorado.

RUSSELLVILLE, Ark.—Vim Rye, proprietor of the Rye Motor Company and local dealer for Dodge Brothers cars has purchased the Bowers Motor Company and the Buick agency from Eddie Bowers. He will continue the Buick agency.

ATLANTA.—Dealers handling the Peerless line in the South Georgia and Florida territory, with the exception of dealers in the Tampa, Fla., district, have been advised by the Peerless Motor Car Co., of Cleveland, O., that the Lanford Motor Car Co., 928 Main Street, Jacksonville, Fla., has been appointed distributors of the Peerless line in the above territory.

NORTHAMPTON, Mass.—Frank S. Parsons, Reo dealer, has had plans prepared for a new show room adjacent to his large garage, part of which is occupied by the Hampshire County Used Car Exchange. Meanwhile he will use half of the last named building, having leased his former quarters to the New England Telephone & Telegraph Co. for its motor fleet.

CHICAGO.—The Chicago Flint Co., 2500 South Michigan Avenue, has changed its status and is now wholesale distributor for the Flint car in the Chicago district, instead of a branch of the Flint Motor Company. H. J. Rosenberg continues as head of the organization.

TAMPA, Fla.—One of the finest automobile buildings in the state of Florida, including sales rooms and service station, will be constructed here by the Peninsular Motors Corporation, handling the Studebaker line in Tampa, it has been announced by S. O. Metchik, vice-president and general manager of the company.

NORTHAMPTON, Mass.—Chase Motor Co., Ford and Lincoln dealer, has bought the sales and service building erected for Girard Motors Co., and recently used by the Shaw Motor Co.

NEW ORLEANS.—Charlie Landry, for eight years manager of the service and parts department of the Universal Motor Company, Ford dealer, has bought the entire service and parts outfit of the Universal company and opened a new service station with Graeme M. Ton, former stockman for the Universal.

DETROIT.—Thomas Brooks, Inc., Detroit distributor for Moon and Diana, has opened the first of a number of sales and services in this district at 507 Main Street, Royal Oak, Mich.

GREENFIELD, Mass.—Herbert F. Allen has been appointed Chevrolet dealer here in place of the Manning Motor Co.

CHICAGO.—The Quinlan Motors Company, Moon and Diana distributors, announces the opening of a new retail branch at 2029 S. Michigan Avenue. F. E. Walsh, former Moon and Diana distributor of Des Moines, is in active charge as manager. Quinlan also announces the opening of a service station at 2645 S. Wabash Avenue for the convenience of Moon and Diana owners and dealers.

HOMER, Mich.—A. E. Adams and Warren Clark, owners of the Ford sales and Service Garage have sold their business to Earl Durbin and Victor Rademacher of Carson City, Mich., who operate a Ford garage in that town.

MILWAUKEE.—Rinden Garage of 389 Atwood Avenue, Madison, Wis., has been appointed Moon-Diana dealer.

VANCOUVER, Wash.—W. E. Knight, who has been for a number of years associated with the Portland branch of the Mack International Motor Truck Corporation, has been made manager of the new headquarters here.

CHICAGO.—The wholesale department of the central western district of the Oakland Motor Car Company, in charge of E. M. Lubeck, has moved its headquarters to the London Guaranty Building from 2426 South Michigan Avenue, which premises will now be occupied by Community Motors, Inc., retail Oakland representatives.

SEATTLE.—The Huebner Motor Company of West Seattle has taken the agency for the Chevrolet line. The concern is composed of Bob Huebner and James Preston.

ATLANTA.—The southern branch of the Durant Motor Co., in Atlanta, advises that a new direct distributing branch will shortly be opened at Jacksonville, Fla., to handle the company's dealer trade on the Star and Durant lines in the Florida territory. The company is now constructing a warehouse at Jacksonville, and has established temporary headquarters for that state at 918 W. Main Street, Jacksonville.

CHICAGO.—The Chicago branch of the Davis Motor Car Co. has been closed and its business in the future will be handled by the R & V Service Co., 2530 South Michigan Avenue, all other Davis dealers in this territory having, for the present, direct factory connection.

NEW YORK.—Garland Automobile Co. has purchased the sales branch heretofore conducted by the Rickenbacker Motor Co. on Broadway between Fifty-sixth and Fifty-seventh Streets, with sub-branches at 1296 Bedford Avenue, Brooklyn, and 2396 Grand Concourse, the Bronx.

DETROIT.—Nash sales for Mt. Pleasant have been taken over by Dr. Frank Hackett and William Carroll. The sales room will be located at the corner of Broadway and Franklin Streets.

OGDEN, Utah.—A new Utah Oldsmobile agency to be known as the Maus-Hedges Oldsmobile Co. has opened up here with headquarters at 2200 Washington Avenue.

OAKLAND, Cal.—Bell & Boyd, Willys-Overland dealer here, announces the opening of a new store exclusively for used cars. The store has all the appearance and decorations of a new-car show room, and 50 rebuilt used-cars are to be kept on display at all times. The cars will be sold on a basis of transportation and mileage.

WESTFIELD, Mass.—J. W. McLeod has taken the agency for the Hudson and Essex in this territory.

ST. LOUIS.—Earnest J. Krause, Inc., Rolls-Royce distributor and Moon dealer is in the process of liquidation. Earnest J. Krause, Jr., president, recently filed a voluntary petition in bankruptcy listing assets of $44,000 and liabilities of $64,000.

CEDAR RAPIDS, Ia.—Walter Arnold, district representative for the Ford Motor Company, was host last week to 75 dealers and guests from Johnson, Cedar, Benton, Jones and Linn counties at Cedar Rapids.

MILWAUKEE.—De Somers Motor Co. of Milwaukee, Wis., Chrysler dealer, has changed its name to W. C. Goerke Motor Co. Alex De Somers is no longer with the company whose new officers are W. C. Goerke, president, P. W. Wendeborn, secretary-treasurer and Hugh Horn, vice-president.

KELSO, Wash.—The Fred Hess Motor Company which operates garages in Kelso, Longview and Ryderwood, will open a branch in Kalama, Wash, managed by Fred Horn. The Hess company has the Ford, Fordson and Lincoln distribution.

CHICAGO. — The Auburn Automobile Co., 3914 South Wabash Avenue, has become a direct factory branch of the Auburn company and in the future will be known as the Auburn Chicago Co., 2449-51 South Michigan Avenue. F. P. Popp is branch manager. H. L. Wood, who has relinquished his Moon dealership, will take over the dealer business from Edward & Crist.

NEW ORLEANS.—P. L. Adams of the Adams Motor Car Company, announces that his company has just inaugurated the flat rate system in its servicing of Cleveland cars.

CANTON.—The Nash-Ajax Motors Co., 615 12th Street, N. E., has been chartered with an authorized capital of 500 shares, no par value designated, to deal in automobiles and supplies.

DETROIT.—A. S. Healy, associated with the wholesale tire business in Detroit for many years has opened a new K. O. Tire Store at 12243 Twelfth Street. A radio department is being conducted jointly with the tire business.

OAKLAND, Cal.—E. A. Hamlin, general manager of Hamlin & Wichman, Hudson and Essex dealer here, has been elected president of the Oakland Motor Car Dealers' Association. Charles L. Hebrank, head of the Hebrank, Hunter & Peacock Co., Chandler, Cleveland and Hupmobile dealers, was re-elected treasurer, and Robert W. Martland, veteran manager of the organization, was unanimously re-elected to that post.

PITTSFIELD, Mass.—Berkshire Auto Co., 109 South Street, has taken over the franchise for the Cadillac for this county, formerly held by Berkshire Cadillac Co.

ST. LOUIS.—Weber Implement and Automobile Co., St. Louis Hupmobile distributor, has opened a used car department at the southwest corner of Locust and Nineteenth Streets under the management of Emil Weber.

ROCHESTER, N. Y.—The Yonk-Foster Nash Company has been organized here as a sub-agency to the Mortimore Motor Car Company, Nash distributors in this territory. E. J. Yonk, wholesale manager of the Mortimore company, is president of the sub-agency but will also retain his position with the distributing company.

DECATUR, Ill.—E. G. Hedges, local Oakland dealer, is retiring and has been succeeded in the agency by Robert R. Peck.

MILWAUKEE.—Quality Chevrolet Co. has been formed at Rhinelander, Wis., to deal in automobiles. Capital stock consists of 100 shares at $100 par or $10,000.

NEW ORLEANS. — The Glenny-Buick Company has announced the appointment of John Milandin as service superintendent to succeed C. J. Lelleher, who resigned to enter the real estate business.

With the Associations

Iowa Indorses Roads

DES MOINES, Ia., Nov. 21.—More than 200 automotive merchants of Iowa, here for the seventh annual convention of the Iowa Automotive Merchants' Association, gave unqualified approval to the good roads plan as outlined by Governor John Hammill in his address before the convention. The governor outlined the road building plans for the next three years, which include the construction of eight principal roads extending east and west and five north and south.

Featuring the meeting of the first day were three group conferences, the tire dealers constituting one group, battery and electrical men making up another, and dealers interested mainly in garage, service and maintenance, the third. Tire dealers interested themselves in a discussion of time payment plans for selling tires. It was brought out that under Iowa laws, a tire dealer selling tires on the time payment plan has little or no protection. Tire dealers recommended that the association promote legislation which would protect the tire dealer who finds it necessary to use the time payment plan of selling new tires.

Approval of the new battery rental law was voiced by the battery and electrical men who also discussed business methods. Flat rates and "gyp" practices were items of interest to the garage group.

The organization of the association for the coming year will include four committees: Dealer Relationships, Customer Relationships, Legislative, and Vigilance. The committee on dealer relationships will endeavor to promote better understanding and feeling between dealers, the committee on customer relationships will adjust differences between customers and dealers, the legislative group will sponsor beneficial legislation, and the vigilance committee will investigate and expose fraudulent practices.

Beginning December 1 a concentrated drive for new members will be made by the association. The goal set is for a membership of 2,000 active dealers. The drive will be directed by district chairmen, who will help county chairmen organize and direct the efforts of assisting dealers.

At the election preceding the close of the convention the appointment of T. W. LeQuatte as secretary-manager was confirmed and all officers re-elected. They are: W. E. Wissler, Des Moines, president; C. A. Morris, Waterloo, vice-president; and F. M. Rankin, Ft. Dodge, treasurer. Directors were chosen as follows: District No. 4, C. D. O'Harrow, Waterloo; district No. 6, Ray Van Brunt, Sioux City; district No. 11, L. M. Millsap, Cedar Rapids; district No. 12, H. J. Lytle, Davenport.

New Mayor Heads Dealers

SYRACUSE, N. Y., Nov. 21.—Charles G. Hanna, mayor-elect of Syracuse, has also been elected president of the Syracuse Automobile Dealers' association. Mr. Hanna is the Ford-Lincoln dealer here, head of the Charles G. Hanna Co., Inc. As president of the organization of dealers Mr. Hanna hopes to find time from his duties as mayor to bring about solution of many problems with which dealers are confronted. The stolen car problem is among them.

Detroit Holding Contest

DETROIT, Nov. 21.—Members of the Detroit Automobile Dealers' Association are staging a master salesman contest under the direction of the association. The contest will run during the months of November and December, ending at midnight, December 31.

All 74 members of the association are taking part. Prizes will be awarded on a points basis, one point being awarded for selling the car and two points for delivery. The rating salesman of the different organizations will be awarded a gold watch. Reports will be made weekly to the association during the period of the contest showing the standing of the different salesmen. The prizes will be awarded at a dinner to be tendered the winner and members in January.

The contest is the first of its kind ever held by the association and if successful may become an annual event.

Rochester Picks Burch

ROCHESTER, N. Y., Nov. 21.—R. D. Burch, of the Burch-Buell Motor Corporation, was unanimously elected president of the Rochester Automobile Dealers' Association at the annual meeting held this week. Other officers elected were: vice-president, J. J. Williams, of J. J. Williams, Inc., secretary, Oscar W. Stanley, of Swope Stanley Motors, Inc., treasurer, G. W. Frisbie, of Thomas J. Northway, Inc., directors, G. Norton Mortimore, Mortimore Motor Car Company, E. M. Alling, Alling and Miles, Inc., and J. E. Hansen, Rochester-Packard Motors.

Sunday Closing a Success

CHARLOTTE, N. C., Nov. 21.—The Sunday closing program of the 55 gasoline filling stations within the limits of this city has proved entirely successful, according to reports submitted at a meeting of the Charlotte Automotive Service Association, which promoted this innovation here. An effort now is being made to influence the automobile storage houses to cease the sale of gasoline, tires and oil on Sunday, these houses having reported a tremendous increase in their Sunday gasoline sales.

Atlanta Boosts Christmas Sales

ATLANTA, Nov. 21.—Due to the unusual degree of success that crowned the efforts of the Atlanta Automobile Association in the co-operative Christmas advertising campaign held last year, the association will again sponsor a similar campaign during the approaching Christmas season, but on a more extensive scale than heretofore.

The present plan is to have an advertising copy expert perpare a series of sales-building ads that are published at regular intervals in the Atlanta daily newspapers for several weeks prior to Christmas, the costs of this advertising to be shared by the members of the association on a co-operative basis, as was done last season.

The campaign last year resulted in a volume of automotive business in Atlanta, particularly in accessory and equipment lines, that far surpassed any previous holiday record in the history of the business in this section. As this advertising is thought by members of the association to have been largely responsible for this success, the campaign this year will be larger and more extensive.

Milwaukee S. A. E. Meets

MILWAUKEE, Nov. 21.—Thomas Coleman, vice-president of the Madison-Kipp Corporation, was the principal speaker at the first fall meeting of the Milwaukee section of the Society of Automotive Engineers, held at the Blatz Hotel. Mr. Coleman had as his topic "Engine Lubrication" and since he has given years of study to this problem, he presented facts of great interest to club members. In addition Mr. Coleman, with A. Fisher of the Waukesha Motor organization is scheduled to present a joint paper on the same subject at the national meeting in Detroit in January.

Battle Creek Dealers Meet

BATTLE CREEK, Mich., Nov. 21.—The Battle Creek Automobile Dealers' Association held its first fall meeting at Post Tavern hotel this week. About 60 dealers and salesmen heard Thomas T. O'Brien of the Reo Motor Car Co. discuss dealers' problems.

Urge Parking Enforcement

MILWAUKEE, Nov. 21.—Strict enforcement of the parking regulations, especially as they apply to the downtown and night parking provisos, is demanded by the Milwaukee Garage Owners' Association, which claims that thousands of automobiles are now permitted to park in the downtown streets throughout the night without having their lights burning. Tourists are permitted to violate virtually all of the city's parking regulations, the garage men claim, and are not molested.

Cliff Durant Building New Car for Memorial Day Race

Harlan Fengler Is Working with Him In Design of Promised Sensation

LOS ANGELES, Nov. 21.—R. C. "Cliff" Durant has started construction in Los Angeles of the first of a fleet of fast racing cars which he plans to enter in the next Indianapolis race. Because of the rapid development of automobile racing and the favor with which it is being received all over the world, Durant feels that the time has arrived to inject more competition into the game.

Durant is building the new cars, which are declared to embrace sensational features, with a view to realizing his life's ambition—that of winning the great Indianapolis classic. It will be remembered that Durant came close to winning this race a few years ago and he now believes that with the reduction in size of the cars he can win the 500-mile grind next Memorial Day.

The services of Harlan Fengler, famed racing pilot, have been engaged by Durant together they have designed a race car which includes many improvements on cars built in the past.

Two of the cars are expected to be ready for speed trials on the Culver City track early in 1926. It is Fengler's plan to complete the entire fleet of cars in time for the Indianapolis race. The power plant designed for the cars is of 91 cubic inch displacement—the smallest motor ever attempted in auomobile racing. According to Fengler, close to 8000 revolutions per minute will be possible in the new motor as compared to 6800 revolutions in the 122 cubic inch car.

Aside from the new mechanical features of the cars, the general appearance will offer something absolutely new and novel.

Little Rock Holds Second Annual Closed Car Show

LITTLE ROCK, Ark., Nov. 21.—Little Rock's second annual closed car show was held this week with large crowds in attendance. Roy E. Steuber was manager of the show committee consisting of W. L. Owen, Henry C. Thomas, Miss E. C. Currie, and A. L. Woolfolk. The Little Rock Automobile Dealers Association staged the show.

Cars were exhibited by the following:

Ray Robinson Motors, Jordan; Madison-Smith Cadillac, Cadillac; O. A. Cook Auto Sales Co., Studebaker; Little Rock Motor Car Co., Hudson and Essex; Little Rock Buick Co., Buick; Laser Motor Co., Moon, Pierce-Arrow and Diana; Green Chevrolet Co., Chevrolet; Franklin Motor Car Co., Oakland and Franklin; Wright-Mann Motor Car Co., Star; Davis Motor Co., Star; Cook Automobile Co., Willys-Knight and Overland; Jennings-Mott Motor Co., Chrysler; S. R. Thomas Auto Co., Dodge Brothers; Whitney Harb, Ford; Freeman and Freeman, Ford; Shoemaker Bale Auto Co., Ford and Lincoln; Owen-Hill Motor Co., Hupmobile and Packard; Arkansas Nash Motor Co., Nash and Ajax.

Coming Motor Events

Automobile Shows

New York.....Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.....Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exibition Co., Chamber of Commerce Building.

Bpffalo, N. Y.....Jan. 16-23
Buffalo automobile show by Buffalo Automobile Dealers' Association in 174th Regimental Armory, Carlton C. Proctor ,manager, headquarters, Hotel Statler.

Cleveland, O.....Jan. 23-30
1926 Automobile Show under auspices of Cleveland Automobile Manufacturers' and Dealers' Association, Herbert Buckman manager, in Public Auditorium.

Montreal .....Jan. 23-30
1926 Motor Show under the auspices of Montreal Automobile Trade Association, Theo Dorian, manager.

Lowell, Mass.....Jan. 25-Feb. 1
Twelfth autmoboile show in Memorial Auditorium by Automobile Merchants' Association of Lowell, Inc., George R. Garmon, manager, 119 E. Merrimack Street.

Chicago.....Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Washington.....Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

San Francisco.....Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bdg., manager.

Denver.....Feb. 2-6
Annual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Providence, R. I.....Feb. 6-13
Providence automobile show under auspices R. I. Automobile Dealers' Association, Chester I. Campbell, manager, 617 Industrial Trust Bldg.

Toledo, O.....Feb. 8-13
Annual show by Toledo Automotive Trades Association in Civic Center Garage, T. J. Cooper, manager, 925 Jefferson Avenue.

Louisville, Ky.....Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Hartford, Conn.....Feb. 20-27
Automobile show by Hartford Automobile Dealers' Association in State Armory, Arthur Fifoot, manager, Hotel Bond.

Boston.....Mar. 6-13
Boston Automobile Show under auspices of Boston Automobile Dealers' Association, Inc., and Boston Commercial Motor Vehicle Association, Inc., in Mechanics' Building, Chester I. Campbell, manager, 329 Park Square Bldg.

Conventions

New York.....Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago .....Feb. 9-10
American Drivurself Association Annual Convention.

Galveston, Tex.....May12-13
Tenth annual convention of Texas Antomotive Dealers' Association in Galvez Hotel.

COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

January 1—National Shows Number—Automobile Trade Journal.

January 7—Motor Age—National Shows Number.

January 14.—Motor World Wholesale—New York Show Report.

February 4—Motor Age—Chicago Show Number.

February 4—Motor World Wholesale—Chicago Show Report.

February 18—Automotive Industries—Statistical Issue.

American Cars Used as Anti-Soviet Arguments

PARIS, Nov. 2.—(by mail)—American automobiles are made use of as an argument against bolshevism in a poster published in France by the Cercle d'Etudes Economiques et Sociales of Lille.

The poster shows on one side 25,000 automobiles in Soviet Russia, a 12 to 14 hour working day, and the workmen going to the factory on foot. In contrast to this it is shown that in capitalistic America there are 17,726,000 automobiles, the working day does not exceed 8 hours, and one workman out of every ten goes to the factory by automobile.

The poster points out that Henry Ford, who employs 50,000 men, began life as a mechanic, that the chief of the River Rouge plant was originally a pattern maker, and that the chief inspector of Ford's factories began life as a floor sweeper. This poster is being extensively placarded in the manufacturing centers of Northern France and in the industrial suburbs of Paris where Soviet influences are at work.

INDIA DEALERS MEET

AKRON, Nov. 21.—Seventy dealers attended the annual conference of Pacific Coast distributors of India tires, at the Whitcomb Hotel, San Francisco, October 19 and 20. J. M. Alderfer, president of India Tire & Rubber Company, presided at the meeting.

Accessory Exhibitors at National Shows

	N. Y.	Chgo.
A. C. Spark Plug Co., Flint, Mich.	*	*
Alert Alarm Co., Chicago	*	*
Aluminum Co. of America, Pittsburgh	*	
American Auto Lamp Co., Inc., N. Y. City	*	
American Chain Co., Bridgeport, Conn.	*	*
Apco Mfg. Co., Providence, R. I.	*	
Arkay Sales Co., N. Y. City	*	
Arrow Head Steel Products Co. Minneapolis	*	
Art Metal Works, Inc., Newark, N. J.	*	
Atlantic Yellowstone Pacific Hiway, Sioux Falls, S. D.		*
Auto Bed Camp Mfg. Co., N. Y. City	*	
Auto Tip-It Rack Co., Birmingham	*	*
Automobile Digest, Cincinnati, O.	*	*
Automobile Equipment Mfg. Co., Chicago	*	*
Automotive Daily News, N. Y. City	*	*
Bendix Brake Co., South Bend, Ind.	*	*
Benzer Corp., Brooklyn, N. Y.	*	
Biflex Corp., Brooklyn, N. Y.	*	
Bijur Lubricating Corp., N. Y. City	*	*
Biltrite Motor Equipment Co, Inc., N. Y. City	*	
Borg & Beck Co., Chicago		*
Robert Bosch Magneto Co., Inc., N. Y. City	*	*
Braunsdorf Mueller Co., Elizabeth, N. J.	*	*
Brown Spring Oiler Co., Cleveland, O.		*
Edw. G. Budd Mfg. Co., Philadelphia	*	
Budd Wheel Co, Philadelphia	*	
Bunting Brass & Bronze Co, Toledo	*	*
Byrne, Kingston & Co., Kokomo, Ind.	*	*
C. G. Spring & Bumper Co., Detroit	*	*
Carr Fastener Co., Cambridge, Mass.	*	*
Geo. R. Carter Co., Connersville, Ind.	*	*
Champion Pneumatic Mchy. Co., Chicago	*	*
Chilton Class Journal Co., Philadelphia	*	*
Cleveland Hardware Co., Cleveland, Oo.		*
Cleveland Worm Gear Co., Cleveland, O.	*	
Conn. Automotive Specialties Co., Bridgeport, Conn.	*	*
Consolidated Equipment Corp., N. Y. City	*	*
Continental Co., Springfield, O.	*	*
Continental Motors Corp., Detroit		*
Cox Corp., Wilkes Barre, Pa.	*	*
Cavereroiler Co. of America, Philadelphia	*	*
Cuno Engineering Corp., Meriden, Conn.	*	*
Dayton Steel Foundry Co., Dayton, O.	*	*
R. V. Dorbeck, Asbury Park, N. J.	*	
Duckworth Chain & Mfg. Co., Springfield Mass.,	*	*
Dunhameter Corp., Chicago		*
Dunning Compressor Co., Philadelphia	*	
Eagle-Ottawa Leather Co., Grand Haven, Mich.	*	*
Eberhard Mfg. Co., Cleveland, O.	*	*
Eclipse Machine Co., Elmira, N. Y.	*	*
Egyptian Lacquer Mfg. Co., N. Y. City	*	
Erlichman Harris & Klein, Philadelphia	*	
J. H. Faw Co., N. Y. City	*	
Federal-Mogul Corp., Detroit	*	
Federal Pressed Steel Co., Milwaukee	*	*
Kink-Dumont, White, Inc., N. Y. City	*	
Fitzgerald Mfg. Co., Torrington, Conn.	*	*
Ernst Flentje, Cambridge, Mass.	*	
Irving Florman Co., N. Y. City	*	
Folberth Auto Spec. Co., Cleveland, O.	*	*
Frick Bros., Inc., Brooklyn, N. Y.	*	*
Fulton Co., Milwaukee	*	
G-H Mfg. Co., Baltimore	*	
Gabriel Snubber Mfg. Co., Cleveland, O.	*	*
Gemco Mfg. Co., Milwaukee	*	*
Gemmer Mfg. Co., Detroit	*	*
General Electric Co., Schenectady, N. Y.	*	*
Gits Bros. Mfg. Co., Chicago	*	*
Gordon Chemical Co., Foxboro, Mass.	*	
Guyde Publishing Co., Hartford, Conn.	*	
L. P. Halladay Co., Decatur, Ill.	*	*
Hamilton-Wade Co., Brockton, Mass.	*	
Hampden Auto Top & Metal Co., Springfield Mass.	*	*
Edw. V. Hartford, Inc., Jersey City, N. J.	*	*
Hartford Battery Mfg. Co., Milldale, Conn.	*	
Robert H Hassler, Inc., Indianapolis	*	*
Heintz Mfg. Co., Philadelphia	*	
Hercules Motors Co., Canton, O.	*	*
Hinkley Motors, Inc., Detroit	*	*
Ernest Holmes Co., Chattanooga	*	*
Houde Engineering Corp., Buffalo, N. Y.	*	*
Illinois Iron & Belt Co., Carpentersville, Ill.		*
Imperial Brass Mfg. Co., Chicago		*
Irving Engineering Sales Co., Buffalo, N. Y.	*	*
Jessen Wind Deflector Co., Inc., Brooklyn N. Y.	*	
Kant-Rust Products Corp., Rahway, N. J.	*	
Kehawke Mfg. Co., Minneapolis	*	*
Kokomo Electric Co., Kokomo, Ind.	*	*
Lake Sales Co., N. Y. City	*	
Larkin Automotive Parts Co., Dayton, O.	*	
Light Mfg. & Foundry Co., Pottstown, Pa.	*	
Link-Belt Co., Chicago	*	
Lorraine Corp., Chicago	*	*
Lovejoy Mfg. Co., Boston	*	*
Lowe Motor Supplies Co., N. Y. City	*	
J. C. McAdams Co., L. I. City, N. Y.	*	
Morris R Machol, N. Y. City	*	
Majestic Sales Agency, Chicago		*
Malco Products Corp., Brooklyn, N. Y.	*	*
J. F. Mansfield, N. Y. City	*	
Robert Marcus Co., Inc., N. Y. City —R		
Marko Storage Battery Co., Brooklyn, N. Y.	*	
Mercury Body Corp., Louisville	*	
Metal Stamping Co., L. I. City, N. Y.	*	*
Monarch Bumper Mfg. Co., Detroit	*	*
Moto-Meter Co., Inc., L. I. City, N. Y.	*	*
Motor, N. Y. City	*	*
Motor Car Supplies Co, Inc., N. Y. City	*	
Motor Improvements, Inc., Newark, N. J.	*	*
Nacto Cleaner Corp., N. Y. City	*	*
Naperville Machine Co., Inc., Naperville, Ill.		*
New England Fabrics Mfg. Co., New Haven, Conn.	*	
New Era Spring & Spec. Co., Grand Rapids, Mich.	*	
Noisom Auto Compass Co., South Bend, Ind.		*
Overhead Door Corp., Hartford City, Ind.	*	*
Panyard Machine & Mfg. Co., Detroit	*	*
Pedersen & Flanagan, Inc., N. Y. City	*	
Pennsylvania Piston Ring Co., Cleveland, O.	*	
Perfection Heater Mfg. Co., Cleveland, O.	*	*
Pinon Winterfront Co., Chicago	*	*
William E. Pratt Mfg. Co., Chicago	*	*
Protectolite Co., Inc., N. Y. City	*	
Pyrene Mfg. Co., Newark, N. J.	*	*
Quincy Compressor Co., Quincy, Ill.		*
Radiator Spec. Co., Charlotte, N. C.	*	*
Ramspring Bumper Co., Chicago	*	*
Rectifier Mfg. Co., Chicago	*	*
Rex Mfg. Co., Connersville, Ind.	*	*
Ross Gear & Tool Co., Lafayette, Ind.	*	
Rubber-on-metal Welding Corp., N. Y. City	*	
Safety Vulcanizer Co., Chicago	*	*
A. Schrader's Son, Inc., Brooklyn, N. Y.	*	*
Richard M. Sheridan & Co., Chicago		*
Sherwin-Williams Co., Cleveland, O.	*	*
H. B. Shontz Co., Inc., N. Y. City	*	
Sieg Co, Davenport, Ia.		*
Simplex Ignition Corp., N. Y. City	*	
Skinner Automotive Device Co., Inc., Detroit	*	*
Smith Wheel, Inc., Syracuse, N. Y.	*	
Snap-on Wrench Co., Chicago	*	*
Society Solex, N. Y. City	*	*
South Bend Lathe Works, South Bend, Ind.		*
Standard Filters Co., Newark, N. J.	*	
Stevens Products Co., Inc., Lowell, Mass.	*	
Stewart-Warner Speedometer Corp., Chicago	*	*
Storm King Electric Corp., Glendale, N. Y.	*	*
Stover Signal Engineering Corp., Racine, Wis.	*	*
Stromberg Motor Devices Co., Chicago	*	*
Super-Smart Studios, Inc., Chicago		*
Swa-bac Mfg. Co., Chicago	*	*
C. A. Taylor Trunk Works, Chicago		*
Thompson Research, Inc., Cleveland, O.	*	
Titeflex Metal Hose Co., Newark, N. J.	*	
Tonneau Shield Co., Inc., N. Y. City	*	
Trans-Continental Freight Co., N. Y. City	*	
Trico Products Corp., Buffalo, N. Y.	*	*
Triple Action Spring Co. of N. Y., Inc., N. Y. City	*	
U-Kan-Plate Co., Philadelphia	*	*
United Mfg. & Distributitng Co., Chicago	*	*
U. S. E. Corp., L. I. City, N. Y.	*	
U. S. Auto Lamp Mfg. Co., Inc., N. Y. City	*	
United States Chain & Forging Co., Pittsburgh	*	*
Unity Mfg. Co., Chicago		*
Vacuum Oil Co., N. Y. City	*	*
Veeder Mfg. Co., Hartford, Conn.		*
Volco Products Corp., Chicago		*
Walden Co., Chicago		*
Watervliet Tool Co., Inc., Albany, N. Y.	*	
John Warren Watson Co., Philadelphia	*	*
Waukesha Motor Co., Waukesha, Wis.	*	*
Weldo Rubber Co., Inc., Brooklyn, N. Y.	*	
Wellston Mfg. Co., Wellston, O.	*	*
Westinghouse Electric & Mfg. Co., E. Pittsburgh	*	
Whitney Mfg. Co., Hartford, Conn.	*	
K. R. Wilson, Buffalo, N. Y.	*	*
Wire Wheel Corp. of America, Buffalo, N. Y.	*	*
Wolverine Bumper & Specialty Co., Grand Rapids	*	*
Wonderlamp Co., N. Y. City		*
Woodworkers' Hardware Mfg. Co., Chicago		*
Wyman-Gordon Co., Worcester, Mass.	*	
Yellow Jack-It Mfg. Co., Chicago	*	*

Florida Dealers Are Doing Phenomenal Fall Business

SANFORD, Fla., Nov. 21.—That automobile dealers in all parts of Florida are enjoying this fall an almost phenomenal volume of business in the sale of new cars is shown by the fact that more than 350 carloads of new cars have reached Sanford the past month, this city having been made the railroad destination for automotive equipment from the northern and eastern factories.

Serviced here, the cars are then dispatched under their own power to dealers and distributors throughout the state. The total value of cars reaching Sanford the past month has exceeded $650,000. Thousands of new cars are also being unloaded at Jacksonville and driven to points throughout the state, distributors at the important cities throughout Florida having selected these two cities as destination points due to the freight embargo which exists throughout the state, and would otherwise interfere seriously with receipt of new cars by dealers.

At present more than 100 carloads of automobiles are en route to Sanford, and it is estimated that the total will average about 100 carloads weekly during November, making the two months of October and November the largest by far in the state's history in the sale of new automobiles by Florida dealers and distributors.

Schebler Announces Price Reductions on Model S

INDIANAPOLIS, Nov. 21.—The Wheeler Schebler Carburetor Company of this city yesterday announced a heavy price reduction on nine package out-fits of the Model S Schebler carburetor, including out-fits for Models 7U and 7Z Continental motors; Lycoming, model C; Falls motor, model 6 cylinder; and out-fits for the Oakland 6 of 1916 to 22; and the six of the same make for the years 1917 to 1920; the Olds 4, 1921-1924, the Olds 6, 1917 to 1920, and the Rollin 4, 1924-1926.

The reductions follow:

Motor Car	Size in.	Old list	New list
Cont. 7U & 7Z	1	$28.50	$20.00
Lycoming-C	1	28.50	20.00
Oakland 6 '16-'22	1	26.50	21.50
Oakland 6, 1923	1¼	32.00	24.50
Olds 6, '17-'20	1	28.50	21.50
Olds, 4, '21-'24	1	28.50	21.50
Falls, 6 Cyl.	1	30.75	24.50
Rollin 4, 1924-'26	1	28.50	21.50

Milwaukee Sees New Parts Business Record This Fall

MILWAUKEE, Nov. 21.—Activity in the parts industry in this city is establishing a new high record for the fall season according to information gleaned from a survey of the situation locally. Manufacturers unite in reporting a marked improvement during September and October with employment greater than it has ever been at this period of the year.

Similar conditions are expected to obtain throughout the month of November and December and well into 1926. Prospects for next year are most encouraging.

It is expected however that a seasonal decline in retail sales of cars will bring a corresponding reduction in production among the car builders, and which will be reflected back to the car parts manufacturers. Accordingly September and October have probably established peak records in production and employment among the parts manufacturers for the current year.

Even with the seasonal decline, indications point to a better condition during November and December than in the corresponding months of last year.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
2850	4-p	Sport-Roadster	1,495
2860	6-p	Touring	1,395
3020	5-p	Brougham	1,595
3070	5-p	Sedan	1,795
3070	-----	Wanderer	1,845
		"8-88"	
3180	3-p	Sport Roadster	1,975
3200	6-p	Touring	1,995
3380	5-p	Brougham	2,250
3450	5-p	Sedan	2,350
3450	-----	Wanderer	2,400
3750	7-p	Sedan	2,550
BUICK		"Standard"	
2345	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
3350	2-p	Roadster	1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Brougham Sedan	1,925
3960	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line	
		(132 in. W. B.)	
4040	2-p	Coupe	$3,045
4155	5-p	Sedan	3,195
4240	7-p	Sedan	3,295
4075	5-p	Brougham	2,995
4860	7-p	Imperial	3,485
4115	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
3920	-----	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	-----	Phaeton	3,250
4190	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3228	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,895
2895	5-p	Coach	1,445
2985	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2415	5-p	Touring	$895
2565	5-p	Touring DeLuxe	1,025
2520	3-p	Coupe	975
2695	5-p	Sedan	995
		"43"	
2775	5-p	Touring	1,095
2950	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2890	3-p	Coupe	1,175
3120	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
-----	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
-----	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
3100	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
-----	7-p	Sedan (135 in. W. B.)	-----
DODGE BROTHERS			
2473	2-p	Roadster	$855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
-----	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
-----	2-p	Sp. Roadster	$900
2225	5-p	Touring	810
-----	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
-----	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
-----	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,895
		"6-65"	
-----	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
-----	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
-----	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
-----	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$765
2395	5-p	Coach	795
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
		With Starter and Dem. Rims	
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
-----	5-p	Oxford Sedan	3,172
GARDNER		6A	
3290	5-p	Brougham	$1,595
3070	5-p	Touring	1,895
3030	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	-----	DeLuxe Sedan	1,895
		8A	
3620	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3350	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		D-1	
3360	5-p	Sedan	$1,695
HUDSON		"Super Six"	
3400	7-p	Phaeton	$1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4 d.	1,450
3675	7-p	Sedan	1,550
HUPMOBILE "A"			
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		"23-25"	
3060	4-p	DeLuxe Road.	$1,500
3000	5-p	DeLuxe Touring	1,320
2990	5-p	Coach 2d.	1,245
3160	5-p	DeL. Coach 2d.	1,400
3325	5-p	DeLuxe Sedan	1,680
JORDAN		"J"	
-----	4-p	Playboy Road.	$1,695
-----	5-p	Sedan	1,845
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		"55"	
3130	2-p	Speedster	$1,795
-----	2-p	Sp'dster DeLuxe	2,085
-----	4-p	Speedster	1,895
-----	4-p	Sp'dster DeLuxe	2,185
3530	2-p	Enc. Speedster	2,085
-----	4-p	Enc. Speedster	2,185
-----	4-p	Enc. Spdstr. DeL.	2,685
-----	2-p	Enc. Spdstr. DeL.	2,585
3190	4-p	Tourster	1,795
-----	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
-----	7-p	Touring	1,685
-----	7-p	Touring De L.	1,885
3430	4-p	Coupe	2,085
-----	4-p	Coupe De Luxe	2,485
3540	5-p	Brougham Sedan	1,995
-----	5-p	Broug. Sed. DeL.	2,485
-----	5-p	Brougham 2 d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Berline Sed. DeL.	3,185
3530	5-p	Victoria	2,185
-----	5-p	Victoria DeLuxe	2,485
		"75"	
-----	2-p	Speedster	2,195
-----	2-p	Speedster De L.	2,485
-----	4-p	Speedster	2,295
-----	4-p	Speedster DeL.	2,585
-----	2-p	Enc. Speedster	2,485
-----	2-p	Enc. Sp'd'r DeL.	2,985
-----	4-p	Tourster	2,195
-----	4-p	Enc. Speedster	2,585
-----	4-p	Enc. Sp'd'r DeL.	3,085
-----	4-p	Tourster DeL.	2,385
-----	5-p	Phaeton	1,985
-----	5-p	Phaeton De Luxe	2,185
-----	7-p	Touring	2,085
-----	7-p	Touring De Luxe	2,285
-----	4-p	Coupe	2,485
-----	4-p	Coupe De Duxe	2,885
-----	5-p	Brougham Sedan	2,395
-----	5-p	Broug. Sed. DeL.	2,985
-----	5-p	Brougham 2 d.	2,095
-----	7-p	Sedan De Luxe	3,485
-----	7-p	Berl. Sed. De L.	3,585
-----	7-p	Victoria	2,585
-----	7-p	Victoria De Luxe	2,885
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4460	2-p	Roadster	$4,000
4580	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	-----	Sport Touring	4,500
4750	4-p	Coupe	4,600
4885	4-p	Sedan	4,800
4960	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,800
LOCOMOBILE "48"			
5280	4-p	Sportif Tour	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Drive Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,785
3400	5-p	Sedan	2,285
3350	5-p	Brougham	2,285

MOTOR AGE

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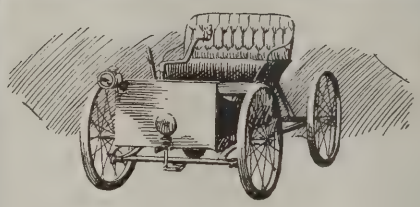
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MOTOR AGE

Vol. XLVIII CHICAGO, DECEMBER 3, 1925 No. 23

Summary and Index of Important Events in

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WHY DEALERS WANT SOUND FINANCING

Time Sales of New Cars Should Be on Basis of One-Third Down and Balance in 12 Months, Without Retailer Endorsing Notes, Declares President of N. A. D. A. at Convention of Automobile Credit Bankers.

By C. E. GAMBILL



C. E. Gambill

President of the National Automobile Dealers' Association and Hupmobile distributor and dealer in Chicago.

AUTOMOBILE financing stands today at the cross roads. Upon its decision rests not alone the future of finance companies, but the future of the motor car industry itself.

An important question presents itself as we prepare to go into the year 1926. That question is "Shall automobile time payment be the handmaiden of legitimate credits, or shall it become credit perversion to make an extra dividend holiday?"

No one today questions the legitimate use of the major portion of the automobile time payment business. The people of this country have accepted it as a commonplace that automobile ownership, being a direct operating item in the daily life of mankind can rightfully be paid for out of current income.

In arriving at this point it must not be forgotten that we have been helped by a great national prosperity and that our general gains have been ample to absorb without serious shock, the minor losses and inconveniences caused by this re-adjustment. But the time has come to ask ourselves how much farther can we trust to general business conditions alone, and disregard those precautions which good business demands we take to preserve what we have and to get what in the future may rightfully be ours.

Right Basis Declared

Approximately a year ago the National Association of Finance Companies was formed here at Chicago and adopted as its basic principle, that the safe limit of automobile time payment financing was reached when sale was made for one-third down, and a deferred balance completely payable within 12 months for new passenger car business.

The original position of the National Association of Finance Companies might have been a mistake, in so far as it attempted to fix details, since we have seen during the past year a general disregard by some of the largest finance companies of its promise. Yet with the spirit of that declaration we are most heartily in agreement, for behind that utterance was the thought that there is a limit of safety beyond which credit terms cannot go, and this at least must be respected as sincere effort to map those limits.

Nearly two years ago the National Automobile Dealers Association stated the principle in virtually the same words as were adopted at the finance association meeting here a year ago. As an organization we have had no reason to retire from that position. There may be periods in the domestic situation when because of general prosperity modifications may be made of this policy, but we do not believe that the time has yet come to substitute a more liberal policy for the one then declared. We regard the keenest danger from a modification of this principle as coming not from the direct financial loss that might result from individual sales of automobiles, but as a wiping out of all sense of the importance of determinable credit limits.

This fear is supported by our own knowledge of human frailty. Attacking the barriers of good credit are the ambition, the greed and the recklessness of automobile manufacturers, dealers and credit bankers themselves.

Interpreted in concrete terms we have the following practical situation confronting us as we go into the new year:

Huge Production Facilities

Automobile manufacturing plants have been built up to a capacity of around 6,000,000 units a year. Even with the unprecedented business of 1925 this means that actual production was only about 70 per cent of productive capacity. There is a tremendous temptation to automobile manufacturers to keep plants operating at full capacity, because the nearer this can be done, the more certain is the manufacturers' control over his productive costs and the certainty of his profits.

Time payments have enabled manufacturers and dealers to flatten out some of the peaks of automobile sales, but it is extremely doubtful if any method can ever be devised by which an equal volume of sales can be made in all months or within quarterly periods.

Delivery movements based upon unsound time payments may be an impetus which seemingly will further flatten

out these peaks, but in our opinion such deliveries themselves are filled with more danger than the seasonal slackness of sales themselves. It is the repossession danger which is feared by every substantial dealer in the business today.

This fear is not based wholly upon imagination. The business still has within the experience of even its newcomers, the memory of practices in the truck industry from which that industry is just again beginning to lift its head. That was the effort to place motor trucks in the hands of people financially incapable of making a satisfactory down payment, and relying upon the earning capacity of the truck itself over a long period of months to pay the deferred balance. Usage to which the vehicle was put often depreciated it so severely that months before the final installment was due, the value of the vehicle was less than the unpaid equity with the result that operators left vehicles standing in vacant lots and upon the roadside when defaulting payments.

In the case of the truck, the buyer had the added incentive of making his own living from the ownership and use of the vehicle. With the passenger car there is not the necessity of possession as a tool of income that was entailed in truck ownership.

Methods of Financing

There are three methods used today in automobile financing, each of which has its own advantages and penalties. One is the time payment sale without recourse, another requires dealer endorsement upon all paper, and a third is non-recourse with a re-purchase agreement which in effect amounts to endorsement. Finance association records of a re-possession show a remarkable record of credit without loss, because the finance company either has had the dealer endorsement guaranteeing them against loss, or the facilities of dealer organization to repossess the automobile and resell it for the finance company account.

Even in those time payment transactions without recourse the finance company has universally "loaded" the rate in advance of experience to protect themselves against what experience alone can prove or disprove. When the experience has been favorable, it is true that these charges have been reduced, but there is a point beyond which even finance companies cannot go, based upon the law of averages and statistical experience. If in the era into which we are going, limits of safety are to be disregarded, this means that higher initial rates must be charged on non-recourse paper to protect the finance companies against bad deals, which again creates sales resistance for the dealer which may curtail his merchandising yield. If on the other hand safeguards are to be weakened and the dealer endorsement required, the finance companies are subjecting the dealer to a risk which they themselves are unwilling to take, and which may work disaster upon the dealer and force the finance companies to establish car merchandising and car repairing departments of their own. This to handle the vehicles that would have been handled by the dealer, except that he has been put out of business by universal bad practice.

In this connection we will say that we believe it is extremely unwise and a matter of poor business practice for either manufacturers or finance companies to insist upon dealer endorsement of finance company paper without also permitting the dealer to set up a reserve against the possibility of repossession and resale. If the dealer is to be a guarantor of the integrity of the buyer, then he should be allowed a guarantor's privilege of a reserve for such endorsement.

Automobile discounts to dealers today are practically the same that were fixed in the days when fully 95 per cent of automobile sales by the dealer were for cash. Since these discounts were fixed, conditions radically different from those of the early days have crept into automobile merchandising and the dealer's margin between gross discount and net profit is today a very narrow one. That original discount never contemplated the time payment business as it now exists, and certainly no provision was made in the original discount to cover the item of guarantee of time paper.

Indeed, careful reflection would indicate that the most desirable handling of this paper from the dealer's standpoint is for finance company acceptance of it without endorsement from the dealer at all. Dealers are constantly contending with the commercial bankers for adequate credit requirements and one of the most serious of these handicaps is the view the banker takes toward the contingent liability of the dealers' endorsed paper. Elimination of endorsed paper, we feel would put the banker in a frame of mind where he would grant larger sums of credit for merchandise stocks than he is now willing to extend.

This attitude of the bankers toward contingent liabilities has been one of the prime factors driving dealers to finance companies for floor plan financing, a function which in our opinion, should never be undertaken except from dealer capital or from bank loans.

Dealer-Banker Relations

This question of the dealer's relation with his banker for years has been a ticklish one because of the marked difference between the character of the automobile dealer loans and the character of the run-of-the-bank loans. The banker in most instances still tries to measure the automobile dealer's credit requirements by the same standard of net worth that he applies to the jeweler, the hardware merchant, or the dry-goods man without grasping the important bearing that merchandise turnover has upon credit extension. The jeweler with a capitalization of $25,000 may be satisfied with a credit line of $10,000 while in the automobile business, this much credit is required by a dealer who may not rate more than $7,000 as is indeed the average in 75 per cent of the towns of the country where 65 per cent of the automobiles are sold today.

But the jeweler is turning his stocks but once in 15 months, and the hardware man and the dry goods man likewise, while the average automobile turnover is 6.6 times per year. It is apparent to all of us in the automobile business that the commercial banker must take into consideration this marked difference in turnover in favor of the automobile merchant as against other merchants, when establishing credit lines.

But if automobile dealer endorsement is to be required on customer paper, then the dealer should be permitted to make a charge, say of two per cent, for making out the finance papers, looking up the references, handling the insurance documents and last but not least but most importantly, guaranteeing the payment of the deferred balance in case of default by the customer.

The automobile dealer is staking his business future

MOTOR AGE here presents an address by C. E. Gambill, president of the National Automobile Dealers' Association, before the National Association of Finance Companies in Chicago, Nov. 16.

Mr. Gambill offers not only some highly interesting observations on the subject of automobile financing, but he makes a statement of the N. A. D. A.'s position on various phases of this important question.

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upon a relationship which legally can be terminated anywhere within from five to thirty days. His obligations may be assumed for a period of as high as five years (for example a building in which to operate) leaving him high and dry if a franchise is cancelled with pending liabilities without sources of income adequate to meet them.

Danger of Sales Pressure

While the bulk of manufacturers no longer force unwanted automobiles upon dealers, there is always the temptation among manufacturers to put on sales pressure to the utmost limit. While the factory is learning the true condition in the field, the dealer may be suffering deadly financial pains. Is it any wonder then that the dealer helps the finance company to tear down the bars that provide safety to his business *future*, if he can but secure some peace of mind for his business *present?*

The dealer in this dilemma may readily yield to the suggestion of a small down payment and longer terms in order to move automobiles from accummulating stocks, but this is a hypodermic that helps over the present with a possible dreadful toll of the future.

Under the present practice of trading automobiles, it is doubtful if the great majority of owners of automobiles in the price class below $1,000 keep a new automobile longer than two years. What is to be the term limit so far as trade-ins are concerned? Are time payments to be extended to such a limit that the buyer with his used car is back in the market for a new automobile before all liens outstanding against the car, offered as a down payment, have been paid?

On a twelve months basis, most automobile dealers feel reasonably sure that the majority of their sales will be in such condition that if there was a change in the domestic financial situation, repossession could be made with minimum of loss to the dealer as well as to the finance company. But who will be so hardy as to proclaim that he can forecast the exact business future of the nation for the next 24 months or even the next 18?

Another point which the finance company must remember, is that it stands as a trustee for the automobile dealer as in the matter of an adequate down payment.

What constitutes the down payment in the average transaction of today? Generally a used automobile.

The Used Car Danger

To illustrate your responsibility suppose we consider a $1,500 new car deal with a $500 trade-in. The finance company in this transaction is called upon to finance a deferred balance of $1,000 on the new car. But this isn't all of the picture. A few weeks later the finance company is advised by the dealer that he has a buyer for the used automobile and that he wants 60 per cent of the resale price financed. That means $300 more for the used car. The finance company has financed $1,300 of the total with two automobiles (both used cars now) as security and with two possibilities of repossession as against one.

It is important therefore that finance companies, to protect themselves, should insist upon proper operation of the used car department by the dealer at all times if he is to be a desirable finance customer. There is no way by which the dealer in the selling transaction can correct the mistakes made in the buying transtaction. The finance company's peril begins the day the dealer buys at an excessive price, and not the day he sells. If the dealer overallows when buying, it is a certainty that he will attempt to over-price when selling and used cars sold too high come back when the customer realizes that he still owes on the car more than it is worth.

We believe that the finance companies must recognize in addition to the individual feature involved in a financing there must be a selection of automobile dealer risks for credit, and that time sale financing just as open credit or bank ratings, must be provided only for those who have business judgment and ability to run their business upon business lines, as well as an inclination to make good their promises.

It is no longer possible for finance companies to plead ignorance of requirements of dealer responsibility. The National Automobile Dealers' Association has shown finance companies and bankers how automobile dealers can be judged worthy of credit. In its great work on budget and chart control of dealer income and expenses, of accounting systems for dealer records, of comparative profit and loss statements, the National Automobile Dealers' Association has provided a yardstick for every bank and finance company to measure every dealer requiring credit facilities. We are distributing model set-ups, which finance companies can check against the operations of the dealers to whom they are extending finance facilities, and unless there is at least a willingness and a spirit to work toward the aims set out in those budgets, we believe finance companies are treading upon dangerous ground in extending credit to dealers for their time financing.

N. A. D. A. Recommendations

In conclusion may we summarize the foregoing recommendations of the National Automobile Dealers' Association as follows:

1. We recommend that all finance companies adhere to the previously laid down rule of requiring a one-third down payment and completion of the deal within twelve months on new car financing.

2. We recommend to commercial bankers that they revise their standards of commercial credit to allow greater credit to automobile dealers with fast turning lines of merchandise than to other merchants whose lines move more slowly. Turnover should be given greater stress in determining ratios of credit to net-worth.

3. We recommend absolute elimination of all dealer endorsement of customer paper as a means of removing a legal contingent liability which is not understood by the commercial banker and which shortens the actual credit granted by banks to dealers.

4. We recommend that where automobile dealer endorsement is required, despite our previous recommendation upon this point, that the dealer be allowed to charge a sum sufficient to set up an adequate reserve to cover himself for the risk he is guaranteeing.

5. We recommend that finance companies and bankers give greater attention to the matter of dealer accounting, requiring from dealers whose accounts they handle, monthly profit and loss statements, similar in form to the standard profit and loss form for dealers devised by the National Automobile Dealers' Association.

(The foregoing is the text of an address delivered by C. E. Gambill, president of the National Automobile Dealers' Association, at the second annual convention of the National Association of Finance Companies at Chicago, Nov. 16, 1925.)

The retail automotive dealer is more than a merchant. The intricate mechanical nature of the motor vehicle, for which he sells supplies, equipment and accessories, is such that the owner relies upon the dealer to give sound advice as to the adaptability of certain articles to fulfill the owner's individual requirements. The dealer who meets this situation intelligently and supplies his customers with products that will give unquestioned satisfaction will build a profitable business.

As the Editor Sees the Automobile Business

Dealer's Influence Over Car Owner's Purchases Is Great Business Asset

BY SAM SHELTON

PROBABLY in no other business does the dealer exercise so powerful an influence over the sale of merchandise to his customers as in the automobile business. In this business the dealer is a real authority looked upon by the car owner as an adviser capable of selecting and recommending the best accessories, supplies and equipment for the customer's individual needs.

The reason is found in the way the consumer uses automotive merchandise. This merchandise may be generally described by three classifications: accessories, supplies and equipment. Merchandise in all three classifications is used in connection with the operation of the motor vehicle. It is either placed within the vehicle or attached thereto and performs some definite function in connection with its operation.

Much of it has to be installed by some sort of mechanical operation which the car owner himself is not equipped to perform. Some of it is consumed with regularity in the process of using the vehicle, and the manner and rate of consumption vitally affect the satisfactory operation of the vehicle.

It is only natural then that the questions of size, fit, adjustment, adaptability to a particular car, and the like, should cause the car owner to rely upon the dealer's experience and judgment in the selection of this sort of merchandise. And the dealer has a responsibility to perform in seeing that the car owner is properly advised so that the car owner gets the satisfaction that should come with the use of the merchadise the dealer sells.

The dealer's influence in the sale of automotive merchandise is strikingly shown by a survey recently made by the Chilton Class Journal Co., publishers of MOTOR AGE and other automotive business papers.

Reports from nearly 2000 dealers showed conclusively that a great majority of car owners leave the selection of accessories and replacement parts to the dealer.

In connection with accessories the questions were asked:

What percentage accept your suggestions?

What percentage demand the products of a certain manufacturer and will accept no other?

Complete answers to these questions were received from 1763 dealers and the summary of their replies was as follows:

The dealer's suggestions were accepted by 75 to 100 per cent of the customers of 1024 of these dealers.

The dealer's suggestions were accepted by 50 to 74 per cent of the customers of 502 other dealers.

The dealer's suggestions were accepted by 25 to 49 per cent of the customers of 142 other dealers.

And in only 95 cases did the dealers report that less than 25 per cent of their customers accepted the dealer's suggestions.

Analysis of these reports shows that in 86 per cent of the cases more than half of the car owner customers relied upon the suggestions of the dealer in the selection of accessories.

Conditions very similar were revealed in the survey of replacement parts sales to car owners. Replies were received on this subject from 1,738 dealers.

1136 stated that from 75 to 100 per cent of the customers leave the selection of parts to the dealer's judgment.

293 stated that from 50 to 74 per cent of their customers leave the selection of parts to the dealer's judgment.

150 stated that from 25 to 49 per cent leave the selection of parts to the dealer's judgment.

159 stated that from one to 25 per cent of their customers leave the selection of parts to the dealer's judgment.

Analysis of these reports shows that in 82 per cent of the cases more than half of the car owner customers leave the selection of parts to the judgment of the retailer.

The majority of car owners recognize that the motor vehicle is an intricate mechanical product and that best results are obtained from it only when all parts, accessories and equipment are properly co-ordinated and adpated to the vehicle. Naturally this calls for the advice of an expert and the influence of this advice extends not only to the selection of size, type and quality but even to the choice of brands.

The dealer who accepts this responsibility and properly qualifies himself to give sound advice to his customers in the selection of their automotive accessories, supplies and equipment naturally will win the confidence of more and more car owners and will build up a profitable business in proportion.

As Nash Sees the Small Town Dealer

Manufacturer Attaches Great Importance to Solution of This Merchant's Problems; Many Can Improve Condition 50 Per Cent by Cleaning Up, He Says

By DAVID BEECROFT

(An interview with the President of Nash Motors Company)

ENVIRONMENT has always been a determining factor in shaping the habits of men, and it is an equally powerful influence in determining the principles and policies of companies. Thus, when the man virtually in control of a company is permeated with a familiarity not only of a department of his factory, but also has studied the distributor and dealer field so as to make himself part and parcel of it, any suggestions for improvement come with a double meaning.

This character of environment, plus a life-long business career in manufacturing and merchandising, enables Charles W. Nash to place his finger on perhaps one of the most important problems facing the motor industry today, which he expresses thus:

"I do not believe there is a single automobile manufacturer who is close enough to his dealers, not merely the big distributors in a few dozen of our largest cities, but to dealers in places of 10,000 population and under, as well.

"The dealer who sells twelve cars per year has his problems that are just as great in his territory as are the problems of the dealer who sells a hundred cars, or five hundred, in his larger territory."

This constructive criticism carries added importance today by virtue of the industry producing at a greater production rate than at any other time in its history, and with the possibility of 1926 setting a new record for production. The small dealer is constantly playing an increasing part in the retailing of this output, which makes his position one of increasing importance to the manufacturer.

Analyzing further the case of the little dealer, who has to dispose of a dozen cars a year, in a sparse territory, where there is constantly increasing competition, both in the sale of new and used cars, Mr. Nash fills in the picture further:

"Nearly every one of these little dealers has to borrow money to finance the cars on his floor, and he has his concern with interest, insurance, etc.

"Go to the place of these small dealers: Too often the new cars are in a dirty, dingy sales room, or in the corner of a garage.

"On the walls are posters of different makes of cars or other products sold during the previous year. The new cars are dusty, sometimes dirty. The repair tools are scattered over the floor. Disorder is too general."

Only a manufacturer who has himself traveled over the country from east to west and north to south, not once but every year, could possibly point with such accuracy to a situation that too often applies to the small town dealer. Mr. Nash is not describing the dealer selling any one make of car, but rather the small town dealer selling nearly every make.

While Mr. Nash, in word-painting his picture of the small town dealer, was giving an accurate cross-section of the situation, he was at the same time disclosing one of his own great characteristics as the head of the Nash Motor Company, because no person could speak with such accuracy and authority unless he had seen with his own eyes, felt with his own hands, and experienced by contact that of which he spoke.

Mr. Nash had.

Very few manufacturers have traveled so extensively each year among their dealer-organizations; visiting not merely the big distributors but the small dealers as well.. He lives not only in the midst of his factory activities, but also in the atmosphere of his distributors. Once a year he visits all of his distributors and on such occasions the associated dealers are called in for a sales talk. But Mr. Nash does not stop here—no, he makes his small town circuits, visiting the small town dealers and looking into the small town situation first-hand.

From CHARLES W. NASH

"The dealer who sells 12 cars per year has his problems that are just as great in his territory as are the problems of the dealer who sells a hundred cars, or 500, in his larger territory.

"Go to the place of these small dealers: Too often the new cars are in a dirty, dingy sales room, or in a corner of a garage. The new cars are dusty, sometimes dirty. The repair tools are scattered over the floor. Disorder is too general.

"The small dealer can improve his condition 50 per cent without spending a cent. He can clean up. Cleanliness is one of the first laws of success!"

"THE FIRST IMPRESSIONS OF THE CUSTOMER ARE LASTING and you must have a clean place of business."

Visits in Dealers' Homes

He not only takes a keen interest but an unusually keen pleasure in this. Recently, while in San Francisco with the Nash distributor, he took a day off to make a 150-mile circuit of the small town and cross-road dealer. Not content, merely with going to the dealers, he made a round of visits to their homes, meeting their families and having an opportunity of studying and interpreting human nature in its relation to business.

Another incident serves to emphasize further how well qualified Mr. Nash is to speak on this subject of the small town dealer. The occasion was a dinner of the Nevada dealers, where the attendance was such that two rooms were needed for the dinner. After eating the first course in the main dining room, Mr. Nash joined the dealers in the auxiliary room, and the comment of one cross-road dealer epitomized the value of such an act: "You're the same as the rest of us." Coming from one of these dealers, this was a classic description of the type of executive who is as close to the small town dealer as he should be.

Mr. Nash is not only a creature of the great out-doors

nd familiar with the face of the country, but he knows he hearts of the people and it is this fact that places a ouble significance on his criticism that the average manuacturer is not as close to his dealers as he should be.

He goes further than merely offering a criticism by iving some constructive suggestions for the small town lealer:

"The small dealer," he goes on to say, "has more serious roblems right at hand today than have faced him heretofore, nd one of the first things he ıust do is to educate himself o as to do business on a igher plane." Further:

"The small dealer can imrove his condition 50 per cent ithout spending a cent. He an clean up. Cleanliness is ne of the first laws of sucess. He can set his sales pace, or salesroom, in order. Ie can keep his new cars lean. He can put his repair hop in order. With this done, ıe begins to set his own menality in business order."

The dealer who has never leaned up a dirty mess has nissed a great thrill. The 'rench have a saying that 'Every day has its morng," which applied to the ɔusiness day, means that ıature starts out fresh and lean and renewed each norning of the year—so ıhould the business man.

Mr. Nash goes further ınd hits at one of the greatst factors in influencing ıales, whether of automoɔiles, tires, boots and shoes, women's wear or groceries:

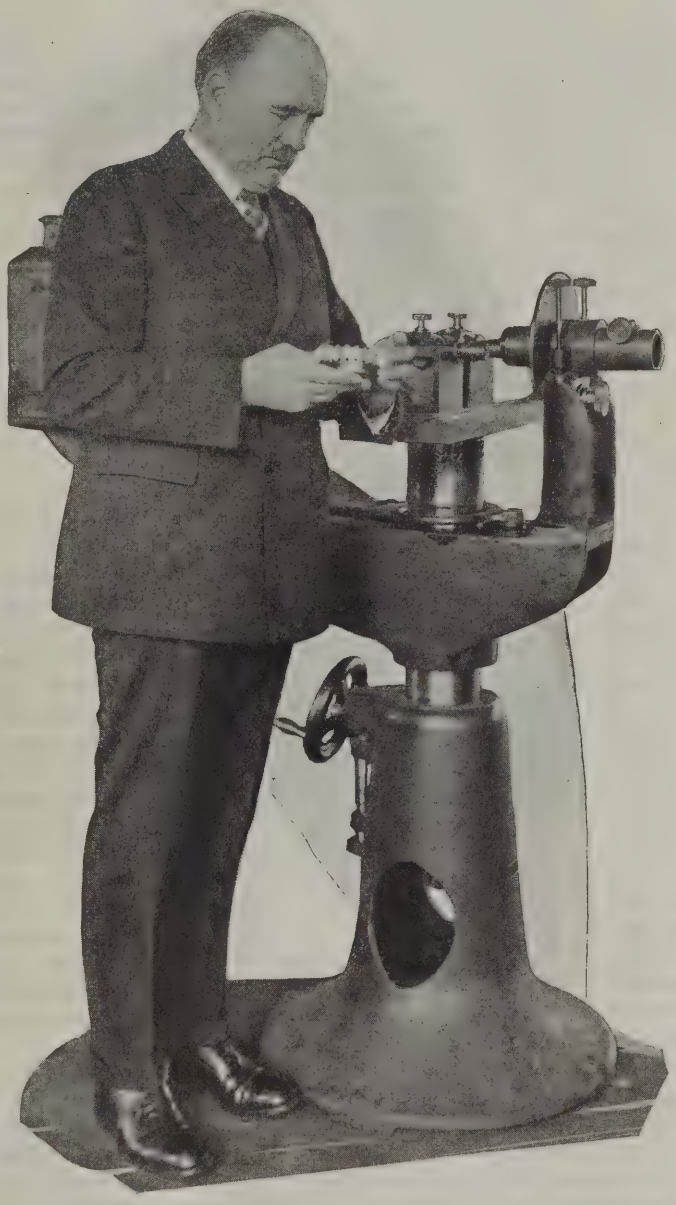
"First impressions are lasting."

These four words are in themselves a business sermon. They constitute a text that could be preached on every business day of the year.

"First impressions are lasting"

What does it mean? It is so simple that an explanation is not necessary, and yet it too often happens that truths so apparent are hardest to analyze. They contain volumes where only sentences are extracted. This is not a new impression born of automotive marketing, but is as old as the hills. Beside possessing age, it posses universal application. It is one of the fundamental laws of psychology—the science of the workings of the human mind. This is what makes it so important. Being an accepted law of psychology, you cannot deny it. It does not permit of dispute. It is as unalterable as the laws of the Medes and Persians. This is because it truthfully expresses the workings of the human mind and, as the mind is master of the man, it becomes a matter of first importance to make sure that the first impressions of the customer entering your place of business are favorable.

Mr. Nash analyzes this further:



Charles W. Nash

"The first impressions of the customer are lasting, and you must have a clean place of business. Too often this is not the case. The average small town dealer prefers to take a stogie and sit down on an old chair, rather than take a broom and clean up."

He has further suggestions as to how this dealer can improve himself 50 per cent without spending much money:

"This dealer must study psychology—not the text book—but get some of the first principles of interpreting human beings. He can make his greatest progress by such personal improvement, and in this I do not speak of the small town dealer, but the dealer in places of 15,000, and perhaps larger."

But while criticizing and suggesting methods of improvement, Mr. Nash has the latch-string of this human heart hanging out for these dealers. He knows their good impulses, as well as their business short-comings, and so this year, as last, this Nash principle of assisting dealers, comes to the front:

Says Don't Load Up Now

The Nash Company is now urging—get it—*urging*—these dealers not to load up with cars in November and December, realizing that they have their problems of interest, insurance, etc., and that their profits are small; but the reminding them that the dealer who does not stock up in January and February is not a good merchant and will generally find himself short of cars when the profitable selling season comes along.

Mr. Nash has a word to say with regard to the large distributor, some of whom have, because of their great success in the past few years, graduated into the coupon clipper classification. Here it is:

"If the distributor is not doing a good percentage of car-retailing, he is not close enough to selling problems. He may be doing an intensive merchandising work, but he can best appreciate the problems of his associated dealers when he has the responsibilities of such an association on his hands. The importance of the small dealer is such that the best assistance of the distributor is needed today as never before."

Mr. Nash is, as he always has been, an apostle of education; not merely the better education of the factory sales organization on the product, but there is a responsibility on the factory to educate its distributors and dealers. He regrets that there are so many dealers today not

(*Continued on Page* 21)

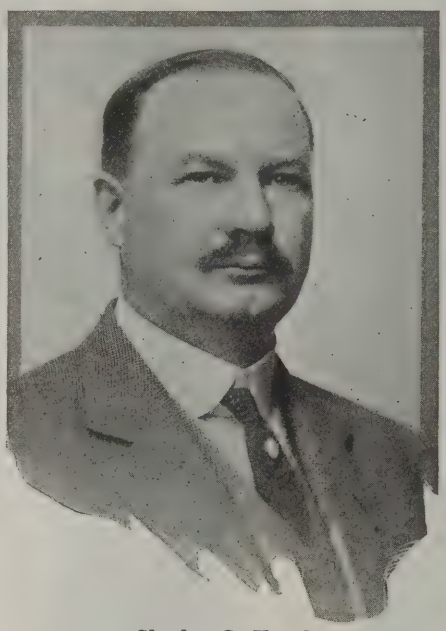
Safety Zone of Automobile Financing

For Years Manufacturers Have Maintained Their Tenet of "Sight Draft Against Bill of Lading." Why Should Not the Finance Interests Hold to The Principle of "One-Third Down and Twelve Months to Pay?"

BY CHARLES C. HANCH

IN nearly all lines of business there is an established "yard stick" in some form to govern terms of payment for services or merchandise. Price agreements among competitors are unlawful, but neither the public nor law enforcing officials object to terms of payment arrived at by common consent or understanding. One of the most conservative and arbitrary "yard sticks" that has ever been used extensively in any industry, is the one used generally by automobile manufacturers. Their "yard stick" is Sight Draft Against Bill of Lading, in other words, cash in advance of delivery of goods. This "yard stick" has been adhered to tenaciously from the very beginning of the automobile industry.

In all other respects, except patent co-operation, they have engaged in the keenest kind of competition. They have omitted no conceivable or known competitive maneuver to confound the other fellow. They have permanently announced new models just as the other fellow was getting under way. New models have been based upon changes so slight that only an advertising manager could find them. Radical changes have been made with the pretense that no new or yearly models were ever brought out. Slow-moving lines have been repainted, truck racks attached, and sold for sport models. Prices have been drastically cut without provocation just when the market appeared to be stabilized. Revolutionary improvements have been announced out of a clear sky. Is it any wonder that hundreds of manufacturers have faded out of the picture?



Charles C. Hanch
General Manager National Association of Finance Companies.

Notwithstanding this battle among giants, no manufacturer has ever abandoned the good old "yard stick," Sight Draft Against Bill of Lading. It is a fortunate thing for automobile finance companies that their methods of competition are not so numerous as in the manufacturing branch of the business. For a number of years, automobile finance companies had a fairly well established "yard stick." This "yard stick" was one-third down, balance in twelve equal monthly payments on new cars, and 40 per cent to 50 per cent with 10 to 12 equal monthly payments on used cars.

Under application of this standard "yard stick" the volumes of financing of automobile retail sales grew from a comparatively small sum in 1915 to upwards of $2,000,000,000 during the last year. This, and this alone, made possible the present great volume of automobile production. Automobile time sales paper under standard terms established a reputation for soundness second to none.

For a number of years the average amount of note at time of purchase has been steadily declining. At the beginning of 1924, the average note on new cars was $587, and the average note on used cars was $303.

An extensive survey completed during 1924 showed a loss ratio of .18 to 1 percent, slightly less than one-fifth of 1 per cent on aggregated new and used car paper, amounting to $193,500,000, both with and without endorsement of the dealer. It should be borne in mind that this survey does not show the loss sustained by the dealer. This survey also showed the ratio of used car repossessions to new car repossessions as two to one.

Early in 1925 another survey was made to show the loss ratio on used car paper, both with and without endorsement by the dealer. This survey showed a loss ratio of a little less than one-sixth of one per cent (.157 of 1 per cent), on used car paper with guaranty and a loss ratio of a little less than three-fourths of one per cent (.735 of 1 per cent), on used car paper with guaranty. In this survey 95 per cent of the paper was with guaranty and 5 per cent of the paper was without guaranty.

During the past year, due to competition among themselves and influence by certain manufacturers, there has been a tendency, particularly in a few localities, to depart from the usual or standard terms. In view of the steadfast Sight Draft Against Bill of lading of the manufacturers, the recent position of some manufacturers in advocating smaller down payments and longer time, is anomalous to say the least.

Comprehensive Survey Made

In order to determine the actual effect of various departures from the standard terms, a very comprehensive survey has just been completed. This survey is based upon reports from four times as many finance companies as ever before participated in a survey of this character. The average note at time of purchase is now $528 on new cars and $280 on used cars. Inasmuch as the maturity period has a direct effect upon the unit loss of repossessed cars with any given down payment, the factor of maturity was used to show different unit losses.

The experience average of loss per repossessed car which had 12 equal monthly payments is $50. It should be remembered that this average is based on one year's record of all types of cars and the experience of small, medium and large finance companies in every section of the country, with a preponderance of smaller companies.

The experience average of loss per repossessed car of all types and in all localities which had 16 to 18 monthly payments is $78. The experience average loss per repossessed car which had a balloon note or more than 18

equal monthly payments, is $220. The average loss on repossessed cars with 16 to 18 monthly payments is nearly 57 per cent (56.67 per cent) higher than on repossessed cars with 12 monthly payments. In other words, from a unit loss standpoint paper with 16 to 18 monthly payments is 57 per cent more hazardous than paper with 12 monthly payments. The average loss on repossessed cars with balloon notes, or more than 18 monthly payments, is 341 per cent higher than on cars with 12 monthly payments.

The average losses shown above may not be in strict accord with recent experience, however, they are relative and may be taken as correctly showing the difference in hazard of paper with different maximum maturities.

The amount of the down payment is the most important item in connection with the sale of any article on time. While the down payment has a bearing on the unit loss, its most striking effect is on the repossession ratio. The percentage of repossessions of new cars with one-third down payment is 1.75. The percentage of repossession of new cars with one-fourth down payment is 3.8, and the percentage of repossessions of new cars with less than one-fourth down payment is 11. The repossession ratio with one-fourth down payment is 121.5 per cent higher than the ratio with one-third down payment, and the ratio with a down payment less than one-fourth is 537 per cent higher than the ratio with one-third down payment.

The percentage of repossessions of used cars with a 40 per cent down payment is 3 per cent. The percentage of repossessions of used cars with a down payment less than 37 per cent is 6 1/6 per cent.

A calculation of the loss ratios on total volume of business, based upon the above factors of the last survey is very illuminating. For example, the loss ratio on new car paper, one-third down, 12 months, is .163 per cent; one-third down, 16 to 18 months is .254 per cent; one-third down, more than 18 months is .716 per cent; one-fourth down, 12 months, is .36 per cent; one-fourth down, 16 to 18 months, is .563 per cent; one-fourth down, more than 18 months, is 1.587 per cent; less than one-fourth down, 12 months, is 1.014 per cent; less than one-fourth down, 16 to 18 months, is 1.625 per cent; less than one-fourth down, more than 18 months, is 4.583 per cent.

The loss ratio on used car paper with 40 per cent down, 12 months, is .536 per cent; 40 per cent down, with 16 to 18 months, is .839 per cent; 40 per cent with more than 18 months, is 2.35 per cent; less than 37 per cent down, 12 months, 1.1 per cent; less than 37 per cent down, 16 to 18 months, 1.716 per cent; less than 37 per cent down, more than 18 months, 4.84 per cent.

Loss Ratios

There are differences of opinion as to what constitutes reasonable loss ratios, but in view of usual reserves used by finance companies and the present tendency towards lower financing rates, it seems that no combination of down payment and maturity should be used which produces a loss ratio on new car paper in excess of one-half to 1 per cent, and no combination of down payment and maturity should be used which produces a loss ratio on used car paper in excess of three-fourths to 1 per cent.

In this connection it will be of interest to know that used car paper is now slightly more than 31 per cent in dollars and cents of the total retail paper handled by companies which handle both classes of paper. This percentage should be watched and reduced if possible. Fifty per cent of all companies reporting, require endorsement by the dealer on 100 per cent of the used car paper handled. Forty-four per cent of the companies require endorsement on part of the used car paper, that is to say, 94 per cent of the reporting companies require partial or full endorsement of used car paper. These percentages are only indicative of the general practice of finance companies and do not represent the true volume of endorsed used car paper. Some of the largest purchasers of used car paper do not require endorsement.

Regardless of whether the dealer does or does not, endorse the paper, so far as the retail customer is concerned, there are cetrtain hazards which must be assumed by some one.

Assuming that 12 equal monthly payment and one-third down on new cars and 40 per cent down on used cars, constitutes standard terms, it will be interesting to know the extent of special paper now in existence. Paper calling for more than 12 equal monthly payments is now 18 1/3 per cent of total paper handled and paper with a down payment of 25 per cent or less on new cars, and 35 per cent or less on used cars is 19 1/3 per cent of total paper handled handled. This does not imply that more than 37 per cent of all paper is special. In most cases where paper is special in one respect it is also special in the other particular. In any event, there is too much special and unusual paper being handled for the good of the automobile financing business. If the situation is firmly taken in hand by representative finance companies, no very serious results should ensue. Special paper should not exceed 15 per cent of the paper handled.

Must Pay Fair Rates

No retail customer can reasonably object to paying a rate which covers actual cost of getting the business; cost of credit investigation; cost of collection; insurance premium; proper reserve for actual losses and a reasonable net profit. If this theory is correct finance companies should not employ two sets of rates that the user should pay for the same service and hazards.

It is up to finance companies generally to make their own "yard stick." No one else will make a "yard stick" for them. No one will enforce the proper application of a "yard stick" save the inexorable operation of economic law which ultimately and inevitably punishes flagrant and persistent violators of its rules. If finance companies do not make a "yard stick" of their own and voluntarily adhere to it, there will be no Safety Zone in the automobile financing business; not even a silent policeman will guide the traffic.

Charles C. Hanch, the author of the accompanying article, speaks with the authority of one long connected with the manufacturing, selling and financing of automobiles. It was largely through his efforts that the cross-licensing agreement was reached, which saved the industry thousands of dollars.

Mr. Hanch is at present general manager of the National Association of Finance Companies, and "The Safety Zone of Automobile Financing" was incorporated in his report at the financial conference recently held in Chicago under the auspices of that association.

Mr. Hanch was one of the organizers and directors of the Automobile Board of Trade, which later became the N. A. C. C. During the war he was chief of the automotive products section of the War Industries Board.

Jewett Brings Out Smaller Six Cylinder Car Listing at $995



Interior view of the front of the two-door sedan showing location of coincidental lock on the steering post column. The one piece windshield should be noticed.

Standard Sedan Becomes Lowest Priced Vehicle of Its Type Embodying Hydraulic Four-Wheel Brakes as Regular Equipment. Wheelbase Is 109 In.

By LESLIE S. GILLETTE

A NEW light six automobile in the form of a smaller, lower priced edition of the present Jewett has been introduced by the Paige Detroit Motor Car Co. One body style, a steel-two-door sedan offered either with standard or de luxe equipment will be the first model available on the New-Day-Jewett as the latest addition to the line is known. It is planned to have a touring car and another closed model ready for presentation at the shows.

Listing at $995, the standard sedan becomes the lowest priced car of its type embodying hydraulic four wheel brakes as regular equipment. In the de luxe style, the price of the special sedan is $1,095. The engine is of four bearing L-head type having a 2¾ by 4¾ in. bore and stroke and developing in excess of 40 brake h. p. Remy electrical equipment and a Johnson carburetor are fitted. A single dry plate clutch and three speed gearset in unit with the engine are connected with the semi-floating rear axle by two metal universal joints and a tubular propellor shaft. A standard gear ratio of 4.90 together with 27 by 4.75 in. balloon tires allows a maximum speed of nearly 60 m.p. h. The wheelbase is given as 109 in.

While the general layout of the new car has not departed from standard practices and also follows closely the design and appearance of the larger Jewett, it was develoopel to be adaptable to present day driving conditions, specially in regards to high performance in congested city traffic. On the road the car demonstrated its easy handling and liberal reserve of power, the "get-away" or rate of acceleration and the effective breaking were found to be unusual for a car of this type.

By the use of steel bodies, products of the Murray Body Corp., the cross dimensions of the corner pillars, door posts and window frames have been considerably reduced, permitting of a wider and alsomst unobstructed range of vision. This type of construction together with a shorter overall length of the engine, allows an unusually roomy body to be fitted on the new chassis. While there is a difference of 6 in. between the wheelbase of the New Day Jewett and its larger brothers, it is surprising to note that the interior dimensions of the two-door sedans on both chassis are identical in every respect.

An unusual amount of development work has been undertaken by the Paige engineers in perfecting the new model, a fleet of which have been undergoing severe road-testing for several months before being put into quantity production. Throughout the entire factory extensive changes have been made to expedite the assembly of the New Day Jewetts and production of the new member of the family will run the highest in Paige history, it is said. In addition, the larger Jewett and the Paige car will continue to be part of the dealer's line.

The engine is specially built for the new car by Continental Motors Corp. With an N. A. C. C. horsepower rating of 18.15, a piston displacement of 169 cu. in., the new six develops 40 b.h.p. at 2,400 r.p.m. while the maximum torque is 99 ft. lbs. at 800 r.p.m

Powerplant suspension is at four points with the method of carrying the rear of the engine departing from usual custom. By moving the flywheel housing to the rear approximately 1 in. it has been possible to run a channel cross member from one side of the frame to the other so that it passes under the engine between the housing and the oil pan. Two lugs are cast on the housing through which hold-down bolts pass securing the rear of the engine to the cross member. On the forward end two feet are formed on the rear of the timing chain housing, these feet resting on pressed steel brackets riveted to the frame.

Additional Stiffness

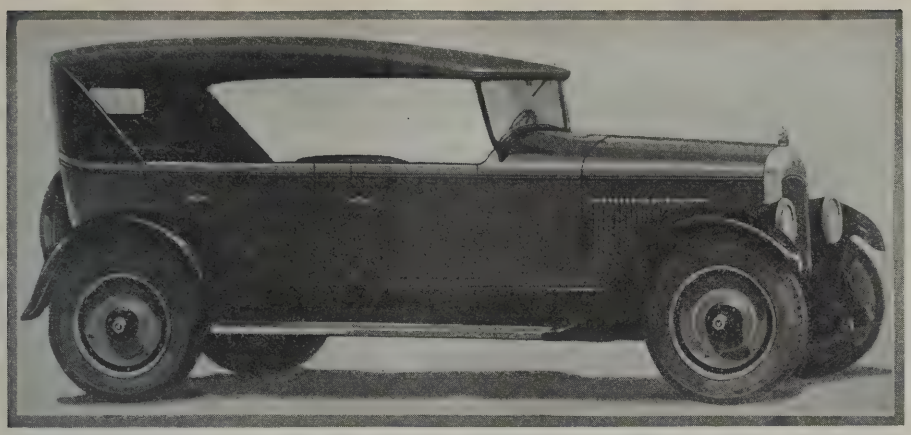
The cylinder block is grey iron with the bores finished by grinding and honing and the crankcase are cast integral. The head of course is detachable. The casting is well ribbed and by extending it 2½ in. below the center line great rigidity has been obtained. Besides providing more effective cooling, the effect of extending the water jackets down to the top of the case provides additional stiffness. A sheet metal header extending the entire length of the block allows complete inspection and cleaning of the water passages and is precaution against damage to the casting through freezing. Both the oil pan and the timing chain cover are steel stampings.

Weighing 43 to 45 lbs., the static and dynamic balanced crankshaft is of extra massive construction for an engine of this size being carried in four poured babbitt bearings of 2⅛ in. diameter and of the following lengths; front 1¼, both centers 1 5/16, rear 1 3/16 in. Connecting rods of "I" section with a center to center length of 9 in. have a bearing diameter at the lower end of 2 in. with a length of 1⅛ in. With cap, bushings and clamp bolt, the rod weighs 28¼ oz. In addition to locking, the 47/64 in. diameter pin in the cast iron piston with a tapered set-screw, snap rings are inserted in grooves at either end of the piston pin. The weight of the piston plain is 18 oz. while its length is 3⅜ in. Three rings located above the pin and of ⅛ in. width are employed, the lowest one being of special oil control type, requiring ten relief holes drilled in the groove.

Front end drive is by a 1¼ in. wide Link-Belt chain, having 89 links of ⅜ in. pitch and manually adjusted by swinging the generator mounting. The four bearing camshaft has its three rear bearings carried in grey iron bearings while the front bearing is babbitt, bronze backed to withstand the greater stress should the chain be set too tightly. Dimensions of the bearings in inches starting from the front are as follows:

Diameter	1⅞	1 13/16	1¾	1 11/16
Length	1⅜	1/2	1/2	1¾

Cams are ½ in. wide providing a .312 in. lift for the tappets.



Open touring model on the new Jewett chassis. This model will not be exhibited until Show time and the price has not yet been decided. The permanent top and one-piece windshield should be noted

Both valves are inclined on an angle similar to those on the larger Jewett, and have nickel steel heads welded to carbon steel stems, the latter being ⅜ in. diameter. On the exhaust, the clear diameter of the valve throat is 1¼ in. while for the intake it is 1⅜ in. By removing two large cover plates the entire mechanism is accessible. The valve lifters are of the convex type and carried in three cast iron cages that are easily replaceable. Turning of the lifter is prevented by a plunger held through a spring pressing against its flat side.

In line with latest developments the fan and water pump are combined in a single detachable unit mounted on the front of the cylinder block and driven from a pulley on the front of the crankshaft by a "Vee" belt. Adjustment for the belt wear is compensated for in the movable flange on the fan pulley. The shaft carrying the 3 in. rotor and the four bladed 16 in. diameter fan is supported in a New Departure double row ball bearing at the forward end while a plain phosphor bronze bushing is employed at the rear. The radiator is of the honeycomb cellular type similar in design and appearance to the larger car. Standard equipment includes a baked enamel shell while on the de luxe model it is nickel plated.

Pressure Lubrication

Lubrication is by pressure to all main bearings with the oil conducted through the drilled crankshaft to the connecting rods. Ducts in the crankcase webs carry the oil to the camshaft bearings while another lead to the front of the engine insures positive lubrication of the timing chain. In an accessible position just to the rear of the carburetor and below the valve cover plate, the combined oil pump and relief valve is located. It is necessary to remove four nuts to detach the unit, while withdrawing six small bolts and removing the cover exposes the pump gears which are operated by a spiral drive from the camshaft. Both the bayonet type level gage and the breather are on the right side of the engine while the capacity of the crankcase to show "full" on the gage is 6 qts.

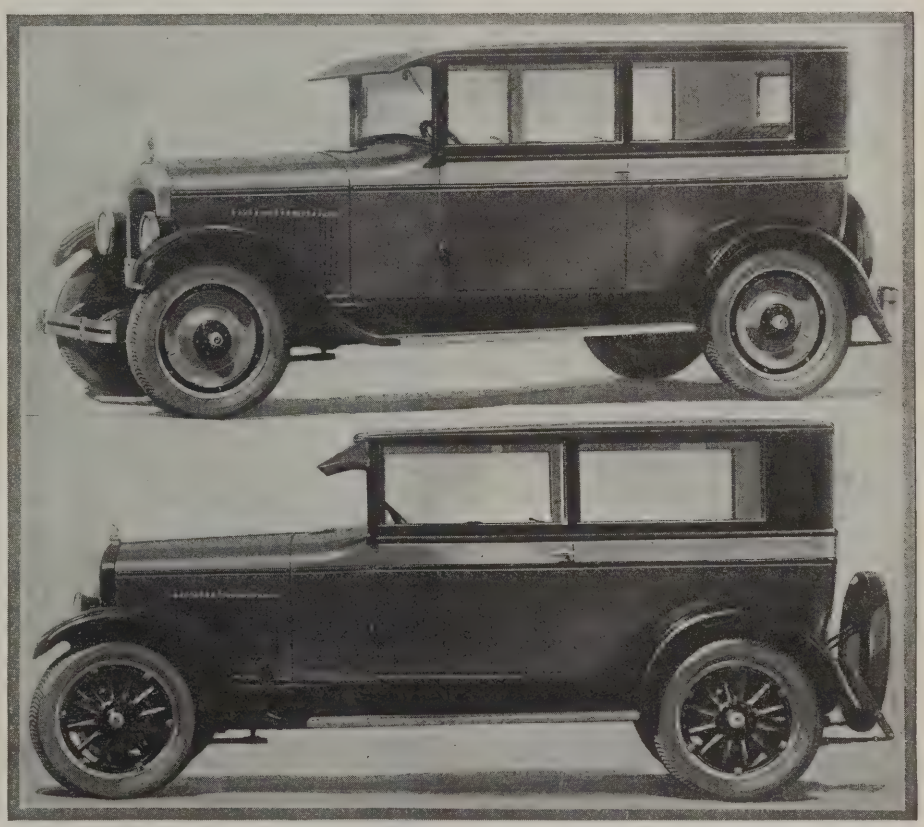
The manifolding is of the same design as employed on the larger car except that it is proportionately smaller. A Johnson model "H" carbureter with a 1 in. top outlet is bolted directly to a connection which is cast with the exhaust manifold and passes through it to the rectangular section intake manifold. The exhaust is led down the forward part of the engine to make for greater accessibility and to keep the hot gases away from the floorboards.

Electrical Units

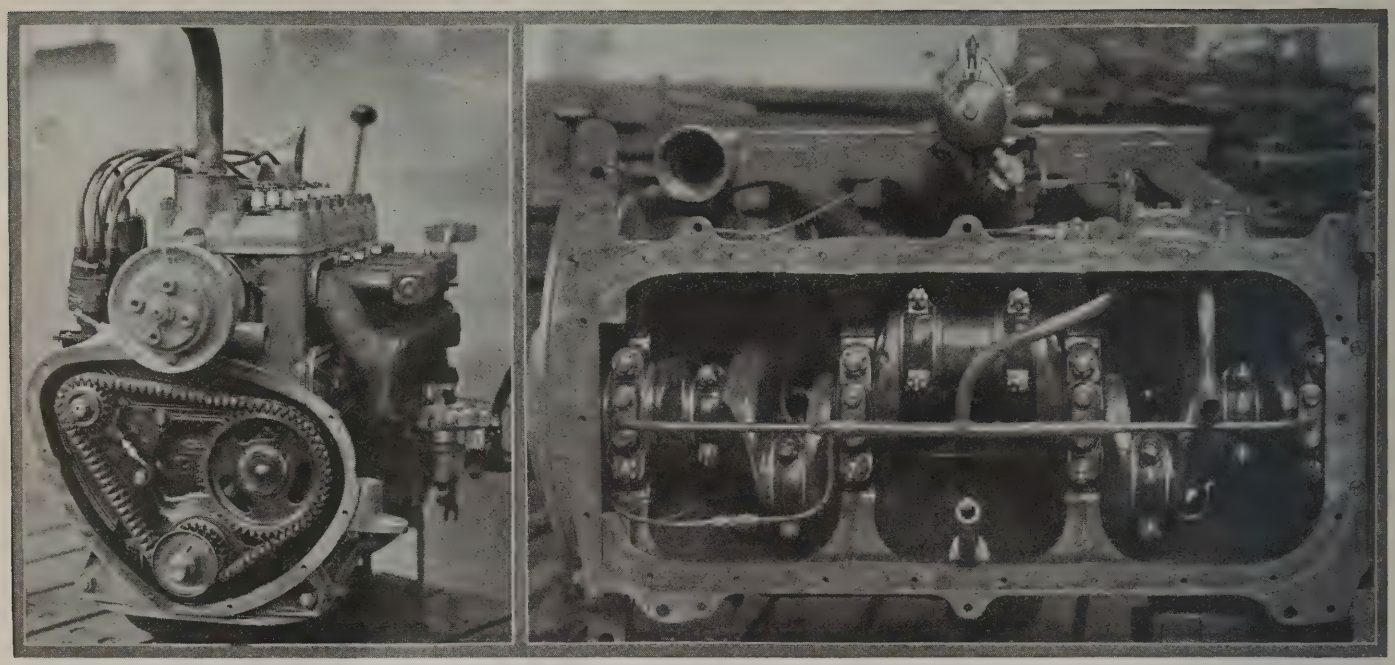
All three electrical units are of Remy manufacture while the battery is of the same type as employed in the larger Jewett, being an OB-13 Westinghouse of 115 amp. hrs. capacity. The starter is mounted on the right side of the flywheel housing and engages with 108 tooth gear on the flywheel by a Bendix engagement. On account of moving the flywheel housing to accommodate the rear engine support, a slight departure has been made from the standard S. A. E. method of mounting and a special armature shaft approximately 1 in. longer is to the third brush type generator, the latter being carried on the separate support casting upon which the distributer is located. The ignition unit is provided with automatic spark advance and operated by spiral gears connected with the generator drive. Both the coil and cut-out are mounted on the top of the generator.

High tension leads to the A-C make of ⅞ in. spark plugs are conducted through insulated brackets. Snap type terminals are used. A 5 amp. 25 volt fuse protects the generator field circuit while the lighting system is provided with a 20 amp. 25 volt fuse. Headlamps are of Corcoran manufacture and 6-8 single contact bulbs are used all around.

A single dry plate clutch of Rockford manufacture, model 9-HH, giving a greater leverage on the release arm than those employed on the bigger model is adopted. Besides being easier and smoother in operation, no adjustment is required. Four 90 deg. segments of friction material are applied to each face of the driven disk, the dimensions of the material being 8⅞ in. O. D., 5¾ in. I. D., by ⅛ in. thick. Throwout bear-



Top: The two-door De Luxe Sedan employing steel construction and listing at $1,095. Standard equipment includes disc wheels, front bumper, bumperettes, nickel radiator automatic windshield wiper. The top of the sedan has been carried forward producing permanent visor; bottom: The regular two-door steel sedan listing at $995. The narrow corner posts and door pillars as a result of steel construction should be noted.



Left: Front end chain of the new six showing pressure lubrication for timing chain; right: Oil pan removed from the Jewett engine showing oil leads running to each of the four main bearings.

ing is of Nice make and oiled by pressure gum through a nipple in the throw-out sleeves.

The transmission is a product of the Warner Gear Co. and known as model T-68A. Annular single row ball bearings carrying the main shaft while the lower shaft and spigot bearings are phosphor bronze bushings. Gear ratios are:

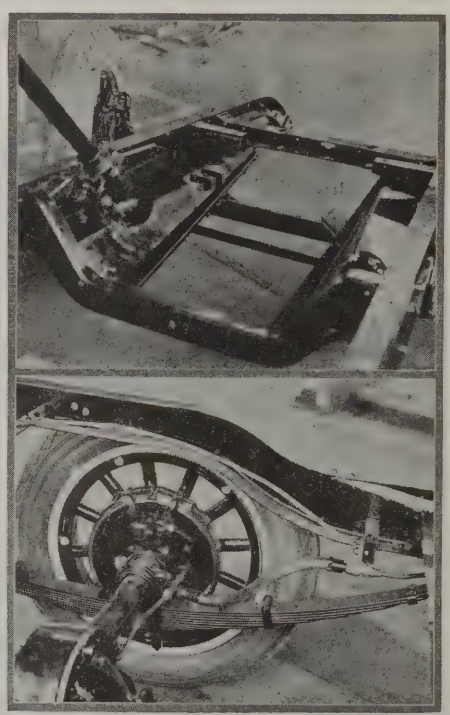
Low	3.07 to 1
Second	1.77 to 1
High	1.00 to 1
Reverse	4.00 to 1

Except for minor changes the leverages on the transmission brake are the same as those on the larger car, the dimensions of the drum being 6 in. diameter by 2 in. wide.

Two metal universal joints and a tubular propellor shaft all of Mechanics Machine Co. make transmit the power to the model No. 1593-E Salisbury semi-floating rear axle. Propulsion and torque is taken through the underslung springs while the axle housing is of pressed steel. The pinion is straddle mounted being carried at the front on a double row ball bearing and at the rear on an annular ball bearing. At the wheel ends of the $1\frac{1}{32}$ in. diameter axle shafts Bower roller bearings are used while the differential is supported on Timken roller bearings. Standard gear reduction is 4.9 to 1, the ring gear having 49 teeth and the pinion 10.

Front axle is also of Salisbury make, model No. 1592 and of the reverse Elliot type. Ball bearings similar to those on the larger car are employed on the knuckle joints while the king bolts are ¾ in. diameter. Bower inner and outer wheel bearings are employed. The worm and sector steering gear of Gemmer make, model No. 70 is fitted with a ratio of 10 to 1. A 17 in. diameter steering wheel is locked by a plunger located at the point where the post is secured to the dash. By depressing the plunger the ignition is automatically shut off.

The hydraulic four wheel braking system is virtually the same as that employed on the heavier Jewett except for the method of conducting the fluid to the rear wheels. Instead of the customary rubber hoses leading to the cylinders at each rear wheels, only one flexible connection is employed. On the left side a hose of the usual type connects with a "T" joint placed just above the spring pad and from this point the fluid passes through a short copper tube to the left operating cylinder. For the other wheel, fluid is led from the remaining outlet of the "T" by copper tubing passing along and secured to the axle housing, connection being made directly with the right operating cylinder. This arrangement besides making for a simpler hook-up prevents the possibility of damage to one less flexible connection between the frame and the axles. All four brake bands are interchangeable and contract over 12 in. diameter drums. The width of the lining is 1½ in. and the thickness $\frac{5}{16}$ in. Dimensions of the springs are the same as those on the larger car, the sizes on the front being 36 by 2 in. wide and on the rear 54 by 2 in. wide.



Top: The method of supporting the rear of the engine can be seen in this picture. This is an unusual feature, the entire rear of the engine being supported on the cross channel member; bottom. Photograph shows the method of transferring fluid from one rear rubber hose connection for the hydraulic braking system. Instead of a rubber hose to each rear wheel, fluid is transferred from left rear wheel to right wheel by means of copper tubing passing over housing.

On the standard model 4 in. Jaxon rims carrying 29 by 4.75 tires are fitted to 12 spoke artillery wheels. Tuarc disk wheels are supplied on the special sedan. Chassis lubrication is by the Zerk pressure oil gun.

In addition to the usual instruments on the dash the following items are included as regular equipment. Dash gasoline gage, cowl ventilator, sun visor, coincidental lock and windshield wiper. De luxe models also have nickeled radiator shell, front bumper, quarter rear bumpers, combination tail and stop light, automatic windshield wiper and snubbers all around.

Standard color for both closed cars is two-tone Killarney Grey lacquer.

As Nash Sees the Small Town Dealer

(*Continued from Page* 15)

sufficiently familiar with the product they are selling. The big dealer does not post himself sufficiently; his salesmen are not as well posted as they should be, and the factory is too busy producing cars to give the attention that the situation demands. The great lack of today is that desirable co-ordination between manufacturer and dealer; and the more this co-ordination can be carried out the better.

Mr. Nash is opposed to the extension of time-payments on motor-cars from twelve months to eighteen and twenty-four months. Here is his objection:

"Conditions in this country change very rapidly, and great numbers of cars are sold each year between April and the early fall. If these are sold on twenty-four months' paper, an unfavorable fall, due to frosts, poor crops, etc., means that many buyers cannot meet payments. The result is that these cars will come back on the financing organizations in large numbers, and in all probability will be placed on the used-car market at a 50 cent on the $1.00 basis. This will prove disastrous to used-cars in the hands of the dealers."

Mr. Nash is not one of those who believes that the saturation point of the motor car industry lies ahead, but rather that it was reached two or three years ago and that, because of this, there is a proportionately greater danger with time-payments that extend over eighteen months or two years.

He has one other message at this time for the distributors and dealers; namely, that both must recognize the importance of service and that, when the car is sold and paid for, the dealer's responsibility does not cease. He was one of the first executives in the industry to virtually preach the necessity for service, and is more thoroughly convinced now than ever before that it is the dealer who gives service that will continue and succeed in business.

Mr. Nash is not carried off his feet with the car production records that are being made at present, and does not believe possible the almost fantastic figure of 5,000,000 cars for 1925. In all these present evidences of prosperity he comes back with the old warning that the automobile industry has spoiled more men than any other, and that there is greater necessity today than ever before for distributors to stick close to their business and concentrate all of their efforts on merchandising and servicing motor cars.

Industrial Health Conservation a Sound Business

TUBERCULOSIS in industry is decreasing. The death rate during the past 20 years from this disease for the entire country has been reduced by one-half. A part of this gain at least, may fairly be attributed to the sunlight factories, exhaust fans, dust-protecting masks and other health measures, which have become common-places in industry. Yet physicians and health workers still urge employers to install further protecting measures for working men and women. And many employers are questioning whether the expense of such equipment is really justified as a sound business investment.

It requires careful consideration of the studies which industrial physicians and life insurance company statisticians have made of tuberculosis incidence, to understand the uses of what is known as "industrial medicine." The Metropolitan Life Insurance Company, for example, has found that more men than women die of tuberculosis after the age of 25. They infer from this that the higher death rate for men is due to industrial strain, as after the age of 25 women, for the most part, are employed in the more sheltered occupations of the home.

The labor turn-over and loss of time through illness still create a considerable loss to most employers of labor. To prevent this loss, and experts maintain that it is preventable, large industrial plants such as the New York Telephone Company, Metropolitan Life Insurance Company and the Dennison Manufacturing Company, have installed departments of preventive medicine for their workers.

Most to be reckoned with as hazards to the health of workmen are the dust hazard, impure air and over-fatigue. The problem of under nourishment, too, is a serious one.

It is one of the aims of the National Tuberculosis Association and its affiliated organizations to educate working men and women more in the rules of healthful living, thereby making them not only happier but more useful as producers. In order to further this campaign of education, the eighteenth annual sale of Chirstmas seals will be held throughout the country in December.



1926 BUS SHOW PLANNED

DETROIT, Nov. 28.—Detroit will be the place for the Second National Motor Bus Show, C. E. Stone, chairman of the general committee, has announced. The decision to hold the show again next year, in all probability at Convention Hall, was reached at a meeting of the general committee. "The show will be held here next year," Mr. Stone said, "and it will be bigger and better than the one just closed. Bus and accessory manufacturers have notified us that they are willing to exhibit their products again and that they will give the show their support."

One Outfit Does the Work of Two

An interesting arrangement of battery charging equipment obviating the necessity of purchasing an additional motor generator, was recently made by a western company using a number of storage battery trucks. A 125-volt, multiple battery charging, motor generator was being used, the capacity of which was seven trucks charging at a 40-ampere rate. It was found necessary to double the number of trucks and, at first, it seemed necessary to install a duplicate charging equipment.

Upon conferring with the San Francisco office of the General Electric Company, however, an arrangement was devised whereby the starting time of each battery was staggered. Thus, batteries which had been charging for some time would gradually require less and less current until finally an additional battery could be added for charging. This was made a continuous process. The equipment used for the purpose was a CR-9390 solenoid operated dial switch actuated by means of a type TR, form W contact making ammeter. The ammeter rotated the dial switch to increase or decrease the number of batteries connected on the terminals when generator amperage varied between predetermined limits.

The automatic arrangement above described accomplished by mechanical means what the battery man in a service station accomplishes when he uses a constant potential charging outfit to the greatest advantage. In using the constant potential charging outfit new batteries can be added, one at a time as those on the line become charged, so that the load factor of the set is maintained constant or nearly so, which gives the greatest efficiency from any electrical machine.

MOTOR AGE'S PICTURE PAGES

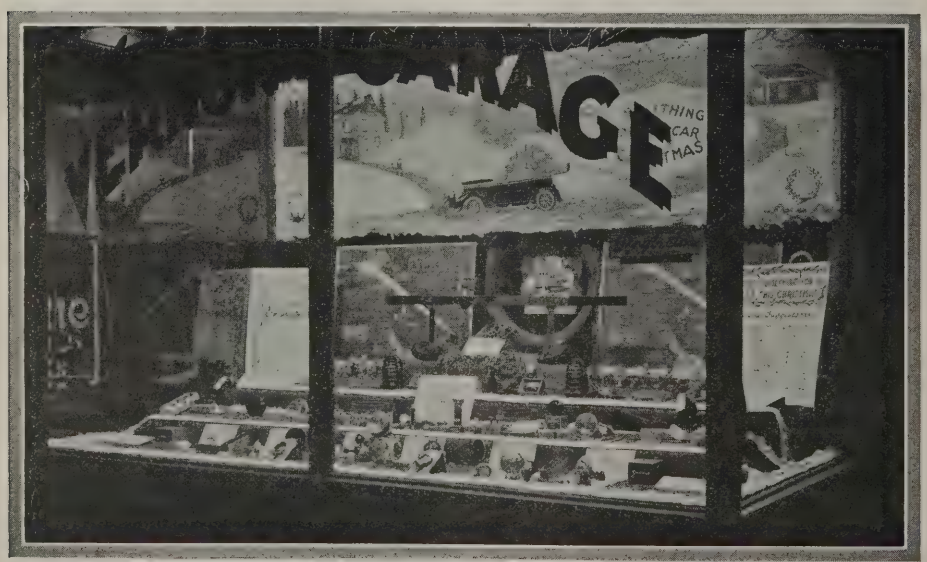




Top, left: Display of Nash Vriesma Auto Co., Omaha. The figure was so realistic that many at first thought it was alive; top, right: This is how A. W. Wade, Hudson-Essex dealer at Riverside, Cal., got the message across. The layout attracted much interest due to the fact that they do not have snow in southern California



Left: A suggestion of the primitive was contained in the Christmas effort of Jamison Sales Co., Chevrolet dealers at Canton, Ohio. It was the handiwork of four of the firm's salesmen who originated and worked out the window detail



Canada was heard from with this attractive window display entered in the A. E. A. contest last year by Vernon Garage, Vernon, B. C. It won fifth prize

YOUR CHRISTMAS WINDOW

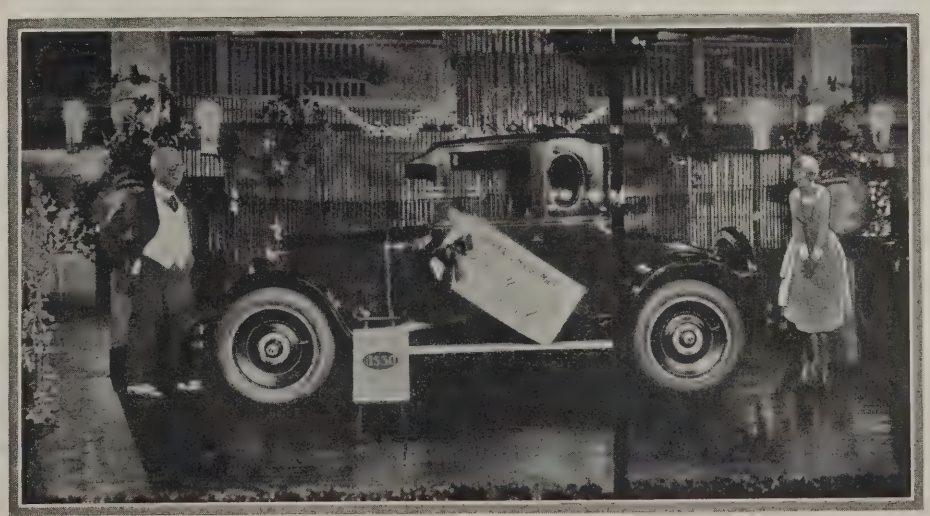
Automotive dealers who expect to get their share of the Chrismas trade will have to present the holiday invitation in their display windows. On these pages MOTOR AGE presents photographs of some of last season's best decorated Christmas windows. These displays should furnish inspiration and ideas for other dealers who desire to make the best of the holiday selling season.



The Christmas spirit was effectively stressed in the entry of Harold L. Arnold of Los Angeles in the A. E. A. window display contest last year, shown above. There is no mistaking the psychological appeal in such an exhibit and it did much to keep the cash register ringing at Christmas time



Kreiner's Tire & Service Co., Ottumwa, Iowa, submitted the layout shown at the left in the A. E. A. contest last year and annexed a $10 prize as a result. One could scarcely escape the suggestion of an automotive Christmas contained in such a display



Father has made daughter glad with a gift dear to every feminine heart. The clever display at the right is that of the Mossler Motor Co., Oakland dealer, New Orleans. The portiers and chandeliers are made of red and green paper rope. The figures are beaver-board outlines

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ^ ELECTRICAL ^ FLAT RATES
SHOP ^ LEGAL ^ PAINT & TRIM ^ ACCOUNTING

An Old Model Car Spits at High Speed

Q.—We are working on a Premier car, six cylinder type, which is about a 1912 or 13 model. It is No. 8522 model Z and is equipped with Eisemann magneto and Stromberg carbureter. The carbureter is of the old glass float chamber type. The car is all right up to speeds of 25 miles per hour, but over that it backfires at the carbureter and in the exhaust line very badly. It will not give better than 35 miles per hour and has very little power in high speed or on hill. Valve timing has been checked up with flywheel and seems to be o.k. Magneto has been overhauled and seems o.k. We have advanced the inlet valve camshaft gear two teeth without apparently helping much. The motor runs at normal temperature.—Milton J. Ludkins, Marblehead, Mass.

Our first suggestion is that you check the ignition. Run the engine at the speed which compares to 25 or 30 miles an hour or even higher and remove a wire from the spark plug to see if the spark will jump from the terminal to the engine, a distance of about $\frac{3}{16}$ inch. The spark may jump a distance of only $\frac{1}{8}$ inch and still be o. k. if the spark plug points are not set more than .025 inches apart. This will enable you to tell whether the ignition is cutting out at high speed or whether some other condition is responsible. As the magneto has been overhauled, we wonder if the work was properly done.

If the distributer gear is not correctly timed, with respect to the armature, it may be that as you advance the spark that the spark goes to the wrong cylinder. This, of course, would cause trouble such as you describe and make the engine back fire in the carbureter. The only other thing we can think of, that would do this, would be a sticking valve, which only sticks at high speed, so it might pay to check up the valves and see that the spring tension is good. The timing should be such that the exhaust valve closes and the inlet valve opens about the same time which is 6 degrees past top dead center. It also might pay to install a newer model carbureter and possibly a hot spot manifold, although we do not believe these changes would correct the trouble you are having.

REMOVING TAR SPOTS

I have noticed in an issue of MOTOR AGE, where a reader asks about a solution that will remove road tar. I have found that raw linseed oil, a soft cloth and a little patience are better than all the gasoline and coal oil. Where the tar has hardened it is best to apply a good coat of the oil and allow it to set for a while and then rub off with the cloth. —Majestic Garage, Hot Springs National Park, Ark.

MOTOR AGE'S READERS CLEARING HOUSE INDEX

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The Pinion Nut Shears the Cotter Pin

Q.—We have a Chevrolet, 1922, which has developed a peculiar case of differential trouble. A few weeks ago on taking the axle apart we found that the drive shaft nut had cut the cotter pin and backed off allowing the drive shaft pinion to come off. Of course, this chipped the gears slightly. We replaced the drive shaft pinion and ring gear and put in a new drive shaft gear key and drive shaft nut. We saw that the nut was tight and that a cotter pin was used. After putting it together the axle was all right with no hum or noise of any kind. However after driving about 300 miles the same thing happened again, the nut shearing the cotter pin and backing off.—M. R. Wilson, Miltonvale, Kansas.

This sounds like a strange sort of trouble and the local Chevrolet service manager does not know of its ever occurring. We wonder if the drive pinion is a good fit on the taper on the drive shaft. If it does not fit the taper and if the key is not tight in the key way it is possible that the pinion is working back and forth and tends to work the nut back and forth. We would suggest your lapping the pinion to the drive shaft by means of valve grinding compound until you get a very good fit. In most cases not only does the nut fail to come loose but after it is removed a puller is necessary in order to get the pinion off. We accordingly feel that if the pinion is a good fit on the shaft that you will not have this trouble.

Q.—How should the brush holder be set on a Remy starting motor as used on a 34-B Oakland 1919.

Starting motor brushes should always be lcoated so that minimum sparking is obtained at the commutator. When testing the starting motor the brush location should be such as to give maximum torque when the lock torque test is made. The starting motor should speed up rapidly when connected to the battery.

TO GET PAINT OFF AND GEARS OUT

Q—What can I use on a car to take the old paint off to get it ready for repainting?—Tennessee Reader.

This information will be given by letter.

Q—How can I remove the distributer gears on a Dodge Brothers car? They are ground up and are locked where I can't turn the shaft at all. I have the outfit off the car.

There is a set screw underneath the distributer housing which should be removed. Then the whole distributer should come out of the lower casting. If it jams and does not come out, there is no official way of removing it. You will have to use your own discretion and mechanical ingenuity.

Planning Your New Building

By TOM WILDER

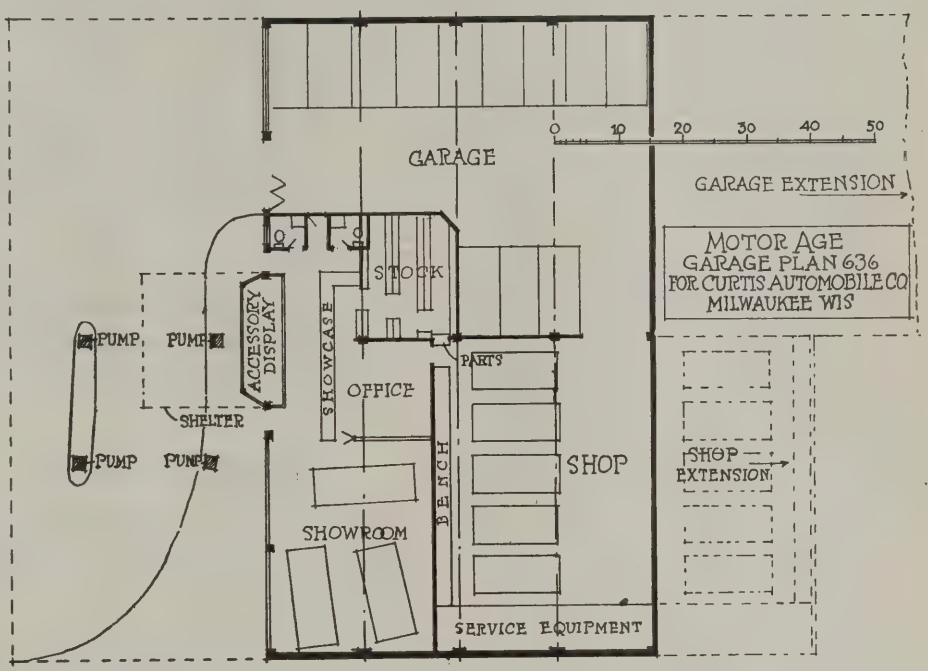
The READERS CLEARING HOUSE

A 100 Foot Front Is Better Than a 60 Foot

Q.—One of our dealers is asking us for ideas for practical garages for small town use and we hope if you have anything of this sort, you will forward it to us. The dealer's lot is 100 ft. wide and 200 ft. deep. His idea is to build in the center of the lot putting his oil filling station and canopy at the front of the building. He would like to have a showroom, office, stock room and the necessary rest room facilities. He does not plan on having his building over 60 ft. wide and about 100 ft. long. He plans on being about 40 ft. back from his lot line in order to allow plenty of space for his gasoline pumps.—Curtis Automobile Co., Milwaukee, Wis.

In our estimation there is quite a good deal of objection to building in the middle of a lot of this sort. If this is done there is a space of 20 ft. on either side that is not wide enough for any real use and is also not wide enough to build on to make a good useable addition to the 60 ft. building which is in the center. We are recommending that the 100 by 60 ft. building be placed crosswise of the lots occupying the whole front width. This can be divided perfectly into a 50 ft. garage on one side and a 50 foot shop on the other, the frontage being used for accessory store and showroom. This layout has the added advantage that it can be added to without in any way disturbing the existing departments as we have indicated in our plan. The back doorway may be installed in the garage so that the yard back of the building may be used for storage or outside service such as greasing, etc.

Placing the building as we have suggested also has the advantage that it looks like twice as much building as if it were narrow in the front giving the dealer the look of a good size prosperous dealer instead of a small one that had more lot room than he knew what to do with.



If this dealer is committed to his idea of a narrow building he should build to one side and 50 ft. in width.

Bad Vibration in Two New Cars

Q.—I have two Fords which vibrate very badly when the engine is pulling at about 15 miles per hour. These cars have only gone 1000 miles. What causes this? —W. M. Ryan, Long Beach, Calif.

It is unlikely that the mechanical parts could be so badly unbalanced that serious vibration would result at this low speed. We would suggest your checking the compression and if possible getting a compression gage and trying it in the four different cylinders to see how nearly alike they are. Another possibility is that the timing is inaccurate. You can remove the spark plugs and turn on the ignition switch in the battery position and turn the engine over slowly by hand to see if the coils start to vibrate at points half a revolution from each other, that is half a turn of the starting crank. Another possibility is in a defective manifold which would give an unequal mixture to the different cylinders.

Q.—What causes a roaring noise in a Ford when driving alone 20 or 30 miles per hour when the front wheels strike a bump? I have not been a subscriber to MOTOR AGE very long, but enjoy it very much, and the Clearing House most of all.

Ordinarily a roaring or grinding noise is due to rear axle trouble. It is possible that if the front wheels strike an obstruction or cause an extra load on the car that the additional strain on the rear axle produces a noise which would not otherwise be evident.

LEGAL QUESTIONS ANSWERED

By WELLINGTON GUSTIN

of the Chicago Bar

DEPOSIT HELD IN TRUST

Q. Can a deposit be collected? I made a deposit of $500 with a certain tractor company several years ago, I have discontinued their line of tractors and want to get my deposit back but they refuse to give it to me. If I brought suit would I be likely to win out?—Geo. E. Maurer, Freeport, Illinois.

A deposit is made under a contract and whether you may recover or not depends upon its terms and also possibly whether you have breached any of said terms which would in themselves prevent your recovery of the deposit. For instance, if you have agreed to do certain things which you have not done which has damaged the tractor company to the extent of the amount deposited, then on a suit to recover the company would likely set up a counter claim for this amount.

However, the company could retain only the amount of actual damages. The holder of a deposit holds the same in trust for the depositor and generally the depositor may recover with interest from date of demand for the return. The holder has no title except that of possession under the terms of the contract. So strong is the depositor's right that the writer recovered a deposit of $500 made by a dealer-agent of a truck company from the receiver in bankruptcy in Detroit—and as a preference over other creditors—although the firm claimed breach of the contract of deposit.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

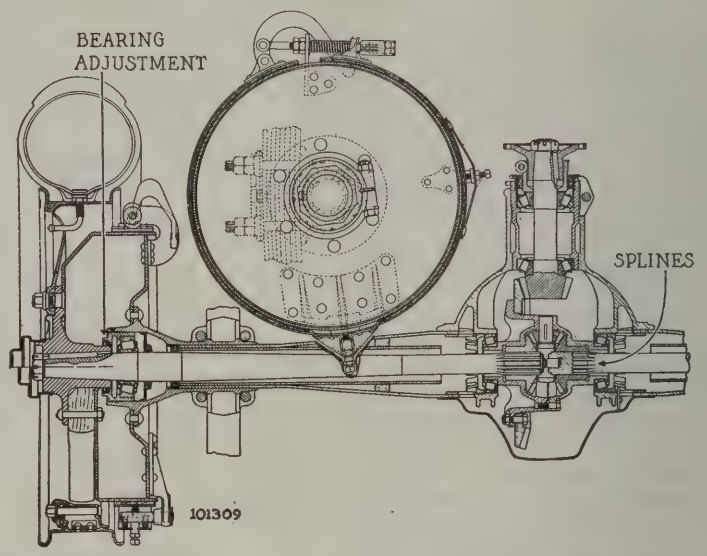
The Gear Teeth Chew Up The Differential Case

Q.—We have a special six Studebaker, 1924 model which has run 7000 miles and has developed a noisy rear axle. On examination we found that the spider gear and side gears had cut into the differential case. We put on a new case and now find that the axle is getting in the same condition after running about 700 miles. We cannot find any cause for this condition. Would be very thankful for any information which would help us in this case.—Frackville Sales & Service, Frackville, Pa.

We are showing a sectional view of the Studebaker axle. In the very center of the differential you will notice that the two axle shafts butt together and that a hardened steel button is set in the end of each shaft, these two buttons bearing against one another. At the wheel bearing there is an adjustment which when tightened pushes the shaft and wheel toward the center of the car. Tightening the two wheel bearings will push the two hardened steel buttons together in the center of the axle.

One possibility as far as your trouble is concerned, is that the adjustment has been taken up too much at one wheel bearing and not enough at another. This would cause the shafts to meet each other at some point other than the center of the axle. The shafts are splined and take their drive from the two side gears in the differential. If one shaft is too far to the left or right it is possible that one of these gears will bind on the end of the spline, so that a continual end thrust might be exerted on one of these gears.

As there is no special provision to take thrust of this character at this point, it might cause the gears to be forced to the right or left and make them cut into the differential case. Another possibility is that you have an axle shaft which is improperly machined or one which is too long or too short. When the adjustment is correctly made it is possible to have the axle jacked up and turn one shaft by hand and have the other turned readily in the opposite direction. There should also be no appreciable end play.



Construction of axle in Studebaker 1924 Special Six showing bearing adjustment which determines location of wheels and shafts

EXCESSIVE BACKLASH TROUBLE

Q.—I have a question to ask in regard to a 1922 model Buick. When it was driven 3,500 miles it developed a knock which gradually grew to be a very sharp knock. It can be plainly heard when the engine is idling and it is practically impossible to hear the knock when the car is running on the road except running two to five miles an hour. The knock is very plain. We have measured the cylinder walls and find only .0015 variation and the pistons have only .0025 clearance. The wrist pins, main bearings and connecting rod bearings are in good shape. We tightened main and connecting rod bearings and while the motor was still tight it had a dull bump instead of a sharp knock.

After the motor loosened up it had the same old sharp knock. The motor works perfectly at all speeds. It is impossible to short out the knock and it seems to come with the action of the valves and I think the push rods are in good shape. The knock also can be heard when cranking the motor with the crank. This car has the broad aluminum timing gears. At the present time the car has been driven 8,000 miles and the knock is no worse. What do you think of the trouble?—Vernon Hoblet, Willshire, Ohio.

We are of the opinion that the noise is due to backlash in the timing gear. We would suggest that you remove the timing gear cover and use a feeler gage to determine how much backlash is present. There should be not more than .0025 of an inch and if there is it means that the gears should be replaced with new ones. It is also possible that the noise comes from the valve action in which case very thorough directions covering methods of locating it can be secured by reading a story printed in the May 22, 1924, issue of MOTOR AGE, under the heading "Abnormal Engine Noises and How to Find Them." This story outlines a plan that can be followed and is based on the theory of removal and replacement of engine units in order to trace the knock.

ENGINE DEVELOPS VIBRATION AT 20 M. P. H.

Q.—We have a Gardner car with a 4 cylinder, 5 main bearing crankshaft Lycoming motor which has lately developed quite a vibration point at 20 m. p. h. This car when new was practically vibrationless and has been driven about 22,000 miles. The vibration is not noticeable at 15 m. p. h. or at 25 m. p. h. We have checked the compression and found it to be 50 lbs. in the No. 1 cylinder, 53 lbs. in the No. 2 cylinder, 55 lbs. in the No. 3 cylinder and 55 lbs. in the No. 4 cylinder. This motor has no bearing knocks or pounds. Neither the main nor the connecting rod bearings have ever been taken up with the exception of one of the main bearings.—Oskosh Cylinder Grinding Co., Oshkosh, Wis.

We would recommend your checking the shaft of the ignition unit to see that it does not have too much side play. It is possible that wear has occured at this point and that the opening of the interrupter points is not the same for all cylinders and does not occur at the same point in the piston travel. You can remove the distributor cap and shake the shaft sideways to see how much play there is and you can also turn the engine over by hand with the compression released and with the distributor cap off.

The interrupter gap can be checked with a thickness gage, as each corner of the cams functions. It is also possible that one corner of the cam has worn more than the other corners and produces a change in the timing.

You can also check the timing by relieving the compression and noting the piston position when the interrupter points open. The best way of determining the exact instant at which the points open, is to watch the ammeter and turn the engine slowly by hand. When the points come together with the ignition switch turned on, the ammeter will show 4 or 5 amperes discharging and when the points just separate the ammeter hand will drop back to zero. If the interrupter point openings are not uniform, it would be well to install a new interrupter cam.

Clearing Up Electrical Trouble

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Wrong Ignition Coil Generates Static

Q.—We have a condition at the creamery here that seems to us peculiar. A 2 h.p. make and break gasoline engine is equipped with a coil the same as the 6-volt Delco light uses and was connected directly to the battery. The make and break arm was made to break the primary circuit and the engine runs much better than with the old system. It also uses much less fuel and gives better power. When the engine is running a decided shock can be felt by placing the hand on any of the battery straps. The effect is similar to the shock from a spark plug on an automobile, but not quite so pronounced. It comes in on the nearby radios and spoils the reception to some extent. It can also be heard on the telephone. Would like to have your opinion about what causes this and how it can be overcome.—W. Virginia Subscriber.

The ignition coil which should be used with a make and break ignition system has only one winding. On the other hand all of the ignition coils used with 6 volt Delco light units have two windings. We have made a diagram to represent the general nature of the circuit you are using. The current from the battery goes through the primary of the ignition coil and through the contacts of the make and break device in the engine. When these contacts open you get a flash which fires the gas and the engine operates all right.

However, at the same time that you interrupt the current in the primary winding you generate a very high voltage in the secondary winding and there is no chance for the secondary voltage to be dissipated. In an ordinary jump spark ignition system as used on an automobile a connection runs from the secondary winding through the distributer to the spark plugs and the voltage rises only a certain amount and then causes the spark to jump the gap. The voltage then drops off to three or four hundred volts which is sufficient to keep the current flowing after it has once jumped. Where you have an open circuited secondary, however, as in the illustration we have shown, the voltage rises to a very high value, perhaps 10,000 volts or even higher. This, in a small way acts like a sending station and the high voltage sends out radio waves which are picked up as interference on nearby radio sets. The remedy would be to use the right kind of a coil or to take the coil you have and tear it apart and remove the secondary winding, then replace the primary winding and connections which would be still satisfactory for your purpose.

A TRICK START—SOMETIMES

Q.—I have found out a method of easily starting an automobile without using the electric starter. If the car has not been standing very long I turn on the ignition switch and then move the spark advance lever. If the engine has stopped in the right position the moving of the advance lever will make and break the ignition circuit and the breaking of the circuit will produce a spark just as if the engine were running. This works most of the time and saves a lot of battery current. Is this method used in the United States? —Frank Holland, River Terrace, Tinwald, Canterbury, South Island, N. Z.

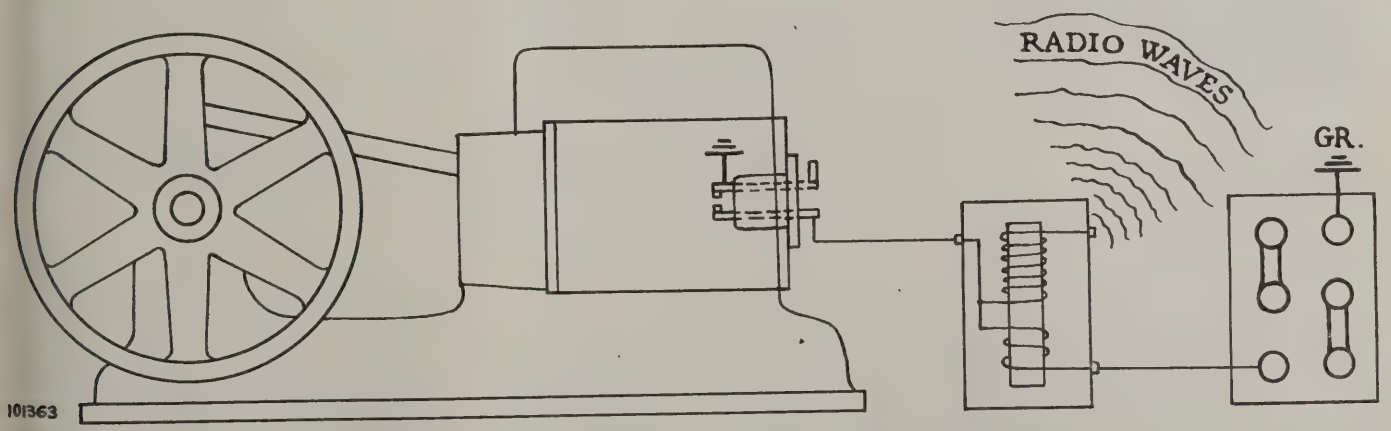
No, the car owners are not sufficiently interested in the mechanism of the car or in the operation of the electrical system to use any such method even if it would work most of the time. With the grade of gasoline used here and considering the fact that engines are not always in the best of condition this method would not work very often. To the electrical trouble shooters, however, it is of interest that the spark can be produced by operating the spark advance lever and may in some cases cause the engine to start.

Get Education You Can Turn Into Cash

A reader of MOTOR AGE who has conducted his own automobile business for seven years became particularly interested in the electrical articles in MOTOR AGE and wrote in, requesting advice as to whether he should take up an electrical engineering course. Our advice to him, sent by personal letter was to the effect that he should not. The rosy side of electrical engineering is often advertised in a way which would make it appear that it is only necessary to take an electrical engineering course and immediately obtain a wonderful position.

As in every other line of work however, the engineering must be applied to some particular business. Readers of MOTOR AGE and others who have been engaged in the automobile business for some time and are more experienced in that work than in anything else should stick to it if possible. In the case of the man who had applied some of the electric testing principles explained in MOTOR AGE we recommended that he study this more thoroughly at a short term course in some electrical school, but still with the idea of applying it to his automobile work.

We also pointed out to him that after improving his mechanical and electrical departments as much as possible he should take on profitable lines such as carbureters and shock absorbers which are often handled by electrical service stations. Many shop proprietors are inclined to forget that their chief job should be merchandising. The mechanical or electrical ability may be necessary or may be purchased as expert labor, but this job will prove a failure if good items are not handled and merchandised actively.



Ignition circuit that would cause interference in nearby radio sets.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Something to Think About When You Plan Flat Rates

THE automotive industry has as yet placed no official name on that part which has to do with a motor vehicle performing as a transportation medium over prolonged periods.

Several names have been and are being used by makers, dealers, garages and repair shops.

There are those who choose to call it service. Others designate it by a little more dignified word—maintenance. And the country is full of places where the well known sign "Automobile Repairing" stands out in bold relief across the front of the premises.

Meaning About The Same

To the car owner all these names, service, maintenance and automobile repairing mean pretty much the same thing and he has even a few of his own, particularly the word "upkeep."

No matter how we look at it all of these expressions mean just about the same thing. All have been coined for one purpose and that is to furnish the trade and car owner with some ready means for referring to the things which come up during the operation of a motor vehicle after its purchase.



THINGS THAT HELP FLAT RATE

Knowing at all times just what was done to a customer's car on its previous visit, will often help in carrying out subsequent flat rate operations. One service station uses an index system containing the names of all its customers who frequent the shop and reference to the cards shows exactly the previous operations

But there is something to be said about the way these various terms are used. When you have just sold a man a brand new car you desire that he get uninterrupted use of that car and therefore, refrain immediately from telling him of your "repair department." You know sooner or later that car will need repair work, but it is not good form at this time to talk repairs to the new owner.

So we talk about service or maintenance and probably keep this up at least until the car starts to look a little weather beaten.

"Trading-In" Period

Then we start to talk about "running her in the shop." Maintenance and service give way to repairing. Repairing to the car owner kindles anew the word upkeep, a big bill for the work and sooner or later he begins to talk to friend wife about "Tradin'" the old boat in for a new one.

He gets a nice shiny new one and all he need do for the time being is to put "oil and gas in her." The dealer tightens the fan belt, adjusts the clutch and brakes and all this just plain service and maintenance. By and by comes the repair shop stage again and the cycle starts all over.

Observations indicate that the word maintenance is gaining favor steadily and it probably is the best all-around word that can be applied to that branch of the industry which seeks to give a motor vehicle owner the maximum period of usefulness at the smallest possible cost per mile.

MOTOR AGE'S FLAT RATE FORUM

No. 42

FLAT RATES FOR DODGE BROTHERS CLUTCH OPERATIONS

Manufacturer's Official Designation		Time
3112	Clutch shaft front bearings, remove and install	6½ hrs.
3113	Clutch shaft rear bearings, remove and install	6½ hrs.
3114	Clutch release bearing and housing assembly, remove and install	7 hrs.
3100	Disc clutch, remove and install—for overhaul (aluminum transmission case)	7 hrs.
3102	Disc clutch, remove and install—for overhaul (cast iron transmission case)	7 hrs.
3101	Clutch assembly, remove and install one (aluminum transmission case)	6 hrs.
3103	Clutch assembly, remove and install one (cast iron transmission case)	6 hrs.
3104	Clutch discs, remove and install	7 hrs.
3111	Clutch release bearing grease tube flange, remove and install	¾ hr.
3121	Flywheel bolts, tighten (includes removal of transmission and clutch)	6½ hrs.
3116	Clutch release fork, remove and install	3 hrs.
3118	Clutch pedal, remove and install	1 hr.

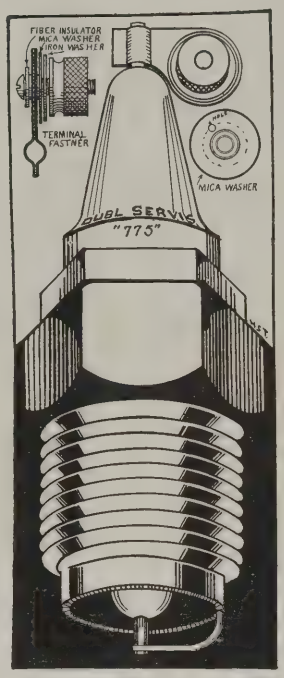
(To be continued next week)

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

"Dubl Servis" Spark Plugs

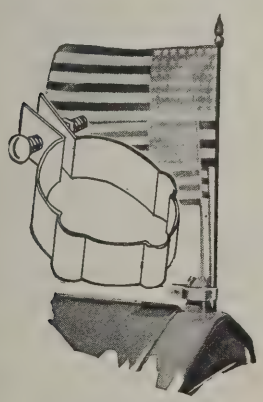
SPARK plugs which the makers declare will give exceptionally long service are being manufactured by the Thomason Manufacturing Company, of Minneapolis, under the name of "Dubl Servis" Spark Plugs. This is a spark plug with a reversible core, making it possible when the end in use in the engine becomes fouled or fouled to bring the other end into service. Such a change provides an entirely fresh spark plug. Another feature is in the terminal connector which makes a slip-on connection for Ford cars as well as all other makes. Materials used in the "Dubl Servis" plug are said to be of the highest character.



"Dubl Servis" Spark Plug

Ever-Brite Headlight Deflector

HEADLIGHT deflectors which the manufacturers say effectively does away with dimming are produced by the Akron Specialty Manufacturing Company, Akron, Ohio. The device is called the Ever-Brite Headlight Deflector and consists of four elliptical visors which deflect the headlight rays toward the road. Not only will the headlight equipped with this deflector relieve the oncoming driver from glare but it also enables the owner to provide full light at all times for his own driving. The deflector is easily attached by removing the lens and rim from the lamp and placing it inside the rim where a flange holds it in position. As the deflector fits in front of the lens the makers say it does not conflict with any state law. The device sells for $3, $3.50 and $4, for a set of two.



AKRON FLAG HOLDER

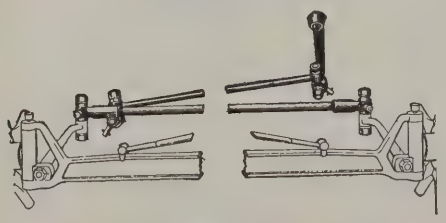
Cut shown above

A FLAG holder made of duraluminum is being made by the Akron Novelty Manufacturing Co., Goodrich Station, Akron, Ohio. The flag holder is fastened to the radiator cap and will hold three flags. List price, 25 cents each.

Bring Profits Through Your Windows

Speaking of window trimming—and the trade will be speaking of it more the rest of the year than at any other season—it is more difficult to make a display show up well in daytime than at night. Yet with many accessory dealers more traffic passes the store in the daytime.

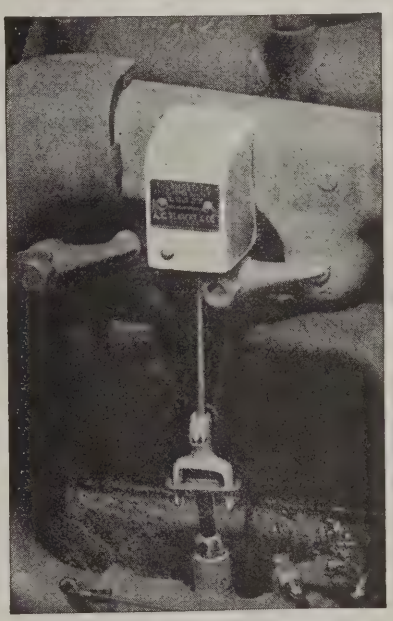
Black or dark background and plenty of electric light make for better daytime effectiveness. Where a dark article is shown, however, it should be given an immediate base of white or some contrasting color. Winter offers an excellent opportunity for use of cotton in such a window and snow suggestion. Rustic color can be added with a miniature rail fence of split fire wood, a box well with bucket upside down on top and rope visible, and some use of small evergreen trees—all snowcapped.



"Steady Boy"

Blancke Thermostatic Control for Ford Carbureter

A NEW universal design of automatic thermostatic carbureter control for Ford cars has been developed by A. C. Blancke & Company, 602 W. Lake Street, Chicago, Illinois. As in the previous models the device is provided with a thermostatic coil which automatically positions the needle valve as the engine warms or cools, thus giving correct mixture so as to obtain the maximum power, without the necessity of turning the needle valve by hand. Tests are said to have been made which increase the gasoline mileage from 30 to 100 per cent depending on the care or lack of care formerly used by the driver of the car in adjusting the needle valve to suit operating conditions. The General Motors Corp., have obtained a license from A. C. Blancke who owns the basic patent covering thermostatic control of carburetion and this principle is now being embodied in a special construction for the carbureter used in Cadillac cars. Among the advantages of accurate carbureter adjustment controlled according to temperature are better lubrication, easier starting and more efficient operation.



Blancke Thermostatic Device

Steady-Boy

A REPLACEMENT steering system for Fords is offered by the Moon Brothers Manufacturing Company, of St. Louis, in its "Steady-Boy." The name of the appliance largely tells its purpose. Its object is to steady Ford driving and make for better riding comfort as well as economy for the Ford car owner. Use of the Steady-Boy is recommended by the makers to do away with jerking of the wheel that the Ford owner experiences when driving over rough roads. List, $7.50.

GETTING MORE OUT of the SHOP

Van Norman Valve Refacing Machine

A new valve refacing machine said to cut the time of regrinding valves on a six-cylinder car from 2½ hrs. down to 30 min., is now being marketed by the Van Norman Machine Tool Company of Springfield, Mass. The new machine replaces a former model and with added refinements brings greater efficiencies to valve repairing operations. The new model is known as the "Super Franklin Valve Refacing Machine," and is driven by a ¼ hp. Westinghouse motor.

The new machine is readily adjusted to accommodate valves having any angle



Van Norman Valve Refacing Machine readily adjusted for valves of any angle head

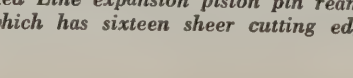
head, while the work-head may be swung around against the side of the 5-in. grinding wheel for such operations as refacing of tappet screws, points, breaker arms, etc., a self compensating drive mechanism furnishing maximum power to the work-head in any position. The fact that the machine also resharpens the reseating cutter and assures the same angle in the seat of the motor as on the face of the valve, guarantees accuracy. The new type machine sells to the trade for $175.

Red Line Expansion Piston Pin Reamer

The Red Line expansion piston pin reamers are made with sixteen helical flutes to give 50 per cent greater cutting efficiency and eliminate chatter. A 2-in, pilot and long shank makes the alignment easy and the rose reamer on the pilot prepares the hole for the expanded cutting edges. The countersunk expansion screw affords ready expansion and is said to prevent over expansion and broken reamers. It permits regrinding several times without undersizing. The expansion limits include.

Sizes	¼	to	⅝	inch	.012
"	11/16	"	⅞	inch	.014
"	15/16	"	1¼	inch	.016
"	1-5/16	"	1-9/16	inch	.018
"	2	"	2⅝	inch	.022

To take care of undersize bushings the reamers are ground .001 undersize. The



Red Line expansion piston pin reamer which has sixteen sheer cutting edges

No. 16 set, covering 98 per cent of all passenger cars, trucks and tractors and packed into a polished hardwood box, is priced at $163.15. The reamers are made by the Modern Reamer Specialty Co., 2401 Chestnut Street, Philadelphia, Pa.

New Greenfield Tap and Die Catalog

The Greenfield Tap & Die Corp., Greenfield, Mass., is distributing to the trade a new catalogue on small tools, known as No. 49. Its line of bolt and pipe threading machines, gages, ground thread taps and spiral fluted stay bolt taps are listed complete for the first time.

Carbon Cleaning Brushes

The No. 5148 display board of the Worcester Brush & Scraper Co., Worcester, Mass., contains a variety of steel brushes for cleaning carbon from gasoline motors. Hand and power surface cleaners are included as well as cleaners for valve guide. The assortment consists of 21 No. 7900 series valve guide cleaners; ten No. 80 small rotary carbon cleaners; No. 68 large rotary carbon cleaners; ten No. 66 hand rotary carbon cleaners. List price, 51 brushes, $47.75.



HB Buffer and Grinder

Cut Shown Above

The HB Ball Bearing Motor Buffer and Grinder is being placed on the market by its manufacturers, Hobart Brothers Company, Canal Lock Square, Troy, Ohio. The grinder and buffer is operated by a direct connected 1 h.p. non-stalling, ba bearing motor running at 1800 r.p.m. T outfit is furnished complete excepting t grinding wheel, ready to connect to t electric lines. The weight is 175 lbs. a it occupies a floor space of 15 in. by 15 When supplied for single phase A.C. direct current the price is $108.

Lock Washers and Cotter Pins

Western Wire Products Compan Third and Spruce Streets, St. Lou announces that it is prepared to furni the trade with lock washers in additi to cotter pins. The lock washers a cotter pins are packed in a novel co tainer known as the "Twin Assortme Container" which is a two compartme can with a screw lid at each end. O compartment holds the lock washers a



the other the cotter pins. The "Tw Assortment" of lock washers and cott pins consists of 50 of the latter and 1 of the former in ranges of sizes. Price On orders of less than 1000 assortment nine cents each; on orders of 1000 more, 8¾ cents each.

Auto Coat-A-Pants

Designed to save the motorist' clothes and time when he has t work around the car W. C. Kiernan Company, Whitewater, Wis., have brough out the Auto Coat-A-Pants. This is a army drab khaki garment made like coat above and with the lower portio made to clasp about the legs pants fashion. It gives full protection of work suit to the clothes and at the sam time is more conveniently put on tha stepping into a pair of regular overalls A dirt proof bag is furnished with eac coat making it possible to carry th garment in the tool box without undu soiling. Prices—over United States— $3.50. Canadian price is the same plu duty.

A CORRECTION

In the October 29, 1925, issue of Moto Age, page 30, was shown a picture o the Weaver Wrecking & Service Car and in the text mention was made that the equipment included the standard 1-ton Ford truck chassis. This is an error, as the truck chassis is a Graham Brothers 1½ ton model E B with a Graham Brothers closed cab.

EDITORIAL

Trade Days at National Shows

EVERY automobile dealer ought to attend one of the National Automobile Shows. There he will get a broader understanding of the great business he is engaged in and will gather up inspiration and enthusiasm that will help him in selling his own line. These shows, which are under the management of the National Automobile Chamber of Commerce, have made special arrangements to enable automotive merchants to see the shows without having to struggle through the throngs that are always present when the public is admitted. Two days, Monday and Tuesday, of the show weeks have been set aside for the exclusive attendance of the trade so that exhibits may be viewed and business transacted without the disturbing influence of throngs of public visitors. The trade days deserve the enthusiastic support of the dealers and the manufacturers.

Don't forget that the gun of abuse is never fired at a competitor without a "kick." And sometimes it kicks harder than it shoots.

Christmas Seals for Health

TUBERCULOSIS Christmas seals are again for sale on the candy counters, cigar stands and hotel desks of the country. Millions of them, too, are pouring into our homes by mail, with the request that we purchase the little stickers and so further strengthen the campaign against one of the world's greatest scourges.

This year the Christmas seal comes of age. It is just 21 years since an obscure postal clerk in Denmark conceived the idea of a decorative stamp to be placed on Christmas mail as a means of raising funds for a hospital for tuberculosis children. A few years later the first Christmas seals that were sold in the United States raised $3,000 for the purchase of a sanatorium site in Delaware. Last year 1,250,000,000 seals were printed for the National Tuberculosis Association and their sale brought approximately $4,500,000 into the coffers of the 1,500 organizations affiliated with the national body.

During these years the Christmas seal has helped to finance hundreds of local, state and national campaigns to secure hospitals, sanatoria, clinics and dispensaries. At least 20,000 public health nurses are at work in the schools and homes to educate children and parents in the rules of healthful living. In this way minor physical defects are detected and, because of early treatment a physical breakdown in later life with tuberculosis or some other serious disease is often prevented.

Our participation in the annual Christmas seal sale is an investment in individual and community health. More than that, we become a part of the message of hope which the seal carries to the many thousands who otherwise become victims of a preventable and curable disease. In all truth, the mission of the Christmas seal is joyous health.

Ardent bath tub merchandisers tell us bath tubs last much longer than automobiles. Of course. Anything that is used very little lasts a long while.

Let's Put This One Over

ROBERT E. LEE, manager of the St. Louis Automobile Dealers Association, issued a bulletin to the membership emphasizing the fact that it is unnecessary for the owner to put his car away for the winter and giving some practical points on the care of the car for winter operation. It was obviously intended for the dealers to make use of the bulletin's suggestions in efforts to stimulate winter business.

This is a good movement to spread over the country generally. Sell the public on the idea that the motor vehicle is a facility for all-year use. The public is pretty well sold on that thought already and with little promotion the trade can drive it home more thoroughly and profitably. We want to sell more cars and accessories and we want more maintenance business. Therefore we want to keep the cars out of storage and in service. All the public needs to fall in line is well directed suggestion and helpful information. Any trade association can take up such a movement locally.

The difference between a salesman and an order-taker is another bit of information you may obtain from income tax records.

More About Christmas Trade

INSPECTION of exhibits at the A. E. A. convention suggests that many automotive devices will appear on Christmas counters this year in appropriate wrappings. This is the work of manufacturers and in this work they are offering retailers a chance to cash in with them on the season's opportunity. Many retailers are planning special displays for the holiday trade. It is hoped that all retailers will give impetus to this big merchandising campaign through advertisements in their local newspapers. There will be much competition in this field of selling and if the trade realizes its share of the profits it will have to make its appeal conspicuous.

Carryover of 500,000 Cars Expected

Sales Reported as Good Or Better Than Normal

Dealers, However, Begin to Resist Heavy Stocking Because of Potential Tax Cut

NEW YORK, Dec. 2.—Except in a few of the central states, especially Iowa, where a poor corn crop and bad weather are affecting business, automobile sales are on a satisfactory level for the time of year—a little ahead, in fact, of normal for the season. But sales are not the burning question of the day in automotive circles. The growth of dealers' stocks in relation to production and next year's market is now the principal subject of conjecture.

It is generally agreed that the carryover into next year, on the basis of current production, will be about 500,000 cars and trucks. This will not be a large burden if the market is good next year, for there is no reason why automobile dealers should not accumulate inventories during the dull season; it is the practice in all retail trades. The main question, therefore, is whether the factories will continue to ship cars in excess of dealers' requirements after the New Year, as was done in 1924 with unfavorable consequences for the industry as a whole.

On this point the leading producers have reiterated their assurances that production will be curtailed to a point near the sales level as soon as it appears that their dealers have accumulated sufficient cars to place them in a satisfactory position for the late winter and early spring trade. That drastic curtailment, however, is not looked for in the immediate future is clearly indicated by the large volume of business still being done by original equipment makers, with whom orders are placed roughly a month ahead of the factories' production schedules.

Some resistance from the dealers to the stocking program is being encountered by the factories as a consequence of the prospect of tax reduction. The merchants do not want to have to meet a heavy loss on the cars in their hands on which the tax will have been paid at the 5 per cent rate, as against the proposed 3 per cent levy. It is hoped that Congress will see the desirability of having the reduction effective on the cars in transit or on dealers' floor.

KARDELL PROMOTES SHAW

ST LOUIS, Nov. 28.—Fred Shaw, formerly in charge of used car sales for the Kardell Motor Car Co., Reo distributors in St. Louis, has been appointed sales manager and assistant general manager of the company.

Motor Car Output in U. S. and Canada

WASHINGTON, Nov. 28.—Following tables show the production of automobiles, both passenger cars and trucks, for the first ten months of 1925, compared with the full year, 1924, as announced by the Department of Commerce for the United States and Canada:

Total Cars and Trucks

	1925	1924
Jan.	241,062	324,567
Feb.	287,213	367,370
Mar.	377,252	393,489
Apr.	439,125	384,353
May	426,016	331,638
June	447,860	254,146
July	400.361	260,935
Aug.	259,581	283,879
Sept.	332,781	295,480
Oct.	452,392	293,356
Total 10 Months	3,618,654	3,198,219
Nov.		232,248
Dec.		209,631

The following tables shows car and truck production in 1925 in United States and Canada:

	Cars	Trucks
Jan.	212,921	28,141
Feb.	252,803	34,410
Mar.	332,154	45,098
Apr.	391,302	47,823
May	382,714	43,303
June	364,806	38,054
July	358,554	41,817
Aug.	221,831	37,750
Sept.	272,413	60,368
Oct.	406,569	45,823

OVERLAND PROMOTES WHYTE

ST. LOUIS, Nov. 28.—J. F. Whyte has been apopinted retail sales manager of the St. Louis factory branch of Willys-Overland, succeeding Harold W. Booth who resigned to accept the position of assistant sales manager of the Ajax Motor Works at Racine, Wis. Whyte has been with the Overland organization 15 years.

Insurance Men Vote to Cut Agents' Commissions

NEW YORK, Nov. 28.—The National Automobile Underwriters' Conference at its annual meeting here, reduced the acquisition cost or commission paid to agents from 25 to 20 per cent, the reduction to apply generally among members of the conference throughout the country.

It was the opinion of some of those who attended that this reduction in commissions promised a reduction in rates in the not distant future. At any rate it was realized that a crisis in handling automobile insurance was pending.

Frederick C. White, vice-president of the Hartford Fire Insurance Co., was elected president, William R. Hedge of Boston, vice-president, and Herbert W. Ellis, assistant manager of the Phoenix of London, was re-elected treasurer.

Chicago Nash Dealers Plan Big Winter Sales Boost

Showrooms and Windows Display Advancements That Aid Comfort in Cold Weather

CHICAGO, Nov. 30.—The Nash Sales Company of Chicago, and 24 associate dealers in this city have set aside the week from November 29 to December 6 as "Winter Week" and are celebrating the event by special exhibits in all the showrooms and show windows throughout the city.

The purpose of the campaign is to educate the public as to the importance of recent advancements in motor car construction in relation to their effect on comfortable winter driving.

H. T. Hollingshead, president of the Chicago distributing firm, believes that few outside the automotive industry realize the tremendous strides that have been made toward increasing comfort and safety of winter motoring. He believes that the inconveniences of the old style cars have created an impression by many motorists that the time to buy their new cars is in the spring. Because of the danger of skidding on icy pavements, difficulty of starting in zero weather and the cracking and peeling of finishes, they have let their old cars bear the brunt of winter service.

Mr. Hollingshead is stressing in his Chicago campaign the changes brought about in recent months that prevent the ills and dangers of winter driving. Show windows and rooms are featuring attractive displays of four-wheel brakes, balloon tires, heat control devices, and special Duco finishes with which Nash cars are equipped.

Mr. Hollingshead believes that the public has been informed of these advancements but has not yet realized their full import. It is the purpose of the campaign to show graphically that the old idea of buying new cars only in the spring has passed out in effect just as the open car is rapidly doing in reality.

LOCOMOBILE PICKS SCHMIDT

BRIDGEPORT, Conn., Nov. 28.—George E. Daniels, vice president and General manager of the Locomobile Company of America, announces the appointment of L. A. Schmidt, as consulting engineer and assistant general manager. Mr. Schmidt was for several years chief engineer of the Fiat in this country, and his training in the Turin, Italy plant was of the most exacting nature. His shop experience has been equally extensive.

Cleveland Dealers Plan to Train Own Service Men

Association to Establish School Where Boys Will Become Skilled Mechanics

CLEVELAND, O., Nov. 28.—A three-year course designed to produce thoroughly competent automobile mechanics, will be started by the City of Cleveland shortly after the first of the year and thereafter will be a regular feature of the vocational training work of the Department of Education. This forward step is the direct result of the efforts of the Cleveland Automobile Manufacturers' 'and Dealers' Association to meet the shortage of skilled labor with which the service stations of its members are faced.

When the new course is under way, it is expected that it will provide a steady supply of trained men for the local service stations. The instruction will be given by the public school system and consequently there will be no tuition fee. As the students will spend more than half of the total time required for the course local service stations, the course will be of an intensely practical nature.

The classes will be recruited from boys of 15 to 16 years of age attending the junior high schools. They will be selected on the basis of general intelligence and mechanical aptitude. Before they start the course, their parents will be required to sign a statement that their sons are taking up the work with the serious intention of seeing it through and of entering the maintenance division of the automotive industry.

The entire first year of the course will be spent in school under the supervision of competent instructors, a portion of whose salaries will be absorbed by the Federal and State Vocational Training Boards. The morning sessions of three hours will be put in on practical work in the shop while the afternoon session will be devoted to classroom and laboratory work on related subjects. Among the related subjects to be covered are shop mathematics, business English, elementary physics and chemistry, blueprint reading and shop sketching. In addition, courses will be given in hygiene and safety, as well as in civics and elementary economics, the latter work being included to make the boys realize their responsibilities as citizens and their position in society. This instruction covers 38 weeks.

In the second year, the students will be divided into two groups which will alternate two weeks in school and two weeks in a dealer service station. The school work during this period will supplement the practical shop experience. At this stage, it is planned to give the boys instruction along lines which are not covered in their outside shop work as undoubtedly the dealers, at the start at least, will use the boys for greasing and other similar jobs.

(*Continued on Page* 43)

WHITE REALTY BRANCH

CLEVELAND, O., Nov. 28.—Plans have been announced for segregating the White Motor Company's real estate holding occupied by branch sales and service stations throughout the country. This will be done through the formation of the White Motor Realty Company, an Ohio corporation capitalized with 15,000 shares of no par common stock of which 5,000 shares are to be issued presently. To finance this company an offering of $3,000,000 6 per cent secured serial gold debentures are to be offered by Charles D. Barney & Co., Hayden, Miller & Co. and the Union Trust Company.

Woman Operates Electric Service Plant in St. Louis

ST. LOUIS, Nov. 28.—The Ford-Siefert Auto Electric Company has just occupied its new home at 2629 Locust Street here. The building was erected expressly for the company, is two stories high, with a sky-lighted, one story structure covering the rear section of the lot, 25x-35 ft.



Mrs. Martha Ford

A double drive-way leads from the alley to the granitoid service area in the rear. Shops are on the second floor and all new equipment has been installed there. The company is devoted exclusively to repair and replacement of all automotive electrical equipment.

Mrs. Martha Ford, widow of Peter F. Ford, a pioneer in the automotive electrical field in St. Louis, is the senior partner in the Ford-Siefert company. Clarence F. Siefert, the other partner, has had much experience in the automotive electrical field, having been connected with the Ford Motor Co. branch in St. Louis and the Tate Motor Co., Dodge Brothers dealers.

FRENCH TIRES RAISE

PARIS, Nov. 9—(by mail)—Michelin increased tire prices 22 per cent this week, to take effect immediately. In accordance with the custom here, Michelin's move was at once followed by all other tire manufacturers and importers on the French market.

A. E. A. Holds Meeting to Boost Christmas Campaign

All of Chicago Jobbers Are Present At Session When Merchandising Plan Is Presented

CHICAGO, Nov. 28.—For the first time in four years representatives of all of the eight automotive jobbers in Chicago who are members of the Automotive Equipment Association met to plan a co-operative merchandising movement for the good of the industry.

The meeting was held at the Congress Hotel under the auspices of the merchandising department of the A. E. A., and was attended by more than 100 jobbers, jobbers' salesmen and manufacturers' representatives. It was one of a series of meetings being held under the merchandising plan of the A. E. A. for the purpose of stimulating the sale of automotive accessories, parts, supplies and shop equipment.

Arthur R. Mogge, merchandising director of the A. E. A., explained in detail the campaign which includes a revival of the "Ask 'Em to Buy" movement and a new movement based on the slogan, "Show 'Em and Sell 'em." He urged jobbers to help their customers, the retail dealers, keep their places busy this winter, and showed how the A. E. A. is prepared to help them do this.

He explained the Christmas merchandising promotion being done by the A. E. A. and exhibited samples of the printed matter that has been prepared for the use of dealers in getting holiday trade. He also showed how the sale of winter necessities for the motor car can be greatly increased by proper cultivation of customers. The third phase of this business opportunity that he touched on was maintenance. He cited many examples of highly profitable maintenance business coming for careful attention to the selling and servicing of maintenance operations.

Other speakers were B. W. Ruark, assistant to Commissioner Webster of the A. E. A.; Sam Shelton, editor of MOTOR AGE; Dick Sheridan, president of the International Boosters Club and Ken Cloud of Jobber Topics.

The eight jobbers represented at the meeting were Automobile Supply Co., Chicago Auto Equipment Co., Chicago Automobile Supply House, Electric Appliance Co., E. D. Kimball & Co., Motor Car Supply Co., Sheridan Auto Supply, Inc., and Universal Automotive Supply Co.

Following the meeting several of the jobbers placed large orders for Christmas campaign printed matter prepared by the association.

HERTZ SEDAN RAISED

CHICAGO, Nov. 28.—The Yellow Truck & Coach Mfg. Co has increased the price on the Hertz sedan from $1,695 to $1,795.

Final Draft of Bill to Cut War Tax Is Finished

House Committee Rejects Plea to Make Provisions Retroactive —Reduction Is $70,537,000

WASHINGTON, Nov. 28.—Four decisions affecting the automobile industry were announced this week by the House Ways and Means Committee in its completed draft of the new revenue bill which carries a total of $336,236,000 tax reduction, of which $70,537,000 is cut from the taxes paid by the automobile users of the country.

The four decisions were: (1) rejection of the automobile industry's application for a retroactive tax, by which it would be possible to rebate the 40,000 dealers throughout the country on cars which they have in stock on the date the bill becomes effective; (2) announcement that the tax will become effective on the date of its adoption; (3) a ruling that parts and accessories, sold with passenger cars, be included as a part of the car and taxed 3 per cent, and (4) that automobiles, exported to American possessions be exempt from the 3 per cent excise tax.

Present indications are that the new tax measure will be introduced on December 7, get its first consideration on December 9, under a unanimous agreement by administration leaders and will probably be disposed of in the House within two weeks. The Senate leaders believe that its final passage can be effected by March 1.

G. M. OFFICIALS SAIL

NEW YORK, Nov. 28.—Alfred P. Sloan, Jr., president General Motors Corporation, announces that C. S. Mott, chairman, John T. Smith, H. L. Barton, M. L. Prentis and W. L. Davidson will sail December 5 to look after certain overseas interests of the corporation in England and on the Continent.

Willys-Overland Latest To Join in Finance Plan

NEW YORK, Nov. 28.—The Willys-Overland Co. of Toledo has been added to the group of automobile manufacturers whose dealers are assisted by the Commercial Investment Trust Corp. of New York in financing purchases and placing insurance on their automobiles.

The group so financed includes also Dodge, Hupmobile, Chandler, Nash, Paige-Jewett, Reo, Cleveland and Franklin.

The Commercial Investment Corp., according to a recent announcement has sold to a banking group, headed by Dillon, Read & Co., of this city, $7,500,000 6½ per cent preferred stock in the corporation, and, further, has arranged with the same group to underwrite 72,000 shares of its common stock, to provide additional funds for operating purposes. The common will be offered to stockholders, it is learned on good authority, on a basis of one of the old for five of the new at $60 per share. This transaction will bring to the Commercial Investment Trust Corp. approximately $5,000,000, in addition to the proceeds of the public sale of the preferred.

Wisconsin Chrysler Dealers Have Novel Insurance Plan

Milwaukee Company Finishes Payments and Delivers Car to Beneficiary If Buyer Dies

MILWAUKEE, Nov. 28.—A new insurance plan in combination with motor car sales has been successfully evolved by George W. Browne of the Clark Motor Co. of Milwaukee, Chrysler distributors in 32 Wisconsin counties, and has proved to be a big sales incentive.

The Clark Motor Co., as distributor, and all of its dealers in the territory, offer to purchasers of Chrysler cars, an insurance policy which in effect clears the title to the car in case it is unpaid for and sickness, accident or death overtakes the purchaser. The principal provisions of the policy are:

If the purchaser becomes sick and is prevented from performing the duties of his occupation, and is consequently unable to meet the monthly payments on his automobile, the payments will be made during the duration of his illness by the insuring company, and the receipt given the purchaser at the end of each month.

In event of loss of life through accidental causes the unpaid-for automobile will be delivered to the purchaser's beneficiary, with bill of sale paid in full, regardless of the amount due at the time of death.

There is no possibility of interference by the insurance commissioner of Wisconsin, a fate encountered by other automobile insurance schemes, since the insurance policy is written through the Rebhan Agency of Milwaukee and the Royal Indemnity Co. of New York is underwriting the risks.

Marmon Names Body to Study Dealers' Problems



Left to right. Spencer G. Pope, Pottsville, Pa., Horace A. Rayno, Albany, N. Y., and John G. Salisbury, St. Louis, Chairman.

INDIANAPOLIS, Nov. 28.—For the purpose of gathering together the criticisms, constructive suggestions and sales ideas of Marmon dealers and distributors in all sections of the United States for presentation to the Marmon dealer's convention of the Nordyke & Marmon Company's factory in Indianapolis January 4, 5, and 6, a committee of representative dealers and distributors composed of John T. Salisbury, St. Louis, chairman; Spencer G. Pope, Pottsville, Pa. and Horace A. Rayno, Albany, N. Y. has been formed and will act as a "clearing house" for suggestions which will be presented to the convention for consideration.

This move is a decided forward step in factory co-operation with its dealers and marks an effort on the part of the Marmon factory to garner from its dealers sound and conservative ideas which will accrue to the dealers' benefit and also lead to continued improvements in the Marmon car.

The first meeting of the dealers' committee was held in the office of Percy E. Chamberlain, Sales manager of Nordyke & Marmon Company November 19. At that time the purpose which led to the formation of the committee and the opportunities which it has to further the interests of the dealer body as a whole were explained.

The dealer committee will act independently of the factory Mr. Salisbury said. It will be purely a body for forwarding the interests of other dealers.

One of its first steps will be the mailing of a questionnaire to all Marmon distributors and dealers, asking them a series of questions dealing with the operation of their businesses and the problems which arise in their daily contact with the public. The questionnaires will be returned to Mr. Salisbury and, at a future meeting of the committee, the chronic problems will be separated from those which are purely local and the committee will have a definite picture of the situation as it exists.

Reo Reports Profit of $5,422,181 for Year

Capital and Surplus at End of Fiscal Period Is $3,000,000 More Than 1924

LANSING, Mich., Nov. 28.—With capital and surplus for the fiscal year ending August 31, 1925, $3,000,000 more than for the fiscal year ending August 31, 1924, the Reo Motor Car Company of Lansing has ended one of its best years, according to the annual report just made public. The profits after current federal taxes amounted to $5,422,181.85.

The annual report is for the Reo Motor Car Company and its subsidiary companies as follows: Reo Motor Car Company of New York, Reo Motor Car Company of Chicago, Reo Motor Car Company of California, Reo Motor Car Company of Texas, Reo Motor Car Company of Missouri and the Reo Michigan Sales.

Increase in capital stock is reflected in working capital which indicates a substantial gain in business. The export sales show an increase of 100 per cent, and according to R. H. Scott, president of the company, the prospects for 1926 are unusually good.

According to the report, after paying cash dividends for the year amounting to $2,475,000.00 there remained for transfer to surplus approximately $3,000,000. A stock dividend of 500,000 common shares was also distributed during the year. Good-will and patents are not shown on the balance sheet as having value.

The report follows:

Assets:

Cash on hand and in banks	$7,906,386.41
Sight drafts outstanding	772,822.21
Receivable less reserves	5,079,935.04
Inventories	9,571,503.76
Land, buildings and equipment less depreciation	7,189,376.91
Deferred charges	205,052.31
Stock and bond investments	77,401.00
Reo Motor Car Company of Canada, Ltd.	47,000.00

Among the liabilities listed are $2,360,610.30 in accounts payable, and accrued pay roll of $134,573.08, federal and local taxes of $1,210,500.66. Deferred credits are listed as $111,584,000, miscellaneous payables at $96,705, and the total capital and surplus at $26,935,503.80.

NEW CADILLAC DEALERS

DETROIT, Nov. 28.—New dealers added to the organization of the Cadillac Motor Car Co. include the following: E. E. Lindsey, Rome, Ga., The Jones Cadillac Co., Gulfport, Miss., Marlboro-Dillon Company, Clio, S. C., Claude Nolan, Savannah, Ga., The L. E. Huddle Co., Lancaster, Ohio, Frank Young, London, Ohio, Creighton & Ridley, Woodstock, N. B., Chapman Auto Company, Frankfort, Ind., W. W. Henderson, Lebanon, Ind., Chenoweth Auto Company, Richmond, Ind., H. C. McQuady, Arcadia, Fla., Roberts & Stebbins, Avon Park, Fla., Everett Cadillas Company, Cocoa, Fla., Miami Cadillac Company, Ft. Lauderdale, Fla., Moultrie Buick Company, Moultrie, Ga., Roulerson & Boone, Okeechobee, Fla., Seminole Hudson-Essex Co., Sanford, Fla., Ohio Garage, Sebring, Fla., Tifton Buick Company, Tifton, Ga., J. R. Williams, Valdosta, Ga., Vero Beach Cadillac Company, Vero Beach, Fla., Beeson-Bailey Cadillac Co., Wauchula, Fla., W. L. Hinson Auto Company, Waycross, Ga., Newton Bros., Emporia, Kas., Maloof Cadillac Company, San Bernardino, Cal., J. E. Downs & Co., Pana, Ill., Bob Davis & Company, Salem, N. J., M. A. Pyatt Motor Company, Wildwood, N. J., Foster Auto Company, Cottonwood, Ariz., Hi-Way Service Station, Superior, Ariz., The Charles Green Company, Eureka, Cal., T. A. Bartlett & Son, Lewiston, Ida., Coeur D'Alene Hardware & Foundry Co., Wallace, Ida., Dreyfus & Morgan, Delhi, N. Y.

Kettering Takes Huge Policy

DAYTON, O., Nov. 28.—Charles F. Kettering, vice-president of the General Motors Corporation, has taken out a life insurance policy for $1,600,000, Henry A. Stout, life insurance agent, announced here today.

Hudson Output Is Already Double That of Last Year

DETROIT, Nov. 28.—Hudson-Essex production for 1925 up to the present time totaling 256,000 passenger cars, doubled the entire production for 1924, factory officials said today. The 256,000 car came off the assembly line yesterday.

Of this number approximately 153,600 were Essex and 102,400 Hudsons. Coaches still lead in popularity, fully 90 per cent of the total number being coaches. Closed cars make up 98 per cent of the total.

Hudson-Essex output since 1922 has shown big increases. That year 60,000 were produced followed by 98,000 in 1923. Nineteen twenty-four saw 128,000 with this number being more than doubled by the present year.

NEW KELLY TIRE BRANCH

SPOKANE, Wash., Nov. 28.—A factory branch representing an investment of $250,000 will be opened December 1 by the Kelly-Springfield Tire company, George M. Martin, special representative of the company has announced here. The firm has leased a warehouse for a period of three years with an option to extend the lease for two years more. Mr. Martin announced the appointment of J. R. Bennyhoff, formerly in charge of the San Francisco branch, as manager of the local branch. The territory to be served by the new branch includes a part of Washington, all of Idaho and a part of Montana.

GOUX JOINS PARIS ESSEX

PARIS, Nov. 11.—(by mail)—Jules Goux, one-time Peugeot race driver and winner of the Indianapolis race, is now in charge of the Essex service station and spare parts depot in France. The Essex car is being handled in France by Hibbard & Darrin, who are also distributors for the Belgian Minerva.

New York Group Purchases Kelly-Springfield Truck Co.

Buyers Declare Preparations Will Start at Once for Greater Output Than Ever

SPRINGFIELD, O., Nov. 28.—Purchase of the assets of the Kelly-Springfield Motor Truck Co. by a New York group of men represented by H. W. Torney, Charles C. Jamieson, Edward L. White and Phillip H. Farley at a public sale conducted by Pearl A. Lewis, special master, for the sum of $340,000 has been approved by Judge Frank M. Krapp.

The purchasers are required to deposit $50,000 with the American Trust and Savings Bank as a guarantee covering payment of certain income and excess profit taxes to be adjusted with the government. Mr. Lewis, who is receiver, is authorized to adjust this matter within 30 days and return the balance of the money to the purchasers when they complete the deal.

The entry also shows that the consummation of the sale depends on an adjustment of claims totaling $12,000 at Seattle, Wash., a branch point of the Kelly-Springfield Motor Truck Co., where a receivership has been instituted. It is stated that the assets there total $50,000, and that an adjustment can be obtained within a week.

The purchasers under their bid acquire the real estate, buildings, machinery, good will and stock at the various branches in the United States: Atlanta, Baltimore, Boston, Chicago, Denver, Detroit, Erie, Pa., Greensboro, N. C., Kansas City, Los Angeles, New Orleans, Omaha, Pittsburgh, St. Louis, St. Paul, San Francisco and Seattle.

Edward L. White stated after the sale that the Kelly plant within the next ten days will begin preparations to go forward with the manufacture of trucks upon a larger scale than it has for years.

CHEVROLET SALES SCHOOL

ST. LOUIS, Nov. 28.—Chevrolet salesmen operating within a radius of forty miles of St. Louis attended a school at the Chevrolet branch here last week conducted by William A. Blees of Chevrolet Motor Co., Detroit, W. J. Burns, salesmanager and O. H. Hegre of the sales promotion department of the St. Louis branch.

NEW PAIGE DEALERS

DETROIT, Nov. 28.—The Paige-Detroit Motor Car Company has appointed new dealers as follows:

Lou Footes Garage, Turlock, Cal.; Don's Motor Shop, Kanas City, Mo.; Oppel-Spice Company, Duluth, Minn.; Jewett Sales Company, Logan, Utah; Elnora Garage, Elnora, Alberta, Canada; Orrville Star Sales Co., Orrville, Ohio; Brown Motor Company, Alliance, Ohio; C. G. Blackburn Motor Sales, Ravenna, Ohio; Paige-Jewette Sales Company, Orlando, Fla.; Brick Front Garage, Daytona Beach, Fla.; Lincoln Highway Garage, Medicine Bow, Wyo.; Paige-Jewett Motor Company, Fort Pierce, Fla., and W. A. Overall, Brunswick, Ga.

America Urged to Grow Its Own Rubber in Philippines

Head of U. S. Mission Tells Manufacturers Congress Should Change Land Laws of Islands

AKRON, Nov. 28.—All tropical products, including rubber, that America needs, can be produced at reasonable cost in the Philippines, according to Judge John Hausserman, vice-president of the United States mission of the American Chamber of Commerce in the Philippines, who was a visitor in Akron recently.

The only obstacle in the way of immediately establishing a rubber growing industry on a large scale in the islands is the law restricting land ownership to 2,500 acres, he pointed out, but this can be corrected by an act of Congress. It is believed the question will be brought up when Congress meets next month.

"When American rubber interests start operations in the Philippines," said Judge Hausserman, "they will find the much talked of labor problem has vanished. Labor there is plentiful and efficient. At present 30,000 natives are working on the sugar plantations in Hawaii, but they would rather be employed in their home land if jobs were available for them. The population has grown in the last 25 years from 5,000,000 to 12,000,000.

"Of the 73,000,000 acres in the islands, only 10,000,000 are under private ownership, leaving 63,000,000 in the public domain, available development.

"With Great Britian controlling directly or indirectly 95 per cent of the world's crude rubber supply," he continued, "this vast acreage of potential rubber plantation land is of the utmost importance to this country. The American people don't have to submit to the British monopoly, which has caused a huge increase in cost of rubber and automobile tires, if they will use common sense."

Many Full Time Schedules Being Resumed in Akron

AKRON, O., Nov. 28.—Many departments in Akron rubber factories are resuming full time schedules, this week, after operating for five days a week since about Oct. 1.

There was a seasonal decline in sales at the opening of the fall season, when "spring dating" was abolished, but in the last few weeks the demand for tires, both in this country and abroad, has been gerater than was anticipated. Sales to automobile manufacturers of original tire equipment have been particularly heavy, due to a record breaking car production.

Although none of the tire manufacturers are accepting deferred payment orders, as was the case last year, dealer business is reported to be good. Many distributors, whose stocks are low are ordering large shipments. From now on tire production is expected to steadily increase, reaching peak levels shortly after the first of the year. Most of the tire companies have been running about 80 per cent of capacity during the past two months.

NEW OLDS PARTS DEPOT

CLEVELAND, O., Nov. 28.—A factory parts depot has just been located at 7012 Euclid avenue by the Olds Motor Works, of Lansing, Mich. The new depot, stocked with $30,000 worth of Oldsmobile parts and accessories, will be in charge of T. F. Utley, zone manager. Other officials at the depot are H. J. Nestle, service manager; Arthur Thompson, manager of parts department; Lionel Brown, assistant parts department manager; L. C. Dunham, head of the wholesale department.

STRESSES FLAT RATE

HARTFORD, Conn., Nov. 28.—The L & H Motor Co., Hupmobile distributor throughout the state has just mailed to a selected list of Hupmobile owners and prospects a neatly printed four page folder describing various accessories carried together with a list of flat rate charges for service. The folder also carries pictures of the official sales and service personnel.

Wisconsin Insurance Suit Sets Important Precedent

MILWAUKEE, Nov. 28.—Of great interest to automobile dealers and owners is a recent decision handed down here, which considerably broadens the scope of automobile insurance coverage and establishes one very strong precedent. This precedent is the court's decision that an insurance company is liable for unlimited coverage of an automobile liability risk, except as expressly limited in the policy.

The case was that of the Journal Company, newspaper publishers, against the General Accident Fire and Life Assurance Corporation, and the question grew out of suits for damages following the crash of a Journal truck and a Northwestern railroad train on a highway south of Milwaukee.

The insurance company contended that since the accident occurred at a time when the truck was not engaged in delivering papers, it was not liable. The defense to this contention was that in the absence of a specific clause in the policy exempting the insurance company in such instances, the company was liable. The circuit court in Milwaukee sustained this contention and the supreme court affirmed the decision.

HAGGART VICE PRESIDENT

ALMA, Mich., Nov. 28.—J. C. Haggart, Jr., has been elected vice president of the Republic Motor Truck Co., Inc., according to an official announcement by O. W. Hayes, president. Mr. Haggart has been associated with the Republic truck company for the last nine years, truck company for the last nine years.

Parts and Accessories Set New October Output Peak

Shipments for Car and Truck Equipment Largely Responsible for Record

NEW YORK, Nov. 28.—October was the high month of the year in automotive parts and accessories business as well as in car and truck production, according to figures compiled by the Motor and Accessory Manufacturers Association. A representative group of members of the association reported October shipments to customers running ahead of all months of the year, including the spring peak in April.

Shipments of parts and accessory makers for car and truck equipment were largely responsible for the tremendous October record. October deliveries for original equipment were 214 per cent of the January figure as compared with 179 per cent in September and 183 per cent in April, the previous peak of the year. The tremendous gain in original equipment business which included heavy equipment by several large manufacturers of closed bodies, wheels and kindred products, brought the total shipments for companies reporting from all divisions of the industry up to 188 per cent of January as compared with 158 per cent for September and 168 per cent for April, the previous high month.

Shipments of replacement parts to wholesalers aggregated 131 per cent of January as compared with a total in September even with January and 130 per cent in August. Accessorry shipments to the trade exclusive of vehicle manufacturers aggregated 163 per cent of January as compared with 155 per cent for September and 193 per cent for April, the previous high month. Shipments of service equipment, that is, repair shop machinery and tools, in October ran even with January as compared with 123 per cent of January in September and 113 per cent in August.

The tremendous October business in original equipment was in keeping with the car and truck production of more than 452,000, setting a new monthly record.

WAGON WORKS BOUGHT

EVANSVILLE, Ind., Nov. 28.—The William T. Karges Wagon Works here have been purchased by the Evansville Planing Mills and will be utilized for the manufacture of motor car bodies. The buyer paid $75,000 for the plant. Operated for many years in the manufacture of farm wagons, the business gradually declined with the increase in motor vehicles, and six months ago was closed permanently. Since then, the stock and machinery has been in process of liquidation. William Johann, general manager of the purchasing company, plans to install new machinery and enlarge the plant and hopes to employ several hundred men.

Cincinnati Dealers Keep New Cars Moving Quickly

Used Automobile Sales Receive Big Impetus Throughout October and Early November

CINCINNATI, O., Nov. 28.—Used car sales in the Cincinnati district are exceptionally active according to reports from dealers and distributors. The latter are of the opinion that this is a good sign because it shows that a goodly number of sales of new cars are being made to provide the used cars which are being transferred.

This is demonstrated when it is seen that the used cars being sold are of a fine quality many of them being 1925, 1924 and 1923 models which were traded in at good figures to dealers and distributors when 1926 cars were purchased. All through the fall there has been a steady increase in the sale of used cars and October was a banner month, as 3,868 used cars were sold, delievered and registered at the clerk's office of Hamilton county during that month.

The first half of November also is making a good showing as the registrations up to Nov. 15 were 1,473 used cars. Dealers say that even more more than that number have been sold as the dealers were not always able to make deliveries on the day of sale. New car sales in Hamilton county up to Nov. 15 were 782 cars, the largest percentage of which were closed jobs. This is compared with 2,064 new cars sold in October 1925 and 948 new machines sold in all of November 1924.

Distributors in this territory are using every means of spreading the gospel of better co-operation between dealers and sub-dealers of various makes of cars, so that information may be exchanged and a more uniform basis of sale of used cars in trading-in deals may be established. Distributors assert that often dealers and sub-dealers are imposed upon by buyers in car trades when buyers shop around telling one dealer that another dealer had offered him so much for his car, when in fact there had been no such offer.

Sales of tires and accessories in this district are keeping up well, it is reported, and everything points to a substantial increase of business in November over November 1924.

RECHARGEABLE DRY CELLS

MADISON, Wis., Nov. 28.—A rechargeable dry cell is announced by the French Battery Company of Madison. The container is a cylindrical zinc plate which serves as the negative electrode. The positive plate is especially designed grid so constructed as to prevent the active materials from falling out. Moisture needed by the battery from time to time is supplied by means of distilled water, two or three eye droppers full of water being required every two or three months. The cells may be used separately, but for general use will be put up in six cell units in cabinets, with built in rechargers, the whole outfit to be connected both with the radio set and the electric light plug.

NEW CLEVELAND DEALERS

CLEVELAND, O., Nov. 28.—New dealers added to the organization of the Cleveland Automobile Co. include:

Maudlin Bros., Detroit, Lima Chand-Cleve Co., Lima, O., Dawson Sales Co., Muncie, Ind., Electric City Auto Exchange, Schenectady, N. Y., H. O. Cummins, Vallejo, Cal., Barney Motor Sales Co., Wyandotte, Mich., Chandler Newark Motors, Newark, N. J., Chandler Jamaica Motor Inc., Newark, N. J., Chandler Jamaica Motor Car Corp., Jamaica, L. I., N. Y., General Auto Shop, Appleton, Wis., Cleveland Sales & Service, Moline, Ill., Coast Motors, Long Beach, Cal.

Henry Sterling Houpt

PELHAM, N. Y., Nov. 28.—Funeral services for Harry Sterling Houpt, for 20 years one of the best known automobile dealers in New York City were held at his home here, where he died following two nervous breakdowns. In 1907 he headed his own sales company, handling the Thomas car, which under his guidance was entered in the Vanderbuilt Cup and other races in 1905-07. Later he distributed the Lozier and was aslo interested in the Owen magnetic car. For a time he was vice-president and general sales manager for the American Locomobile Co., builders of the Alco car, and from its organization in 1915 until he retired last year to engage in real estate operation he was president of the Hudson Motor Car Co. of New York. He is survived by his wife, Eleanor G. Houpt, and a brother, Edgar M. Houpt.

Oldsmobile Deluxe Models Far Outsell the Standard

Analysis Shows Public Wants Its Cars Equipped with Accessories —Coach Most Popular

LANSING. Mich., Nov. 28.—Proof of the truth of the statement that the luxuries of yesterday are the necessities of today is shown by an analysis of Oldsmobile's sales figures for the first 10 months of 1925. During that period the deluxe models, fully equipped with all accessories, far outsold the standard models.

The most popular model was the deluxe coach, with the deluxe sedan, the highest priced car in the Oldsmobile line running second, slightly outselling the standard coach, the lowest priced closed car. The sale of standard and sport touring cars are about equal, due to the large export demand for the standard open cars.

Oldsmobile was one of the early companies to recognize the trend toward fully equipped cars, and more than a year ago it standardized on all accessories. They were selected and designed to conform to Oldsmobile's requirements, and are attached to the cars on the assembly line. Thus the accessories are integral parts of the finished car.

From the present trend it is likely that in the not far distant future practically every car sold will be equipped with front and rear bumpers, snubbers, motometer, spot light, automatic windshield cleaner, rear view mirror, kick plates, gasoline gauge, luggage trunks and rack.

Renault Mystifies Paris Drivers



PARIS, Nov. 9.—(by mail)—A 6-h. p. Renault runabout, apparently having nobody abroad, yesterday ran along the Paris boulevards and main avenues during the peak hours of traffic. It was at first believed that this was a radio demonstration and that the G. M. C. truck which traveled in the immediate neighborhood of the Renault constituted the transmitting and controlling station. There is now a suspicion, however, that the car was faked and that it was operated by an electric motor with a driver concealed in the tail. The dealer responsible for putting the car on the street reaped a plentiful advertising harvest.

Safety Director Reports On Progress for 1925

Barber Tells Hoover That Conference Has Succeeded in Stimulating State and Local Action

WASHINGTON, Nov. 28.—Deploring the mounting curve of human, material and financial losses due to street and highway accidents, more particularly those involving motor vehicles, as "one of the most conspicuous examples of waste in modern American life," A. B. Barber, director of the National Conference on Street and Highway Safety, in a report to Secretary of Commerce Hoover which is included in the latter's annual report to Congress, recites what the national conference has accomplished since it was first called in the spring of 1924.

"The National Conference on Street and Highway Safety is nationwide in its scope," says the report. "Its purpose, however, is to obtain results through stimulation of state and local action. Its activities have assisted in focusing wide spread public attention on the automobile accident problem, and in crystallizing opinion on remedial measures which should bear definite results. A beginning has been made on the application of these measures by state legislatures, and an important influence has been manifested in regard to municipal regulation and organized community effort."

Admission is made by Director Barber in his report that: "As this report is being written the Committee on Statistics has reported that the wastage in human life and physical losses is continuing to increase."

Director Barber lauds the co-operation which is being given the conference by the National Automobile Chamber of Commerce, the American Automobile Association, the National Association of Taxicab Owners and other interested organizations.

FIAT PUSHES NEW MODEL

PARIS, Nov. 11.—(by mail)—During the past fortnight Fiat has conducted an important sales campaign in France in favor of the new 7 h.p. model, which next year will constitute the big production job of this Italian concern. Prices on the French market are chassis with tires 16,100 francs; phaeton 21,900 francs; roadster 19,750 francs; cabriolet or four passenger sedan 26,850 francs. These prices are rather higher than the most direct French competitor, the 6 h.p. Renault, but sales are reported to have been very satisfactory.

1500 DEALERS HEAR N. A. D. A.

DALLAS, Tex., Nov. 28.—Automobile dealers, distributors, salesmen and accountants in Texas and parts of Louisiana and Oklahoma have been given a close insight into the motor industry and a clear explanation of modern methods of automotive merchandising through a series of sales congresses held in Houston, Dallas, Fort Worth, San Antonio and El Paso during the past week under the auspices of the National Automobile Dealers' Association, with the manufacturers and local distributors co-operating. Some 1,500 automobile men attended these sales congresses and heard experts discuss the motor industry and the best methods of selling automobiles. The chief speakers at the cities where the congresses were held were Lynn M. Shaw, H. D. Bullock, Edward Payton and A. R. Kroh.

SCHACHT TO REORGANIZE

CINCINNATI, O., Nov. 28.—Stockholders of the G. A. Schacht Motor Truck Co. of Cincinnati will receive two shares of no par common stock for each share of common par value $100 now held, in the re-organization of the company which is proposed to take place Nov. 24 at a special meeting of stockholders to be held here. In the reorganization meeting 6,000 shares of common stock without par value are to be authorized and 11,500 shares of preferred stock of par value of $100 each. Each holder of preferred stock will be given one share of the new preferred and $5 in cash representing the redemption premium on preferred stock now held. The new preferred will carry cumulative dividends at the rate of 7 per cent and will have no compulsory redemption provision.

KLEIBER TO EXPAND

SAN FRANCISCO, Nov. 28.—Capacity and production of the Kleiber Motor Car Company's plant will be doubled in 1926, according to a statement issued by George F. Schwarz, sales-manager. Another floor is being added to the Kleiber plant, which now covers an entire city block. The car is custom-built and Schwarz says the chief difficulty about the expansion is that of obtaining skilled craftsmen in blacksmithing, coach-body work and upholstery. Louis Lagomarsino has been appointed branch manager in charge of the factory at Los Angeles. He has been for several years attached to the San Francisco factory. The Kleiber company has been building trucks for 17 years, but embarked in the passenger car building industry a little more than a year ago.

TRANSPORT CAMPS GO

WASHINGTON, Nov. 28.—The army's motor transport centers, Camp Holabird, Md., and Camp Normoyle, Tex., and the transport section of the San Francisco depot, will go out of business at the end of the present fiscal year, it is announced here by the quartermaster general at the War Department. Camp Holabird will be turned over to the Third Corps Area jurisdiction at Baltimore, and Camp Normoyle to the Eighth Corps commander at San Antonio. Work of the motor transport school at Camp Holabird will be taken over by the instruction school at Philadelphia.

Hudson Dealer Announces Weekly Purchase System

Detroit Distributor Extends Payment Experiment Further Into Lower Priced Six Field

DETROIT, Nov. 28.—Aaron DeRoy, head of the Aaron DeRoy Motor Car Company., Hudson-Essex distributors for this territory, has announced another plan which will make the purchase of either Hudson or Essex passenger cars much easier.

Under the new plan, purchasers of Hudson-Essex cars, can deposit any amount from $1 up with the company and receive 8 per cent interest. Additional payments are made according to the plan under which the car will be bought. When the amount which the future purchaser has paid in together with the interest has reached the amount required for the down payment, he can take delivery.

The plan, according to Mr. DeRoy, has been devised to take care of those wishing to buy cars at present but willing to accept delivery at some later date. The interest shown in the plan indicates that it has helped to stimulate sales.

With the recent price reductions and lower down payment plans which have been in use coupled with the above plan, Hudson-Essex reaches still further into the lower price six cylinder field. It also touches the Ford and Chevrolet buyers making it possible for them to buy Essex cars on payment plans which will not affect their immediate pocketbooks to any extent.

MEXICAN IMPORTS GAIN

LAREDO, Texas, Nov. 28.—During the first ten months of 1925 a total of 1,072 cars of automobiles were exported to Mexico from the United States through Laredo, as compared with a total of 737 cars for the entire year of 1924. The shipments for the first ten months represent only about one-half of the total exports, as many more were made by water through the port of Tampico, and others entered Mexico by way of Eagle Pass, Brownsville, El Paso and other border gateways. The exports through Laredo for October were 177 cars, and the total for November is expected to reach more than 200 cars. The increased demand for automobiles in Mexico is due largely to the general revival of business and a restoration of peaceful conditions. The construction of modern highways which is now in progress also is having the effect of increasing automobile sales, it is stated.

WHIZ PROMOTES SMITH

SEATTLE, Nov. 28.—George F. Smith, former Seattle branch manager of the R. M. Hollingshead Company, manufacturers of Whiz products, has been promoted to divisional manager for the Pacific Northwest.

New Carburetion Features To Be Seen at Big Shows

Lubrication Also Will Be Stressed —More Complete Lines of Shop Equipment Planned

NEW YORK, Nov. 28.—Among the new devices to be displayed in the parts and accessory sections of the National Automobile Shows in New York and Chicago will be several for improving carburetion and lubrication. As a result of research in the past year it is said that the new carburetion systems will come nearer to introducing fuel into the engine in the most productive form than ever before.

Important steps have also been taken in the methods of distributing lubricating oil to best advantage and keeping it pure as long as possible after it is fed to the engine and other parts of the car.

This year the shows will cater to a greater extent than ever to the service stations, presenting complete lines of equipment, both power machinery and hand tools. These will include many new devices to speed up work and reduce costs in the service and maintenance field.

Every succeeding show displays more pronounced trend toward artistic fittings, especially in body hardware. The newer designs this year include gold and silver plated interior hardware, both chased and engraved, and of the various art periods in which dainty and unusual design predominated.

In parts and accessories, as well as in complete cars, the most important firms in the industry will be represented. Engine makers will include Continental, Hercules and Waukesha; body makers, Budd, Rex and others. In the accessory section will be the newly developed device of Thompson Research, Inc., for elimination of carbon monoxide gas.

SCHOOL ENROLLMENT GAINS

SAN FRANCISCO, Nov. 28.—Enrollment records at the Star Automobile Merchandising School, held by Raymond Boyd, in the salesroom of the Star factory branch on Van Ness Avenue, were broken in November, when 250 young men signed up for the course. The school is free and the students who graduate are given positions in the Durant organization.

WILMINGTON PLANS SHOW

WILMINGTON, Del., Nov. 28.—The Wilmington Automobile Trade Association has selected the week of March 1 as the date for the 1925 show. The Hotel du Pont has been chosen as the place for holding the show, the same as last year. Several large rooms, the ballroom, foyer and du Barry room, are available. They will accommodate a large number of cars and accessories. It will not, however, be possible to exhibit commercial cars.

STAR DEALERS MEET CURTIS

PORTLAND, Ore., Nov. 28.—Oregon Star dealers gathered here during the past week to meet the new sales chief of the Durant Motor company of California, H. W. Curtis. With Curtis came other new officials of the Durant family for the Pacific Northwest. Col. Ralph Faneuf, northwest zone supervisor and Bert Goodfield as representative for western Oregon and the Willamette valley. He succeeds Ernest Jones, who has been made assistant sales manager at the factory.

Olds Adds Shassberger to Analyze Its Territories

LANSING, Mich., Nov. 28.—In line with the new Oldsmobile sales development program, two new positions have been created in the sales department of Olds Motor Works, D. S. Eddins, general sales manager of the company announces. They are manager of the territorial analyzation department, and supervisor of territorial representation.

E. J. Shassberger, for the last four and a half years advertising manager



E. J. Shassberger

for Oldsmobile, has been appointed in charge of territorial analyzation, and E. F. Glenny, manager of the Minneapolis branch of Oldsmobile, will be supervisor of territorial representation.

Mr. Shassberger's duties will comprise a thorough analyzation of the United States from the viewpoint of Oldsmobile sales, to determine, scientifically, on the size, number and locations of sales outlets. His finding will be used as a basis by Mr. Glenny in his work of supervising the appointment of dealers. This correlation of territorial sales development is part of an extended sales promotion plan now being prepared under the direction of Mr. Eddins.

Louisiana Dealers Report Good November Business

Conditions in General Throughout State Are Better Than for Last Four Years

NEW ORLEANS, La., Nov. 28.—Although the rainy weather may have temporarily retarded new car business in Louisiana and Mississippi during November, the sloppy condition of the roads had a beneficial effect on tires and replacement parts. Most car distributors reported a better business than that of October, and dealers' reports were optimistic.

Business condtions in general are in better shape in both Louisiana and Mississippi than they have been for the last four years. All crops made fair yields this year, and prices were good. Cotton has about all been picked and marketed, bringing much ready money into the cotton sections, some of which was invested by pickers in used cars that thus made it possible for dealers to go after new business. Distributors report that dealers are not overstocked with used cars and that repossessions are few.

Specifically, it appears that: New cars are selling better since the new models have been stocked and since the winter weather has put some pep in the buyers; used cars being disposed of practically as fast as dealers buy them when good judgment in taking them is used; accessories, fair and improving; shop equipment much better because garagemen have realized the value of well equipped shops; tires, excellent and on the increase, on account of the wear of muddy roads and anticipated increases in prices; electrical units very good for both cars and radio; radio sets selling rapidly; collections satisfactory, and most of buying is done on terms.

FORD DEALERS BANQUET

ST. LOUIS, Nov. 28.—Beck & Corbitt Iron Co., automotive distributors of which William Niekamp is president and George Niekamp is secretary, gave a banquet to Ford dealers and their salesmen at the Coronado Hotel to introduce to them the Universal six-speed transmission for Fords for which the Beck & Corbett Co. has just been appointed distributor. About 400 men including officials of some of the leading Ford establishments in the city attended.

OVERLAND DEALERS MEET

ST. LOUIS, Nov. 28.—More than 250 Willys-Overland dealers in the St. Louis district attended a "get together" dinner and entertainment last week at Claridge Hotel. The district includes parts of Missouri, Illinois and Kentucky. Speakers were W. O. Kirakofe, branch manager, J. F. White, sales promotion manager of the St. Louis Willys-Overland factory branch.

Along Automobile Row

SPRINGFIELD, O.—The Conover-Maples Co., has been appointed representative for the Franklin car in this section, it is announced. The company also handles Studebaker and Marmon.

DES MOINES, Ia.—W. H. McManus, for three years representative for the Ford Motor Company in Des Moines and lately in Memphis, has resigned his southern post to return to Des Moines as special representative for Willys-Overland, Inc., Des Moines branch.

LOS ANGELES.—Stephens S. Nerney, Hollywood Ford dealer, has been appointed an authorized Lincoln dealer in Hollywood. Mr. Nerney plans the early erection of a new building for the exclusive occupancy of Lincoln sales and service facilities.

DALLAS, Tex. — Nash-McLarty Motor Company has established a retail store at Olive and Pacific Avenue with D. C. Welling formerly of Houston, in charge. The Nash-McLarty Company recently established a retail store in Oak Cliff, the biggest suburb of the city.

CLEVELAND, O.—The Cooksey Oldsmobile Company has moved into the Bryant Building, Superior Avenue and East Twelfth Street. The new quarters, more centrally located than the former up-town offices, offer additional space for display and servicing of cars.

DECATUR, Ill.—Merle Torney, formerly of the wholesale department of the Decatur Drug Co., has joined the sales staff of Frede & Sons, Chevrolet dealer.

DAVENPORT, Ia. — The Davenport branch of the Firestone Tire & Rubber Company was host to 50 truck tire dealers of eastern Iowa and western Illinois at a one-day sales conference last week.

HARTFORD, Conn.—Ben F. Butler, formerly general manager of the Connecticut Auto Sales Co. which has passed out of the local sales field, has opened up a salesroom at 170 High Street and will feature Hudson and Essex under an associate dealership.

CHAMPAIGN, Ill.—Auto Service Garage, Hudson and Essex dealer, H. A. Sims, proprietor, moved into its new building recently and had a grand opening which was attended by about 5,000 persons.

MEMPHIS.—The new building for the Stewart-Warner Products Service Station, has just been finished and occupied.

SPRINGFIELD, Mass.—R. A. Phaneuf has been named manager of the Springfield Durant Co., retail sales branch of Durant Motors, Inc.

DETROIT.—Studebaker Corporation has opened a new sales and service branch in Detroit at 3440 East Jefferson Avenue under the direction of F. A. Kolbe. Formal announcement of the opening of the branch was withheld until the entire station could function as a whole.

PEORIA, Ill.—Edwin Mueller, long identified with the automotive sales forces in this city and Springfield, has joined the S. M. Morse Company, Chrysler dealer, as a salesman.

HARTFORD, Conn.—The Brack Motor Sales Co., East Hartford has taken on the Moon and Diana lines.

MEMPHIS.—The Service Motor Co., Chrysler and Marmon specialists, announces that B. B. Boyce now has charge of the service and repair department.

CLEVELAND, O.—A new sales and service office was opened here by L. L. Smith, Cleveland, Nash and Ajax dealer. The new structure, located at 13700 St. Clair Avenue, is one of the most modern buildings of its kind in this section.

ST. LOUIS.—The Lincoln Department of Lambert-Graves Motor Co., Ford and Lincoln dealer, recently celebrated the first anniversary of the opening of its own building at 4001 Lindell Boulevard.

HARTFORD, Conn.—Charles C. Frost, Hartford, Conn., for the past six years with the Harrington Hudson Co., has joined the sales force of the Mohen & Amidon Sales Corporation at 368 Main Street, Hudson and Essex metropolitan dealers.

PORTLAND, Ore.—Rapidly increasing sales have caused another expansion move on the part of Condit & Conser, distributors of Diana and Moon cars and subdealers for Hudson-Essex. They have opened a west side branch.

MILWAUKEE.—The new radio store devoted exclusively to radio receiving sets, parts and accessories and to giving of day and night radio service will be opened soon at Beaver Dam, Wis., by H. L. Kirsh and L. C. Cunningham.

DES MOINES, Ia.—The Chevrolet Motor Company entertained dealers and their families from Iowa, South Dakota and Nebraska, at the opening last week of its new building at Thirteenth and Walnut Streets.

HARTFORD, Conn. — The Brightman Auto Parts Co. has opened a new four story sales building on Morgan Street and will feature new parts for all makes of cars. The firm recently took over the territory of the P. D. Auto Parts Co. which has retired from the field.

SPRINGFIELD, Mass.—O. L. Huntting has been appointed wholesale and retail dealer for the Locomobile complete line in this territory.

CLEVELAND, O.—As part of an expansion program, the Nash-Holzhauser Company, Nash dealer opened new salesrooms at 6225 St. Clair Avenue. The former location will be used in the future as a service station, while the new quarters will be used exclusively as a salesroom.

SPRINGFIELD, Ill.—The Foutch Battery Service, operated by S. E. Foutch has moved to 214 Broadway in larger and newer quarters where he will be better able to handle his growing trade.

ST. LOUIS.—Riesmeyer-Yates Motor Co., Ford dealer in Webster Groves, St. Louis County, has opened a new building at Lockwood and Maple Avenues.

HARTFORD, Conn.—F. W. Williams, Inc., Paige and Jewett distributor, is building a new sales and service station on the Connecticut Boulevard which will be operated as a branch of the Hartford headquarters.

LOS ANGELES.—The Star Motor Company of California recently opened its new Hollywood branch with impressive ceremonies. The new branch is in charge of Ralph Wheeler, manager, and Ray Gunderson, assistant manager.

DETROIT.—Harry Farenback has been named manager of the Bielman-Taube Motor Sales Company of Detroit used car department which was recently opened.

MILWAUKEE.—N. M. Sinske has been appointed office manager of the West Point Garage Sales Co., Willys-Knight and Overland dealer, of Milwaukee. Mr. Sinske was connected with the Hokanson-Thompson Co., Inc. Peerless and Oakland distributor, for several years.

THOMPSONVILLE, Conn.—Carpet City Motor Co. has taken the franchise for the Studebaker for the northern section of Hartford County.

ALBANY, Ore.—W. E. Chrisman and W. R. Scott who have been operating the Chevrolet car agency in Lebanon for the past two years have taken over the Albany Chevrolet agency from the Markle company.

CHICAGO.—Charles F. Benell, for the last ten years a salesman for H. Paulman & Co., former Pierce-Arrow distributor in Chicago, has been appointed a Pierce-Arrow sales and service representative with a store at 5714 Broadway, under the name of the Benell Motor Co.

SAN FRANCISCO.—Victor J. Canepa, state senator from this city, and his cousin, E. J. Canepa, have been appointed Chrysler agents for the North Beach district of San Francisco.

TIFFIN, O.—The Gurney Co. has been incorporated by Albert H. Gurney, Frederick G. Pringle, Wolfgang J. Paulus, Lynn Troxel and James D. Watson to act as a Ford agency.

NORTHAMPTON, Mass. — Frank C. Magranis has taken the Packard and Chrysler agencies and has organized the Magranis Motor Sales Co., for which he is building a new establishment in King Street.

MILWAUKEE.—E. Hirsch, who has been associated with the Jesse A. Smith Auto Co., Hudson-Essex distributor in Milwaukee, for the last 10 years, has joined the Packard Motor Co. of Milwaukee as salesman.

ELGIN, Ill.—Joseph W. Taft has taken over the Cadillac agency in Elgin and announced the erection of a $15,000 sales and service station at North State and Mill Streets.

PORTLAND, Ore.—L. K. Nickols, formerly Buick representative for Eastern Oregon, has joined the sales staff of the Portland Motor Car Company and will hereafter handle Hudson and Essex sales in the entire eastern part of the state.

CHICAGO. — Edwards & Crist, 1255 South Michigan Avenue, formerly representative of the Auburn and the Gardner, has retired from the automotive retail field and will confine its activities in the future to the sale of bicycles and supplies and the manufacture and sale of radio sets.

NEW ORLEANS.—Behr Motor Sales Company, Inc., Kissel dealer, opened at 1400 St. Charles Avenue this week. J. H. Behr has personal charge of the salesrooms.

CHICAGO.—Leon J. DeBroux has been appointed manager of the used car department of the Stutz Chicago Factory Branch, Inc., Floyd D. Cerf, president of the branch company, has announced.

AUGUSTA, Ga.—The Augusta Packard Automobile Co., Packard and Oakland dealers in Augusta, plans rebuilding and repairing of the sales building and service station recently damaged by fire at an estimated loss of about $25,000.

SHELBYVILLE, Ill.—Alva A. Jones has purchased a site on West Main street for the one-story fireproof garage and salesroom. It will adjoin the Domas building now occupied by his Ford agency and on which he has just taken a new five-year lease.

HARTFORD, Conn.—Ben F. Butler, formerly general manager of the Connecticut Auto Sales Co., has opened a selsroom at 170 High Street as a metropolitan dealer in Hudson and Essex under the Harrington Hudson Co.

ST. LOUIS.—William J. Christman, who has been connected with Gill-Foote & Co., battery firm at 4620 Delmar boulevard since its organization five years ago, has become sole owner of the firm. He purchased the interest of Samuel E. Foote who previously had acquired the interest of his partner.

SPRINGFIELD, Mass.—Huhm Battery Co,. has been appointed as an official dealer and service station for the Willard Battery in this territory.

DETROIT.—David R. Irwin, formerly automobile editor of the Seattle Times and more recently with the Burroughs Adding Machine Company, has joined the advertising department of the Cadillac Motor Car Company.

MOLINE, Ill.—The Service Motor Sales Company, distributer of Star, Durant, and Flint cars, formally opened a new garage and sales and service agency.

With the Associations

Discuss Sales and Service

NEW YORK, Nov. 28.—Co-ordination of sales and service was discussed by Henry Holt, formerly in charge of the Overland service station in New York City and now Brooklyn branch manager for the Overland, at the November meeting of the Automotive Service Association of New York, Inc., with H. Ivan Stengel of the Uppercu-Cadillac Corp., president of the association, as chairman.

Mr. Holt's address and the discussion following brought out many of the familiar points of difference between the salesman and the service man.

Mr. Holt expressed the hope that the association would appoint an efficient committee to work out ways and means to bring sales and service closer together.

E. J. Rabidoux, a Reo sales manager for several years and now a Buick salesman, believed that the biggest problem of the service manager was to deliver the car to the buyer fully serviced.

William E. Kemp, wholesale distributor, believed that the whole problem between sales and service men consisted of weak salesmanship.

William G. Gow of the StudebakerS Sales Co., Newark, N. J., insisted that free service should not be handled by the service department but by the sales department. This company gives to the buyer of every new car a coupon book entitling him to $25 worth of service. If the buyer, after these coupons are exhausted, complains that he expected more free service, the serviceman refers him back to the sales department.

Mr. Stengel believed that by complete segregation of sales from the service department, arguments from complaining customers on the sales floor, which too often have a bad effect on new prospects, could be avoided. Mr. Gow held to his point and said that an investigation by his company had proved that 28 per cent of 4,000 complaints referred to free service matters, the responsibility for which lay with the sales and not the service department.

Denver Dealers Meet

DENVER, Nov. 28.—At the November meeting and dinner of the Denver Automobile Dealers' Association, a silver service was presented to the retiring president of the association, Mr. Norton of the Norton Buick Automobile Company. Mr. Norton has been very active in the work of the association as the progress made during the last year has shown. The principal topic of conversation at this meeting was the sales meeting to be held in this city December 9, at which some 600 out of town dealers will be the guests of the distributors.

Memphis Dealers Pleased

MEMPHIS, Nov. 28.—President R. R. Price of the Memphis Automobile Dealers' Association states that this body is gratified at the new honors coming to Memphis automobile tradesmen in a national way and in the prospect of this city entertaining the 1926 annual of the National Tire Dealers' Association, recently held in St. Louis.

The Memphis Automobile Dealers' Association has done some effective work



R. R. Price

this year in conjunction with the Memphis Safety Council and the city in regulating traffic and reducing congestion.

Mr. Price is with the Southern Motor Co., Cadillac dealer, and is serving his first term as president. H. B. Hull, vice president, is from the Harter B. Hull Co.; H. J. Jetton, treasurer is from the Bluff City Buick Co. The directors of the association are E. C. Barwick, J. E. Dodge, Harter B. Hull, R. R. Price, H. J. Jetton, and Thomas H. Smart.

Will Mark Rental Batteries

ST. LOUIS, Nov. 28.—All rental batteries obtained from members of the Associated Automobile Service Companies of St. Louis Battery Division, will be marked in the future to make identification easier. On one connector the initial "A. A. S. Co's" will be stamped and on the other will be stamped the membership number of the owner of the battery.

A list of these membership numbers will be kept by each member and if a rental battery is brought into a battery place for charging or repair the owner will be notified and restoration forced. All such batteries are to be painted red.

Dallas Dealers Elect

DALLAS, Tex., Nov. 28.—At the annual meeting of the Dallas Automotive Trades Association John E. Morriss, Ford and Lincoln dealer, was elected president to succeed Frank H. Stephenson. J. M. Worshaw of the Dallas Buick Company, was named vice-president to succeed C. R. Nachtrieb and L. R. Filgo of the Filgo Motor company, was elected treasurer to succeed W. E. Brown.

Directors named for the ensuing year are: David Burke of the retail group, R. C. Langley of the wholesalers, Fred Orior of the parts and equipment dealers and F. A. Ferris of the accessory men. The holdover directors are J. W. Atwood and W. C. Lemmon.

Reports made at the meeting by the outgoing officers showed the motor business in Dallas and territory leading all other lines in value of goods sold. The automobile business during the last 12 months in Dallas and through Dallas dealers and distributors amounted to $250,000,000 the report said. The officers said men connected with the Dallas automobile trade are responsible for 90 per cent of the 915,000 cars now in Texas to say nothing of the thousands sold in Oklahoma, Louisiana, New Mexico, Arizona and the Mexican Republic.

The automobile men heard reports of the recent show, showing a surplus of funds in the show treasury. The dealers requested that arrangements be made before the next annual show is held to obtain more space for display. This will probably mean enlarging of the present show building.

Peoria Plans Show

PEORIA, Ill., Nov. 28.—The annual automobile and accessory show sponsored by the Peoria Automotive Association, tentatively scheduled for the last week in February, is being outlined already by the association and committees are appointed to confer with dealers and exhibitors in preliminary plans. P. K. Norman, is chairman of the general committee and acting with him are C. A. Roadstrum, L. E. Graham, B. B. Rutherford and A. G. Thede.

Membership Rules Changed

PHILADELPHIA, Nov. 28.—The Philadelphia Automobile Trade Association has adopted a radical change in its by-laws, amending them so as to admit as a dealer-member any concern engaged in the retail sale of automobiles in Philadelphia or vicinity, within 15 miles of the county line. This opens the way for the admission of some 140 dealers. The committees drafting the amendment consisted of M. D. Bushong, Robert B. Parker, Ralph W. Cook, Walter G. Herbert and George W. Reinhold.

Machine Tools in Demand By Dealers of Southwest

Atlanta Jobbers Report Business for Last Ten Months Better Than Former Entire Year

ATLANTA, Nov. 28.—A tangible idea of the healthy tone of business in the South this year may be noted from a survey of machine tool sales Atlanta distributors have made the past six or eight weeks to service stations and independent garage companies in the South, most of the distributors here expressing the opinion that this business will very likely establish a new record this year if it continues to hold up as well the next six weeks as it has the last.

Inquiries from automobile companies and service station managers that are reaching the tool distributors in Atlanta are in sufficient volume to indicate that there will be little abatement in the volume of this business the next few months.

Practically all heavier tools have recently been in exceptionally good demand in this field, primarily including drill presses, lathes, cylinder grinding machines, and similar heavier equipment. There appear to be two reasons why the demand from service stations and garage companies has been so unusually active in this district.

For one thing, the automotive industry this year has done more construction than usual, and particularly has this been active in new service stations and garages; for another thing, service station and garage business has been so good in all parts of the South that finances are in better shape for the adding of this additional equipment that has long been needed. A good part of the buying by the new garages and service stations is in new machinery and equipment, while the latter is largely in used tools and equipment.

Two of the largest distributors of such equipment in the Southeast, both of them located in Atlanta, state their sales the first ten months of this year were the largest they had ever been for a whole year before.

Nash Production and Sales Set Records in 10 Months

KENOSHA, Wis., Nov. 28.—The Nash Motors Company continues to set production and sales records. "For the fourteenth consecutive month," says E. H. McCarty, general sales manager of the company, "the volume of Nash business has shown an increase over the corresponding months of a year ago. Previous to this year, 1923 was our greatest year since the founding of the company. During the twelve months of the calendar year of 1923 Nash shipped a total of 56,685 cars. From January 1 to October 31 of 1925, or a total of ten months of this present year, we have shipped 76,959 cars. In other words, in the first ten months of this calendar year our business is 35 per cent greater than for the full twelve months of 1923.

"In the three-month period since July 23, when the new Nash models first went on display, sales have shown a large gain over the highest mark set by the greatest previous three-month period in the history of Nash Motors. Reports received from ten major cities show that during the first week of November their bona fide retail sales following the price reduction swept 53 per cent above sales made in the same cities during the same week of November, 1924—and November, 1924, was the greatest November in all Nash history.

"Another side light on the success of Nash Motors this year is the increasing number of applications we are receiving for the Nash franchise. During the month of October alone 104 new dealers were awarded the Nash contract."

NEW AUBURN DEALERS

AUBURN, Ind., Nov. 28.—New dealers who have recently been added to the Auburn organization include:

Frank B. Schleinhage, Portsmouth, Ohio, Auburn-Dayton Co., Dayton, Ohio, Wm. D. Pitt Auto Co., Iron Mountain, Mich., Cliff McCready Motor Co., Arcata, Cal., C. T. Kemp, San Jose, Cal., Auburn Sales Co., Lodi, Cal., Russell-Towmey Corp., Lakeland, Fla., Frasca Brothers, Sandy Ridge, Pa., T. C. Wood Hardware Co., Rhinelander, Wis., The Auburn East Cleveland Co., Cleveland, Ohio, F. H. Searles, Minneapolis, Minn., Wroge Motor Sales Co., St. Paul, Minn., Hoch's Garage, Duluth, Minn., Bjorling & Erickson, Willmar, Minn., Edwin Laman, Colfax, Wis., Fred Luchsinger, Lisbon, N. D., Gackle Brothers, Kulm, N. D.

Coming Motor Events

Automobile Shows

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Buffalo, N. Y.—Jan. 16-23
Buffalo automobile show by Buffalo Automobile Dealers' Association in 174th Regimental Armory, Carlton C. Proctor, manager, headquarters, Hotel Statler.

Cleveland, O.—Jan. 23-30
1926 Automobile Show under auspices of Cleveland Automobile Manufacturers' and Dealers' Association, Herbert Buckman manager, in Public Auditorium.

Montreal—Jan. 23-30
1926 Motor Show under the auspices of Montreal Automobile Trade Association, Theo Dorian, manager.

Lowell, Mass.—Jan. 25-Feb. 1
Twelfth autmobile show in Memorial Auditorium by Automobile Merchants' Association of Lowell, Inc., George R. Garmon, manager, 119 E. Merrimack Street.

Chicago—Jan. 30-Feb
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Washington—Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

San Francisco—Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bdg., manager.

Denver—Feb. 2-6
Annual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Providence, R. I.—Feb. 6-13
Providence automobile show under auspices R. I. Automobile Dealers' Association, Chester I. Campbell, manager, 617 Industrial Trust Bldg.

Toledo, O.—Feb. 8-13
Annual show by Toledo Automotive Trades Association in Civic Center Garage, T. J. Cooper, manager, 925 Jefferson Avenue.

Louisville, Ky.—Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Hartford, Conn.—Feb. 20-27
Automobile show by Hartford Automobile Dealers' Association in State Armory, Arthur Fifoot, manager, Hotel Bond.

Omaha—Feb. 22-27
Twenty-first annual automobile show under auspices Omaha Automobile Trade Association, Inc., in Municipal Auditorium, A. B. Waugh, manager.

Boston—Mar. 6-13
Boston Automobile Show under auspices of Boston Automobile Dealers' Association, Inc., and Boston Commercial Motor Vehicle Association, Inc., in Mechanics' Building, Chester I. Campbell, manager, 329 Park Square Bldg.

Conventions

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago—Feb. 9-10
American Drivurself Association Annual Convention.

Galveston, Tex.—May 12-13
Tenth annual convention of Texas Antomotive Dealers' Association in Galvez Hotel.

COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

January 1—National Shows Number—Automobile Trade Journal.

January 7—Motor Age—National Shows Number.

January 14.—Motor World Wholesale—New York Show Report.

February 4—Motor Age—Chicago Show Number.

February 4—Motor World Wholesale—Chicago Show Report.

February 18—Automotive Industries—Statistical Issue.

New Oakland Used Car Division Is Inaugurated

Purpose of New Department Is to Watch Stocks on Dealers' Floors —Buck in Charge

PONTIAC, Nov. 28.—Formation of a used car division of the sales department of the Oakland Motor Car Company was announced today by A. R. Glancy, president and general manager. The division will be a permanent part of sales development work.

W. L. Buck, formerly field instructor in zone two for the sales development department has been appointed head of the new division. Mr. Buck, a veteran in the automobile industry has been in succession salesman, sales manager, dealer, factory district manager and instructor in modern merchandising.

The primary purpose of the new department will be to watch used car stocks and to provide individual assistance in unloading excess inventories. From time to time, the department will broadcast suggestions in keeping with the situation on hand, and which are expected to be of material benefit to Oakland dealers and distributors.

So far the department has been of unquestionable value to Oakland dealers in helping them dispose of their used car stocks, and in many cases has disposed of the "used car problem" in its entirety.

R. E. Olds Deplores Too Lenient Time Payment

ST. LOUIS, Nov. 28.—R. E. Olds, president of the Reo Motor Car Co., at Lansing, Mich., was a recent visitor in St. Louis.

While in the office of the Kardell Motor Car Co., Reo distributors here, Mr. Olds, according to J. C. Kardell, vice-president, deplored the tendency appearing in the industry of extending beyond one year the time limit during which time-payment purchasers of automobiles may complete their payments.

In numerous instances dealers, with the sanction of finance companies have extended the time, to 18, 20 and even 24 months. Olds declared such extension of credit was dangerous.

He said this year would stand out as one of the best years in the automobile industry in points of production and sales and he said he thought that next year would also be a good year.

KUHN HEADS FLINT BRANCH

CINCINNATI, Nov. 28.—W. E. Kuhn, sales manager of the Cincinnati Flint Company, has been appointed as manager of the Flint branch here to succeed J. M. Finlayson. Mr. Finlayson has been appointed regional manager of the Flint Motor Company of Flint, Mich., with headquarters at Detroit.

Grand Central Palace Will House 1926 New York Show



Thousands of automobile dealers will see the 1926 National Automobile Show at New York in the Grand Central Palace from Jan. 9 to 16. The show returns to the Grand Central Palace this winter after two seasons at the big Bronx Armory. The last show held at Grand Central Palace was in 1923. The accessibility of the Palace to the railway terminals and the hotel and theatre district of New York is the great reason for bringing the show back to it.

At the coming show two days, Monday and Tuesday, will be exclusively for the trade so that dealers and others connected with the industry may attend and be free from the confusion and crowding that always occurs when the public is admitted.

Dealers throughout the country who expects to attend the show on these two trade days will be provided with credentials by the National Automobile Chamber of Commerce, entitling them to free admittance.

Schools to Train Service Men

(*Continued from page 33*)

Execept for four hours each week or one day every two weeks, which will be devoted to classroom work, the entire third year will be spent in service stations getting practical experience. The classroom work will cover advanced theory of automobile construction and machine shop practice.

The boys will be paid for all time spent in dealer service stations at an hourly rate on a graduated scale from 25 to 50 cents an hour.

The course is under the direction of Howard L. Briggs, director of vocational training in the City of Cleveland. Mr. Briggs is one of the most experienced men in this field as is evidenced by the fact that all the plumber's, carpenter's and bricklayer's apprentices in the city are being trained under his supervision in the same manner as the automotive mechanics will be schooled.

The details of the plan were worked up for the presentation to the city by a committee appointed by the dealers association. The personnel of this group is as follows: W. Pitt Barnes, Dodge Brothers; R. J. Schmunk, Hudson-Essex; O. C. Tyner, Jordan; B. L. Williams, Ford; J. F. McDonald, Buick; George Roesler, Nash; F. E. Paine, Paige; and W. J. Buckwalter, Chandler-Cleveland.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
2850	4-p	Sport-Roadster	1,495
2860	6-p	Touring	1,395
3020	5-p	Brougham	1,595
3070	5-p	Sedan	1,795
3070	-----	Wanderer	1,845
		"8-88"	
3180	3-p	Sport Roadster	1,975
3200	6-p	Touring	1,995
3380	5-p	Brougham	2,250
3450	5-p	Sedan	2,350
3450	-----	Wanderer	2,400
3750	7-p	Sedan	2,550
BUICK		**"Standard"**	
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
3350	2-p	Roadster	1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Brougham Sedan	1,925
3940	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line	
		(132 in. W. B.)	
4040	2-p	Coupe	$3,045
4155	5-p	Sedan	3,195
4240	7-p	Sedan	3,295
4075	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
4115	4-p	Victoria	3,095
		Custom Built (132 in.)	
3920	-----	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	-----	Phaeton	3,250
4190	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		**J. I. C.**	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2415	5-p	Touring	$895
2565	5-p	Touring DeLuxe	1,025
2520	3-p	Coupe	975
2695	5-p	Sedan	995
		"43"	
2775	5-p	Touring	1,095
2950	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2890	3-p	Coupe	1,175
3120	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
-----	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
-----	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
3100	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
-----	7-p	Sedan (135 in. W. B.)	-----
DODGE BROTHERS			
2473	2-p	Roadster	$855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
-----	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		**A-22**	
-----	2-p	Sp. Roadster	$900
2225	5-p	Touring	810
-----	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
-----	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
-----	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,895
		"6-65"	
-----	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
-----	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
-----	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
-----	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$765
2895	5-p	Coach	795
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
		With Starter and Dem. Rims	
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
-----	5-p	Oxford Sedan	3,172
GARDNER		**6A**	
3290	5-p	Brougham	$1,595
3070	5-p	Touring	1,395
3030	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	-----	DeLuxe Sedan	1,895
		8A	
3620	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3350	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		**D-1**	
3360	5-p	Sedan	$1,795
HUDSON		**"Super Six"**	
3400	7-p	Phaeton	$1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4 d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE "A"			
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		**"23-25"**	
3060	4-p	DeLuxe Road.	$1,500
3000	5-p	DeLuxe Touring	1,320
2990	5-p	Coach 2d.	1,245
3160	5-p	DeL. Coach 2d.	1,400
3325	5-p	DeLuxe Sedan	1,680
JEWETT (Continued).		**"New Day"**	
-----	5-p	Sedan	$ 995
-----	5-p	Sedan de Luxe	1,095
JORDAN		**"J"**	
-----	4-p	Playboy Road.	$1,695
-----	5-p	Sedan	1,845
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		**"55"**	
3130	2-p	Speedster	$1,795
-----	2-p	Sp'dster DeLuxe	2,085
-----	4-p	Speedster	1,895
-----	4-p	Sp'dster DeLuxe	2,185
3530	2-p	Enc. Speedster	2,085
-----	4-p	Enc. Speedster	2,185
-----	4-p	Enc. Spdstr. DeL.	2,685
-----	2-p	Enc. Spdstr. DeL.	2,585
3190	4-p	Tourster	1,795
-----	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
-----	7-p	Touring	1,685
-----	7-p	Touring De L.	1,885
3430	4-p	Coupe	2,085
-----	4-p	Coupe De Luxe	2,485
3540	5-p	Brougham Sedan	1,995
-----	5-p	Broug. Sed. DeL.	2,485
-----	5-p	Brougham 2 d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Berline Sed. DeL.	3,185
3530	5-p	Victoria	2,185
-----	5-p	Victoria DeLuxe	2,485
		"75"	
-----	2-p	Speedster	2,195
-----	2-p	Speedster De L.	2,485
-----	4-p	Speedster	2,295
-----	4-p	Speedster DeL.	2,585
-----	2-p	Enc. Speedster	2,485
-----	2-p	Enc. Sp'd'r DeL.	2,985
-----	4-p	Tourster	2,195
-----	4-p	Enc. Speedster	2,585
-----	4-p	Enc. Sp'd'r DeL.	3,085
-----	4-p	Tourster DeL.	2,385
-----	5-p	Phaeton	1,985
-----	5-p	Phaeton De Luxe	2,185
-----	7-p	Touring	2,085
-----	7-p	Touring De Luxe	2,285
-----	4-p	Coupe	2,485
-----	4-p	Coupe De Duxe	2,885
-----	5-p	Brougham Sedan	2,395
-----	5-p	Broug. Sed. DeL.	2,985
-----	5-p	Brougham 2 d.	2,095
-----	7-p	Sedan De Luxe	3,485
-----	7-p	Berl. Sed. De L.	3,585
-----	7-p	Victoria	2,585
-----	7-p	Victoria De Luxe	2,885
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4460	2-p	Roadster	$4,000
4580	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	-----	Sport Touring	4,500
4750	4-p	Coupe	4,600
4885	4-p	Sedan	4,800
4960	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,300
LOCOMOBILE "48"			
5280	4-p	Sportif Tour	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Drive Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,795
3400	5-p	Sedan	2,285
3350	5-p	Brougham	2,285
		"90"	
-----	----	Touring	$5,500
-----	----	Roadster	5,900
-----	----	Coupe	6,950
-----	5-p	Sedan	7,300
-----	5-p	Sedan (divided)	7,450
-----	7-p	Limousine	7,500
-----	----	Brougham	7,500
-----	7-p	Cabriolet	7,500

MOTOR AGE

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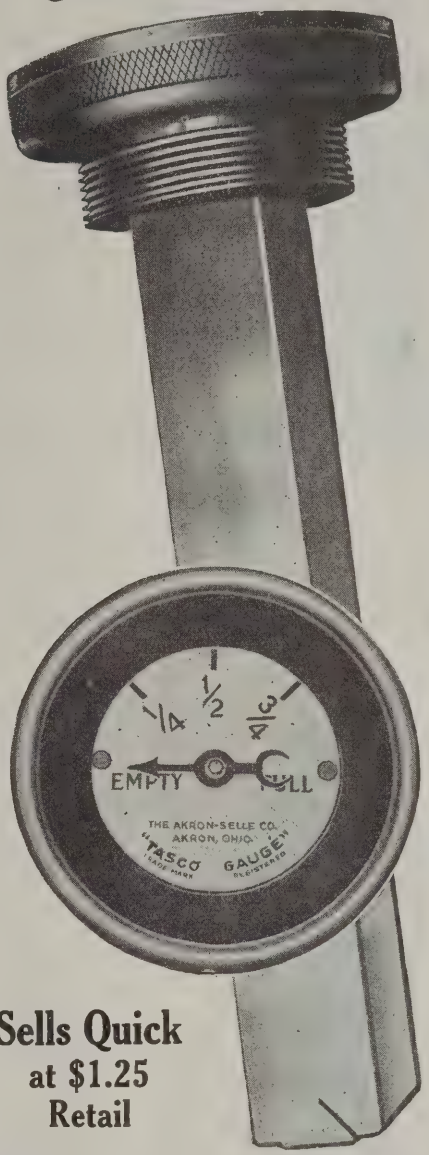
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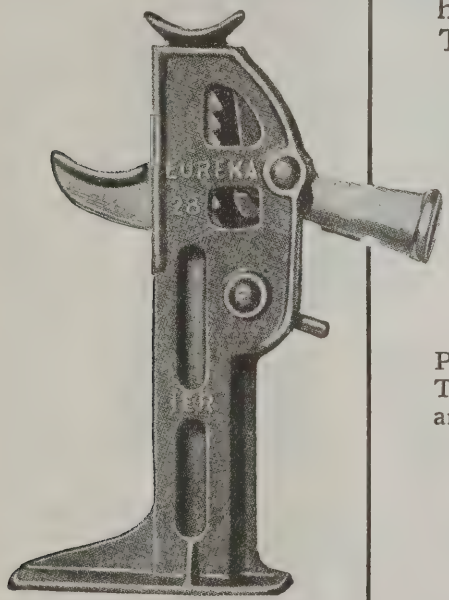
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JACKS and PUMPS

MOTOR AGE

Vol. XLVIII Chicago, December 10, 1925 No. 24

Summary and Index of Important Events in

This Week's Automotive News

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Motor and Accessory Manufacturers' Association rejects plan to merge with A. E. A. Page 32.

Compromise is reached on bill now before Congress to reduce automotive war taxes. Page 33.

N. A. C. C. frowns upon hotel room exhibits during national shows. Page 33.

Car builders in Cleveland say November was the best month on record. Page 43.

Speedway officials mail entry blanks for Memorial Day classic at Indianapolis. Page 35.

Sectional meetings of Society of Automotive Engineers are announced for December. Page 34.

Dealers in Indianapolis see excellent business in 1926. Page 34.

Ford's new steel rolling mill begins operations in Detroit River Rouge plant. Page 34.

Sales of new cars show big increase in San Francisco territory. Page 35.

H. W. Booth joins Ajax as assistant sales manager. Page 35.

Chevrolet expects a gain of 60,000 in its yearly production in 1925. Page 35.

New car sales in Los Angeles are reported on an average level for November. Page 36.

T. P. McGough of Chicago is high man for the United States in sales contest staged by Velie. Page 36.

Cincinnati dealers report public is buying quantities of used cars to be held for expected strong market in spring. Page 36.

Overall height reduced and other refinements are announced in Dodge Brothers type B sedan. Page 37.

Hoover reports on work of automotive division in 1925. Review shows continued expansion of activities. Page 37.

Carolina dealers report that their orders are still ahead of output and delivery. Page 38.

Citroen introduces new model with four wheel brakes to sell for 21,500 francs. Page 38.

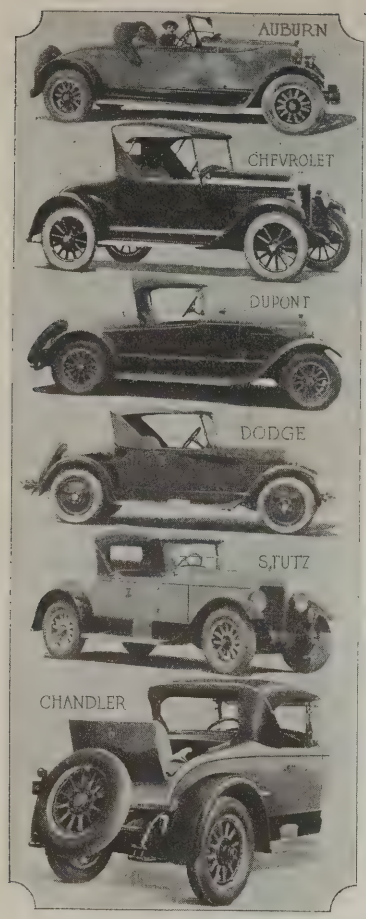
Firestone report for fiscal year shows a gain of $40,000,000 in sales and $5,000,000 in net income over 1924. Page 38.

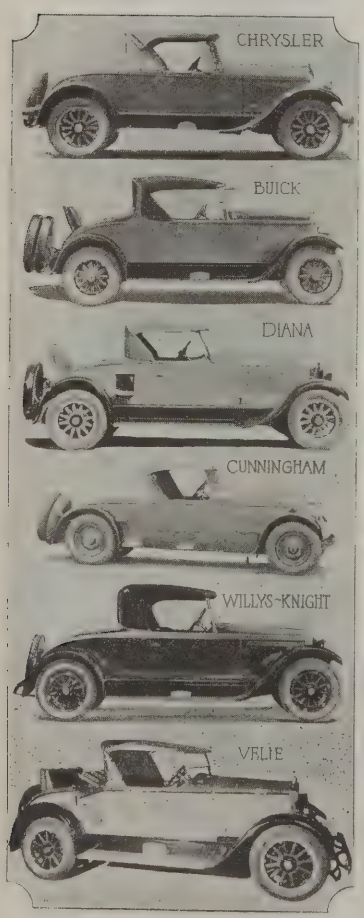
Collections of internal revenue from automotive industry in first ten months of 1925 show gain of $64,578,981 over same period in 1924. Page 39.

R. M. Wilmot Shaw is appointed new advertising manager of Olds Motor Works. Page 39.

Dealers in Chicago report good volume of business throughout November. Page 39.

In Next Week's Issue—Rebuilding Used Cars to Sell New Ones.





The Roadster Plays a Comeback

Demand for a "Second Family Car", Snappy Body Lines and Sport Appeal Apparently Figure Prominently in Reasons for Increased Buying Interest

By CLARENCE PHILLIPS

THERE has been an increasing demand for roadsters—an increase which has amounted to more than a seasonal spurt. It has come as a steady development which began some time last year, gathering momentum at the opening of the present year's active selling and increasing its force as the 1925 season progressed.

With 1925 nearing its close the roadster continues going strong. Some companies will check out with new roadster records this year. The trade as a whole will close books Dec. 31 with a unit roadster volume surpassing either that of 1924 or 1923 and possibly widely surpassing either of the other two years immediately preceding.

According to trade reports there are some sections where the roadster is the only open model that has been enjoying increased demand, touring car demand having been steadily diminishing or remaining at very low ebb as closed models have gained in favor. Apparently the roadster is having its inning again.

"The roadster is playing a strong comeback" remarked a factory man the other day, and a check up reveals that it is doing all of that.

In order to obtain some definite roadster facts MOTOR AGE submitted a questionnaire to the factories replies to which revealed some interesting observations and sidelights respecting the reception and progress of this particular body style.

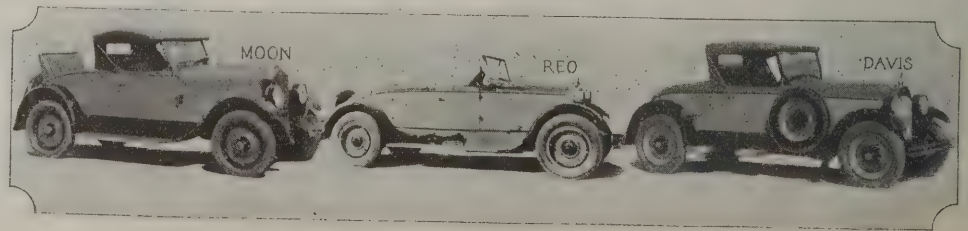
Importantly, the answers show that there is a growing roadster interest in the industry just now, reflecting, of course, growing interest on the part of the buying public. A number of factories which had never made roadsters before or which had dropped them temporarily have included roadsters in their schedules of the past 18 months. Others not listing roadsters at present are considering this addition to their lines.

It is practically certain that several companies not having roadsters on their lists today will have them on display at the national shows or soon thereafter. One company which has not listed a roadster for the past two years but which expects to display roadsters at the shows makes this frank comment:

"Information that you will receive will undoubtedly convince you that 1925 was a surprisingly fine year for roadsters. The best Information that we have been able to gather assures us that we missed out by not having a roadster this year."

A study of records shows that there has always been more or less uncertainty in factory minds as to the roadster's sell-

One big reason for increased interest in roadsters recently is found in the pictorial illustrations accompanying this article. American makers have put smartness and utility in these models in a manner naturally calculated to tempt many automobile buyers



As the Roadster Outlook Has Been Sized Up Each Year Lately by Manufacturers

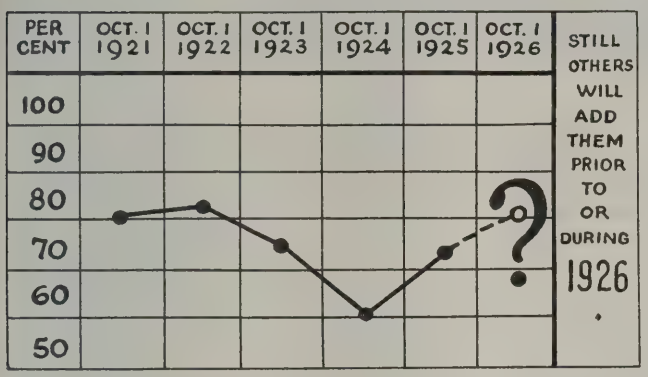


Chart shows roadster curve over five-year period. One hundred per cent would mean all makes represented had roadsters on lists. Eighty per cent, therefore, means 80 per cent of all makes represented that year had roadsters on list

ing qualities, few of the makers having carried roadsters year-after-year without dropping this body one or more times to possibly take it up again later.

The chart published in connection with this article gives an idea of the roadster's prominence in factory production lists over a period of five years ending October 1, 1925. It will be noted that this body's popularity with the makers has greatly fluctuated.

On Oct. 1, 1921, as the chart indicates, eighty per cent of the makes represented (in a list of 112 makes) included one or more roadster bodies. The change from that time to a year later was not material.

But notice the downward pitch of the curve from October, 1922, to October, 1924. From 82 per cent on Oct. 1, 1922, there was a drop to 75 per cent by October, 1923, and a substantial continuance of this grade to 60 per cent by October, 1924.

And now notice the sharp rise from October, 1924, to October, 1925.

In the past year the line has gone from 60 per cent to 73 per cent, going upward on a grade approximately that of the descent.

How much farther upward it will go it is difficult to say, but there are reasons to believe the ascent will continue to a greater or lesser extent for some time yet. It is not at all unreasonable to speculate that at this time a year hence more than four-fifths of the companies making passenger cars will be supplying roadster models. It is possible the proportion will be still greater.

As it is, at the present time 73 per cent of the makes listed include this type of body where but 60 per cent of the makes represented included it a year ago.

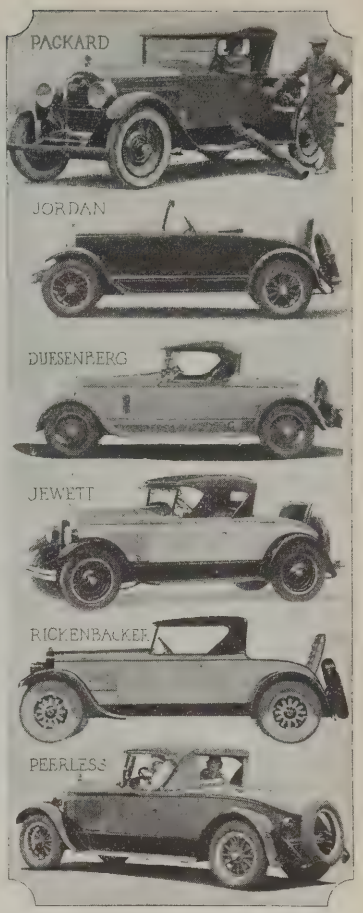
The significance of this sudden turn to roadsters by manufacturers is in the fact that production lists strive to follow the trend of public preference. Merchandisers in the field have found a line of lowered sales resistance in a certain buying class desiring roadster models and makers have capitalized the opportunity by putting out roadster products with especially strong selling qualities. Many retailers over the country who had quit carrying roadsters or who have recently begun showing them for the first time are studying the model's selling points so they will know how best to deal with those buyers who are out shopping for this particular style of body. It is good selling theory to sell the prospect hardest on what he seems most sold on himself, following the line of lowest resistance. Factory suggestions of roadster selling points are touched on later on in this discussion.

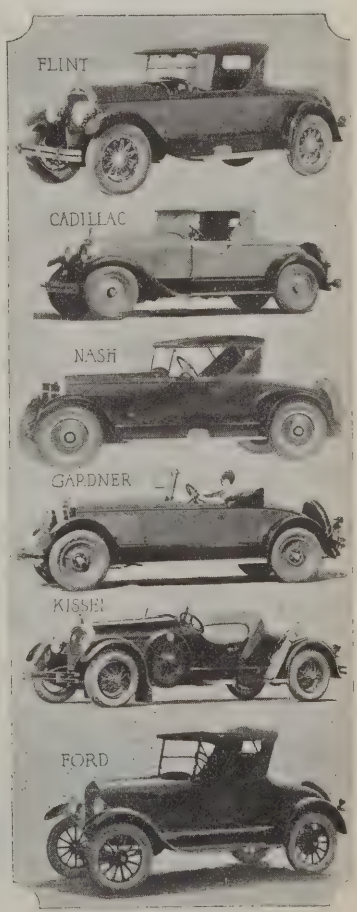
It might come as a revelation in some quarters of the trade to know that a large representative group of our factories, 21 to be specific, has been making four or more roadsters on an average to each six touring cars. Other companies were unable to supply estimates on this particular point.

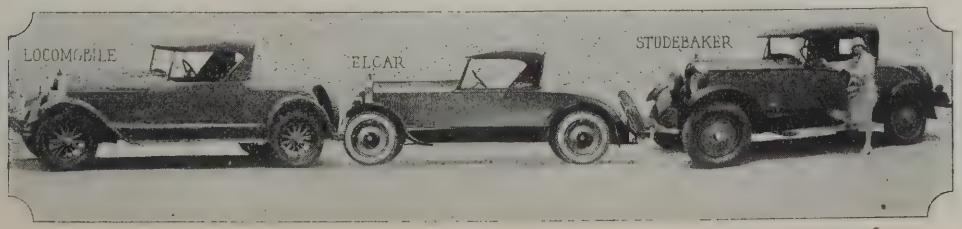
Incidentally, these 21 companies have been giving an average of 74 per cent of production to closed cars.

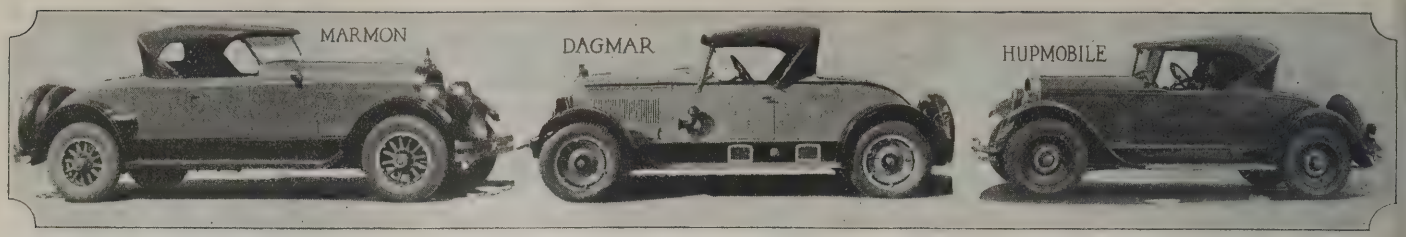
That puts open car production at 26 per cent of the total volume, with roadsters representing 41 per cent of the entire open car output.

There is more than a bare chance that next year will find the factories giving the big end of open car production to roadster









designs. It might be interesting in this connection to remark that Ford's production schedule for October called for a roadster output equal to 20 per cent of the total production volume. All big producers of more popular low priced cars are experiencing brisk roadster interest.

One company handling a medium priced line reports that it is giving 90 per cent of its open car production to roadster bodies. Another reports that its roadster production has been running 85 per cent of the total open car output while with others the proportion ranges from 75 per cent downward.

Demand Much Above Last Year's

With respect to the comparative tone of roadster business to the end of the third quarter this year the factories were asked two questions: (1) Has the roadster demand so far this year been better than it was to this point last year? (2) How much better (in percentage)?

An average of replies by companies in position to give actual figures or estimates indicates an improvement over the first three-quarters of last year of 52 per cent in roadster demand.

One of the largest volume manufacturers of medium priced cars reports that the roadster business this year has been three times greater than that of last year. That is an outstanding case. Elimination of the three highest instances wherein increases of 300, 100 and 100 per cent were reported, would reduce the general average to something above 30 per cent, which still looks large.

Replies also indicate that the roadster business for the industry generally for the first three quarters of the present year scored a material increase over the average roadster business of the previous four years.

And now for whys and wherefores. Question No. 8 submitted to the makers was as follows:

"Assuming that general public interest in roadsters has been increasing—to what do you attribute the improved interest?"

In other words, what is responsible for the roadster's comeback? What are its big selling points? From the mass of replies we have picked out the following high spots in this connection:

Its appeal as a second family car.
Ease of management in traffic.
Demand for small carrying capacity.
Its compactness.
Smartness.
Beautiful lines of more recent models.
It is the logical sport car.
A car for general utility.
Handiness.
A "business and professional" car.
Improved design.
Appeal to persons wanting outdoor life.
Growing popularity of golf.
The worker's daily transportation.
Recently more snappy yet relatively low-priced.

There seems to be general agreement that smartness of current designs, coupled with the roadster's practical utility for many purposes, make for easier selling of this body. Companies featuring rumble seat jobs find that the rumble seat has a powerful sales appeal. That the demand for a second family car is increasing roadster sales is a point on which the majority of factories agree.

"More families are buying two cars," says one factory, "buying the roadster for a sport car in addition to the family sedan."

"Many families that had one car formerly," says another typical answer, "now buy a sedan and a roadster." One company finds that "the two-car tendency is increasing very rapidly" while another remarks that "the public is buying the two-car idea," indicating that this company is merchandising the "two car" idea.

A Different Angle

Differing with the majority to an extent is one reply to the effect that the roadster's rise in popularity is "not so much as a second family car but it is favored by certain elements with whom appearance is a factor—mainly appearance."

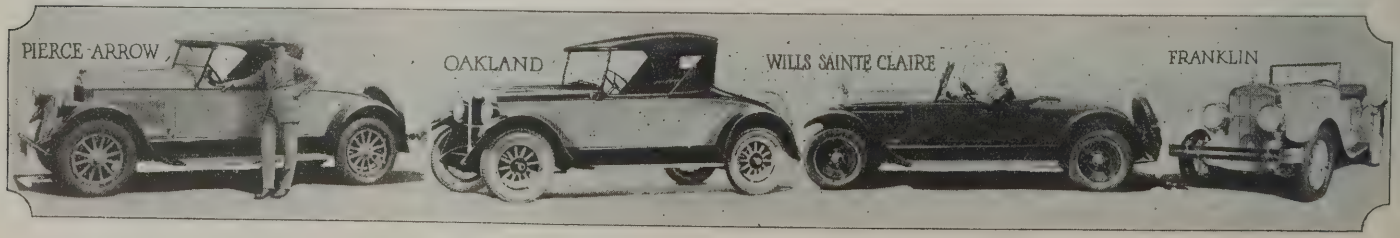
Following is an interesting extract from a letter which one manufacturer sent in:

"We feel sure that the tendency toward roadsters is due to the fact that they are sport models and appeal to the public for that reason. We believe that there is a growing tendency on the part of owners to buy roadsters for use as second family cars, particularly for use of the children and for running out to the golf club. We b l that the added interest in roadsters has been established because of the greatly improved appearance of roadsters in general. We believe that the roadster is the accepted sport model, or sport type, of today, and that other open models will gradually pass out of the picture."

Having digested that, read this: "Answering No. 8 of your questionnaire, the interest in roadsters has been increasing, but it is our belief that they may go out of style more quickly than they came in." That is from a company which now lists no roadster but which expects soon to add one.

To quote another letter: "We have noticed a decided increase in the roadster business this year over last and this increase will undoubtedly be even greater during the coming year. We find that families are beginning to afford two cars which undoubtedly has been a factor in increasing roadster demand. The price element is also to be considered when estimating the demand for open and

(Continued on page 43)



This Trade Association Is a Business



W. L. Hughson, president San Francisco Automobile Trade Association

No Banquets, Picnics or Other Fun, But $200,000 Saved for Its Members in Seven Years Is Record of San Francisco Automotive Group



Arthur D'Ettel, manager and secretary of San Francisco Automobile Trade Association

OUT at San Francisco, where the flying fishes build their nests in the hinges of the Golden Gate and the domesticated whales hold monthly field-days during the tourist season, they have an automotive trade organization which is probably the most successful, as well as one of the oldest, of its kind in the United States. It has been in continuous and successful operation for 14 years; it has saved its members hundreds of thousands of dollars along several lines; it has corrected a number of evils in the industry, and inaugurated a number of good practices which now have become habits; and it was originally devised, and ever since directed, by one man.

It is the San Francisco Automobile Trade Association, of which William L. Hughson is president and Arthur D'Ettel, secretary-manager. Now, if anybody thinks that this business of being a secretary, or a manager, or both of them at once, to a trade association is a cinch, let him try it. But D'Ettel started off, away back in 1909, sixteen years ago, by getting the idea of an automotive trade association which should bring all the crafts together in one beneficial organization. It wasn't until 1911 that he brought the garage men to see it his way, and then only five of them saw it, but by 1912 he had met Old Man Trouble in all disguises, had the old gent whipped, and ever since that time has been running the association just like a Swiss watch is supposed to run, only better.

Today, the San Francisco Automobile Trade Association has a membership of about half of the 450 repair, garage, paint, and other automotive crafts in San Francisco, and the original five garage men have grown to 110.

This year's officials of the San Francisco Automobile Trade Association are W. L. Hughson, Ford dealer, president; C. N. Weaver, Studebaker distributor, first vice-president; Roy Alexander, Chandler and Cleveland, distributor, second vice-president; and Arthur D'Ettel, secretary-manager. The present board of trustees, consists of Manley Harris, from the Auto Body Building Painters and Trimmers Association; H. M. Nicholson, Automobile Repairers' Association; Herman Hinze, Automobile Electrical Association; and A. G. Steelman, Garage Owners' Association. The secretary-manager is also a member of the board of trustees.

Along practical lines, the association has done a great deal for its members, and, this year, is still further expanding its activities. The garage owners, for example, have a purchasing department, which has been in very successful operation for seven years, during which time it has saved, as the books show, more than $200,000 to the members. Mr. D'Ettel does the purchasing, with the aid of men who know particularly well each commodity to be purchased. Each man puts up the money to buy what he wants. This fund is put in the bank and the secretary-manager buys in a lump and distributes the commodity purchased to the individuals. Only large lines, such as gasoline, lubricating oils, soap, sponges, are bought by this method. Tools, metal supplies and accessories are never touched. All these supplies are bought locally from jobbers. An employment bureau is maintained, and this has been particularly successful with the garage men, both in cutting down their labor turnover and in helping them to get more competent men. There is no charge to either party for the use of this department.

The association is operated on a strictly business basis. Picnics, banquets, "field days" and similar social events have been abolished as not only not useful to the organization, but often harmful to its development as a business undertaking. Radio is called on frequently to disseminate information to the membership, and has been found very successful.

Practical Steps in Magneto Overhauling

Barney Hangs Out His Shingle and the Red Head Gives Him Some Pointers on Automotive Electrical Work

By A. H. PACKER

THE Red Head spelled it out slowly, for it made no sense to him. Valvy, looking over his shoulder was equally puzzled.

T-R-A-C-T-O-R
E-L-E-C-T-R-I-C-A-L
B.-O.

Barney was making a sign on a big white strip of cloth, but Bill Fixit's roaming trouble shooting men were having a hard time to figure what it was all about.

"Are you lookin' for a farm hand that can run your cast iron horse?", Valvy wanted to know. "Most of the tramps I've seen can hardly handle a pitch fork, let alone shoot electrical trouble on a tractor."

"You haven't seen the half of it yet," said Barney. "Look at the rest of the sign and you will ken the ambitious idea that's been buzzing under my engine hood since you boys have been here. Dad wants me to settle down to work of some kind, and as digging in the mud and sterilizing barns doesn't appeal to yours truly, I've decided to do some electrical work for this farming community instead of chasin' around in the race car all the time.

Then Barney pulled the rest of the sign out from under the bench, and Red and Valvy began to get the idea. It read,

TRACTOR AND AUTOMOBILE
ELECTRICAL OVERHAULING
B. O. SMITH

"You sure have a lot of crust," said Red. "But I've seen it done before and know of at least two places that are out in the woods, and where the work comes in for miles in preference to being taken to the town garages. But you haven't done much electrical work, and may get stuck on a job now and then."

BILL FIXIT STORY No. 13

PREVIOUS installments in this series by A. H. Packer were published March 19, April 2, April 16, May 7, May 21, June 18, July 30, August 13, September 3, September 24, and October 22, 1925.

SYNOPSIS: Bill Fixit's electrical trouble shooting men start on a trip in a Speedway car. They stop at various places along the way and in a mining community are robbed of all their money. This necessitates getting a job with the local electrician, to whom they give some helpful information gained in working in Bill Fixit's garage. Directional radio is used by government agents in locating a gang of crooks and the boys' money is recovered. The trip is continued and the night after leaving the mining town they stop with Barney Oldfield Smith, an amateur race driver and help him with a magneto job, where a new condenser is needed. The condenser is obtained from Bill Fixit's electrical station, but in the meantime Valvy discovers an old radio set, and the Red Head engineers a trouble shooting job on the set and restores it to its original usefulness.

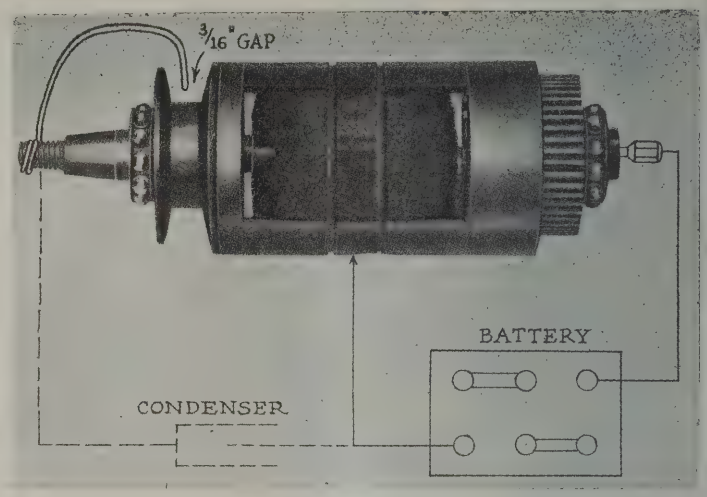


Fig. 4. Simple method of testing a magneto armature with a battery and a couple of wires.

"Right as usual," said young Smith. "But Bill Fixit's prompt service gave me an idea. I'll tackle every job, promise each one in two or three days and when I get stuck send them to Westville. When I get by with a job I'll make some money, and when I fall down I'll get some experience. Then pretty soon I will not fall down on any of them.

"You see I am figuring on pumping you fellows some more, too, before you get away; that is if the old house and mother's cooking is sufficient attraction to pay for your trouble."

Everybody Satisfied

"No kick on that proposition," said Valvy, still thinking of the Thanksgiving feed that had vanquished him in the fifth round. I do most of the eating and Red does the work, it suits me fine."

"I like to do my stuff," said Red, "as well as Valvy likes to eat, so we'll call it a go, and as you are representing yourself as a tractor expert we better take up some of the practical tricks in magneto overhaul, because that's the only electrical unit you find on many of the tractors."

Red went up to his room to get a bunch of diagrams that Bill Fixit had made at one time, and when he came back the lesson started, with Red, the teacher, Barney Oldfield Smith the pupil and Valvy listening in just for luck.

"From a practical standpoint," Red began, "its always best to take a magneto off rather than try to fix it on the car or tractor. In the first place, by the time a magneto gives trouble it probably needs a general overhauling. If the points are causing the immediate trouble, it might be possible to get the engine running by filing the points. This however would give but temporary operation and would not be worth while for the repairman, for only a nominal charge could be made.

"Then when the machine went dead again in a short time, the only thing the customer would remember would be the trouble, and he would forget the fact that he had not paid for a real overhaul.

"Removing the magneto is simple enough, but if the electrician is wise, he will check the position of the engine and then note the position of the distributer brush as well as marking the magneto coupling. Because the magneto

haft turns around twice while the distributer turns once, t is not enough to merely mark the coupling, for you can oosen the coupling and turn it around once so the marks re again together, but this gives the spark at the wrong ylinder.

"It is not absolutely necessary to set the engine on dead enter, but some electricians prefer to do this, turning he engine until the rear exhaust valve has just closed, s this gives the approximate firing point of the front r No. 1 cylinder.

"If the tractor or car is in your yard it may not be ecessary to disconnect the distributer cap from the spark lug wires, but it may be left hanging, while the magneto, vithout the cap is taken off. In either case, however, he cap should be carefully removed, so that the dis-ributer brush and spring are not lost. Having the dis-ributer cap to work with is of some help, however, when he magneto has been put together and the time comes o check the meshing of the distributer gear to see if the listributer is timed properly.

"The next step is to take the interrupter off and this nay necessitate disconnecting a wire. This is true in the Dixie magneto, while in armature types such as Eisemann and Bosch it is not necessary as the screw in the center of the interrupter acts to both hold the interrupter on and also to connect the insulated contact point to the primary of the armature.

"In this illustration of Bill's (Fig. 1)," said Red, "we have the interrupter of a magneto shown and below it we have an enlarged view of the points, the sketch at the right showing how they should be, and the one at the left showing how they often are after missing begins. The contacts require a layer of metal which does not oxidize under the action of the spark. Platinum is often used for this purpose although on battery ignition systems various other metals, notably tungsten, are used. On magnetos platinum iridium is usually considered the most satisfactory.

"Whatever the substance may be, however, it is essential that there be a complete layer of it making contact. When the points have burnt away as shown at the left

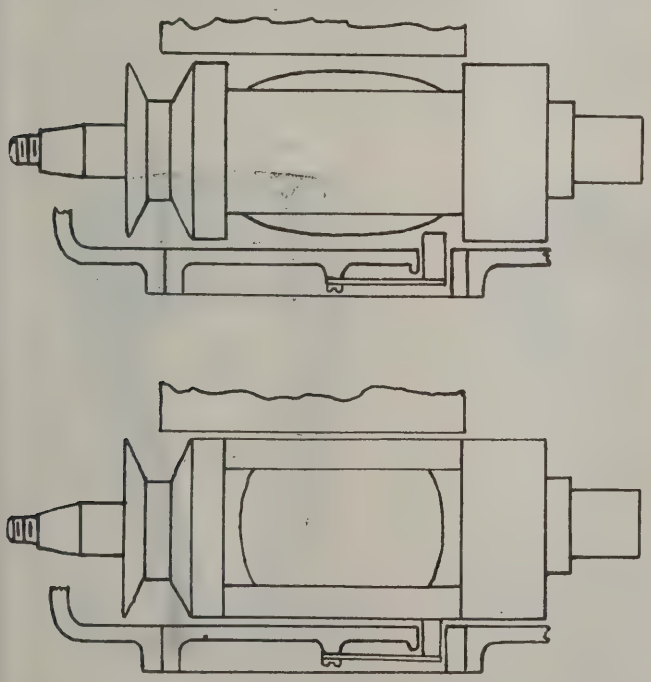


Fig. 3. Removing armature without breaking ground brush. Lower view shows the safe method. Upper view shows method that results in breaking the brush.

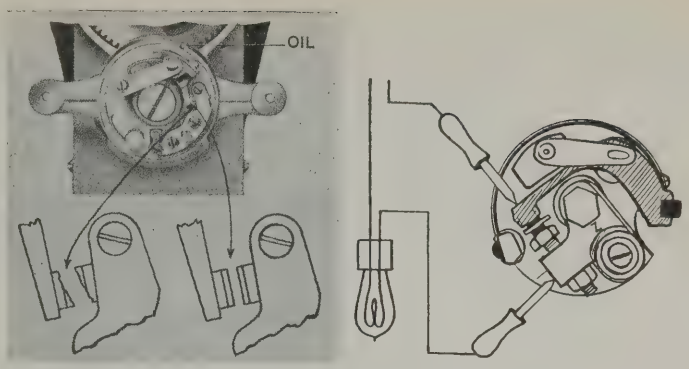


Fig. 1. Left: Checking the interrupter points. Lower right (Fig. 1), points in good condition. Lower left (Fig. 1), points worn down to the iron; right: Fig. 2. The 110 volt test applied to a magneto interrupter to make sure it is not shorted.

sketch (Fig. 1) it means that the iron part of the contact is helping to make the contact, and when the break occurs a bad arc forms, due to the tendency of the iron to burn. The burning iron tends to sustain the arc which permits the primary current to die out slowly, thus seriously weakening the secondary or sparking voltage.

"At times it is difficult to see whether the layer of platinum is good or not, but if in doubt the points should be cleaned with a file all around the sides so that the line of the weld can be seen. When the platinum is nearly gone, new points should be put in, or the magneto will go bad again in a short time.

The 110-Volt Test

"Interrupter insulation rarely gives trouble, but if we are to make a thorough job of it the 110-volt test should be used after the interrupter has been removed. To do this a piece of paper or wood may be used between the points to hold them apart and the test points used to see if the lamp will light up (Fig. 2). If the lamp lights the interrupter is shorted, the insulation being defective. At the same time it would be well to feel the spring action and see if it seems to be normal.

"When the interrupter and distributer have been removed, the high tension pencil, if one is used, should be removed carefully, also the high tension brush holder, these parts being laid aside where they will not be injured. The next step is to remove the armature.

"In some magnetos grounding brushes are used to carry the current from the frame of the machine back to the armature, without making it necessary for the greasy ball bearings to carry this current. Where such magnetos are worked on it is essential to remove the ground brush, if possible, before the armature is withdrawn. In Bosch magnetos, for example, there are two ground brushes, one of which is seen at the back of the interrupter when the interrupter is taken off. The other can be removed by turning the magento upside down.

"In withdrawing the armature on an unknown magneto it is always well to have the armature vertical, that is with the iron end pieces of the armature in the up and down position instead of at the sides. Then if there is an inside ground brush it will ride over the surface of the armature and will not spring up into the winding space when you start to pull the armature out.

"This sketch," said Red, "shows what I mean (Fig. 3) where the lower view shows the brush riding the iron part of the armature, while the upper view shows the armature turned the other way and the brush springing up into the winding space. When the armature is pulled all the way out, it will have to shear off a part of the brush in order to come out.

"Before the armature is taken out, some trouble shooters prefer to take the magnets off, using keepers on them as they are removed so that they will not be weakened. As every magneto overhaul job includes remagnetizing, however, it is somewhat doubtful whether this is really essential or not.

"Another precaution that may or may not be observed is to look for the distributer gear marks that tell where to mesh the distributer gear with the gear on the armature. In some cases the mark is difficult to see and in other cases there may be several marks, made by the various men who have worked on the magneto. For this reason it is just as well to forget the distributer gear marks, but to carefully check the setting as the magneto is being ressembled again.

"After the armature has been removed it should be tested. There are various ways of doing this and some devices for the purpose are furnished by the magneto companies to the service stations representing them. Bill showed us all a simple method once which requires no equipment but a battery and a couple of wires (Fig. 4), although a spare condenser can be used to get a better test.

Regular Interrupter Omitted

"The regular interrupter can not be used applied to the end of the armature shaft, for there it is a short on the primary winding as far as outside current from a battery is concerned. For that reason the regular interrupter is left off and the screw which held it is replaced to make a connection to the primary. Then one battery terminal is connected to this screw.

"Before we go any farther with our test it is necessary to provide a gap at which the spark may jump, or we will be in danger of straining the insulation of the armature, for when out of the magneto it is no longer connected to its safety gap. The improvised test gap is made up by twisting a piece of wire around the shaft and bending it over to within $\frac{3}{16}$ in. of the slip ring. The next step is to take a wire from the other battery terminal and rub it along the surface of the armature.

"Theoretically we should have tungsten or platinum points to break this circuit, but actually it is surprising how the ridges in the center of the armature will help get a sudden break as the wire is rubbed over the armature. As this is done sparks should jump at the gap. These sparks should jump successfully but should not be very fat or red, for the condenser in the armature is not properly connected for this battery ignition test, it being across the primary and not across the improvised interrupter.

"To get a fatter spark and one that will jump a little farther, we can connect a spare condenser as indicated by the dotted lines, for in this position it will be across the crude interrupter we are using. It is, of course, possible to connect a regular interrupter in the circuit and if this is motor driven, as by a horn motor, it would be possible to run a test on the armature for half an hour or so. This would be advisable if there is any question about the magneto working properly after the engine gets hot.

Results of Tests

"It is now interesting to record the possible results of these two tests and the conditions they indicate. We will call the No. 1 test the test in which only the battery and wires are used and the No. 2 test the one where we add the other condenser, the various possible conditions being as follows:

No. 1 test O. K. No. 2 test O. K. Armature O. K.

No. 1 test, spark weak; No. 2 test O. K., condenser poorly connected or low in capacity, or wire to battery test leads too long for good results on the No. 1 test.

No. 1 test, spark very weak; No. 2 test also weak, secondary or condenser shorted. Added condenser does not improve test under either circumstance.

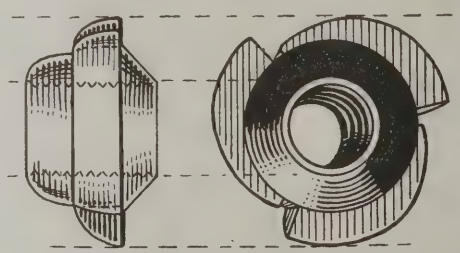
"In the test results just given it will be seen that if poor results are obtained on both tests we do not know what is wrong. However, in either case it would be necessary to take the armature apart, to change either condenser or coil, and when we have gone far enough to disconnect the condenser we can test it with 110 volt points as we tested the interrupter (Fig. 2). If the condenser is shorted we need a new one. We can at this point test the coil over again just to make sure that we are not putting in a new coil unnecessarily."

NOTE: The subject of magneto overhauling will be continued in the next Bill Fixit story.

Lyon Key Nut Designed to Prevent Unauthorized Removal

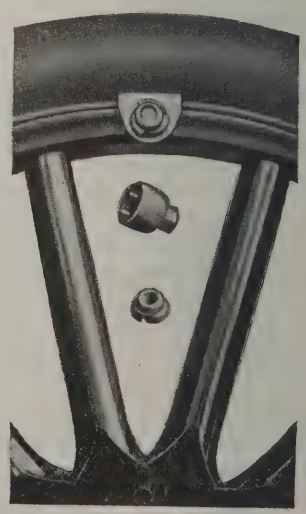
A Chicago inventor recently brought brought out a novel form of nut designed particularly for use in connection with securing rims on motor car wheels and so constructed that it cannot be removed unless the key wrench is at hand. An ordinary wrench, socket wrench, pipe wrench or pliers will not affect the nut in the slightest.

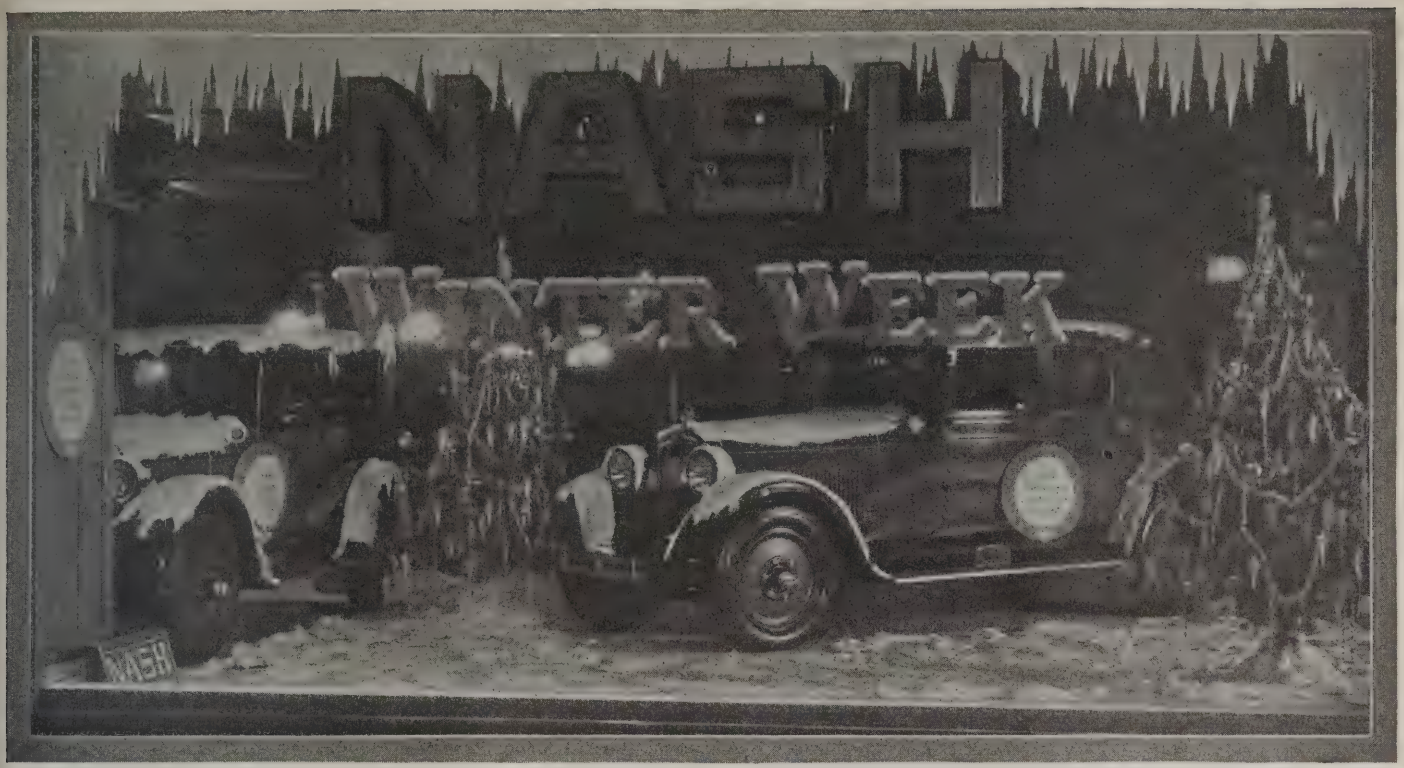
The nut includes a rounded body, as shown in the illustration, and is made with three projecting lugs against which similar lugs in the key wrench bear when the nut is tightened. Small grooves are cut along each face of the lugs on the nut and slightly below the surface and these grooves are the ones into which the particular part of the key wrench fits upon removal of the nut.



Left: Lyon Key Nut, showing the details of construction; right: Its application to a wheel rim

The exterior surfaces along the small grooves are tapered or feathered and consequently it is impossible for anyone to use the shoulder of the grooves as a means for driving off the nut with a chisel or screwdriver. Furthermore, the nut is case-hardened and a pipe wrench or pair of pliers simply slip off if an attempt is made to remove the nut with them. Reference to the illustration makes the construction of the nut quite clear.





Uniform display of Chicago Nash dealers designed to promote winter sale of cars

"Winter Week" Stimulates Sales

REALIZING that the Holiday season holds unappreciated advertising possibilities for merchandisers of automobiles, Nash dealers in Chicago promoted "Winter Week".

Throughout the seven days ending last Sunday, the Nash Sales Co. of Chicago and its 24 dealers presented holiday showrooms and window displays to the public, featuring the comfort, safety and convenience of driving a modern automobile in the winter months.

The week before the campaign opened, attractive full page advertisements were carried in Chicago newspapers, setting forth reasons why the potential buyer should not delay his purchase until spring, as has been so often the custom in former years.

Among the advantages cited in the advertisements were that the Duco finish is impervious to snow, sleet or ice; that full balloon tires cushion the chassis against road racking from the pitted and bumpy streets; that the improved carburetor assures instant starting; the overlapping door construction insulates the body against draft; that the Nash type four-wheel brakes prevent skidding on icy pavements; improved heaters keep cars warm in zero weather; and weather stripping makes enclosed bodies impenetrable.

The dealers further assured the public that their investments would be protected because there are no impending body changes. Extra inducements were offered for the old car in the advertisements. The dealers told the public that their used car stocks were low and that more good cars were needed. A special Christmas offer for the old car, with holiday terms on the balance, was made by the 25 firms that took part in the campaign.

H. T. Hollingshead, president of the Nash Sales Co. is of the opinion that few outside the automotive industry realize the tremendous strides that have been made in increased comfort and safety of winter driving. "Nearly every major advancement of the last three years has helped to establish the motor car as a practical all-year means of transportation," he declares.

"The inconveniences of the old style car have been so numerous that many motorists have formed the habit of waiting until spring before buying their new car. Now these conditions are completely transformed. Besides four-wheel brakes, eliminating skidding, improved heat devices which insure instant starting and special finishes that are impervious to sleet or sudden temperature changes, there has been remarkable progress in body designing.

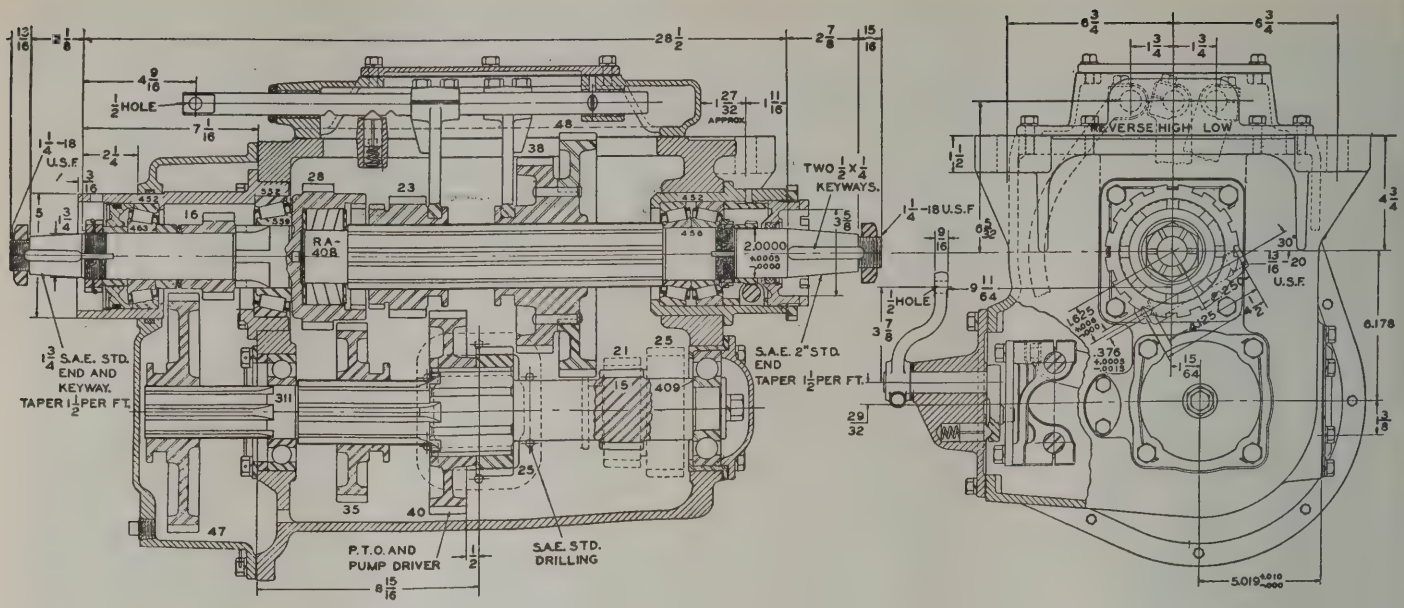
"Doors on Nash bodies are fitted with overlapping edges, heaters have been made more efficient and dependable. Balloon tires have proved their superiority over the high-pressure types not only in riding qualities but in protection to the chassis against road shocks.

"It is our belief that the public knows about these improvements but has not yet fully appreciated how completely they revolutionize winter driving."

On the first day of the special exhibit and during the entire week the Chicago showrooms were crowded. A uniform display pictured at the top of this page was used in every dealer's show window.

Before the week opened, a "teaser" window display was shown by each dealer. Painted on the window were the words: "Winter Week Is Coming" and the window was blotted in with opaque blue. Upon the opening day, the blue paint was washed off and an attractive winter setting as shown above, was visible to the passerby.

"Our normal December business is already being greatly increased as a result of 'Winter Week'," Mr. Hollingshead said. "It was purposely staged at a time when sales effort and buying activity are supposed considerably to lessen. The reason for this slackening of business in December in former years has been the general belief in the discomforts and inconveniences of winter motoring. That is exactly what we aimed to overcome."



Sectional view of the model 70 7-speed 5-ton truck transmission made by Brown-Lipe Gear Company

Brown-Lipe Adds 5 Ton Truck Transmission

ONE of the recent additions to the products of the Brown-Lipe Gear Company, Syracuse, N. Y., is the model 70 7-speed main frame type of transmission. This gearset, made especially for 5 ton trucks will be shown for the first time at the American Road Builders Show to be held in Chicago January 11-15.

The model 70 is made with a two speed countershaft giving the high and low range of four forward and one reverse speed with an over drive on the high range. It is made with an overhead shifting device and a power aperture is fitted. The main shaft and countershaft gears are made of 3.5 per cent nickel steel, and whereas other Brown-Lipe transmissions use a square main shaft the model 70 is made with a splined main and countershaft. Ball bearings are used on the countershaft instead of roller bearings.

The layout of the bearing on the rear end of the main shaft departs from usual practice in that a double Timken bearing is placed in a separate housing to withstand the thrusts and heavy loads.

The model 70 transmission is fitted with the following gear ratios from which it will be seen that a low low is afforded which makes possible a quick return by the truck.

Ratio of Change Gears

High Range			Low Range		
Rev.	4.76 to 1		Rev.	11.19 to 1	
1st	4.00	" 1	1st	9.40	" 1
2nd	1.90	" 1	2nd	4.46	" 1
3rd	1.00	" 1	3rd	1.69	" 1
4th	.71	" 1	4th	1.00	" 1

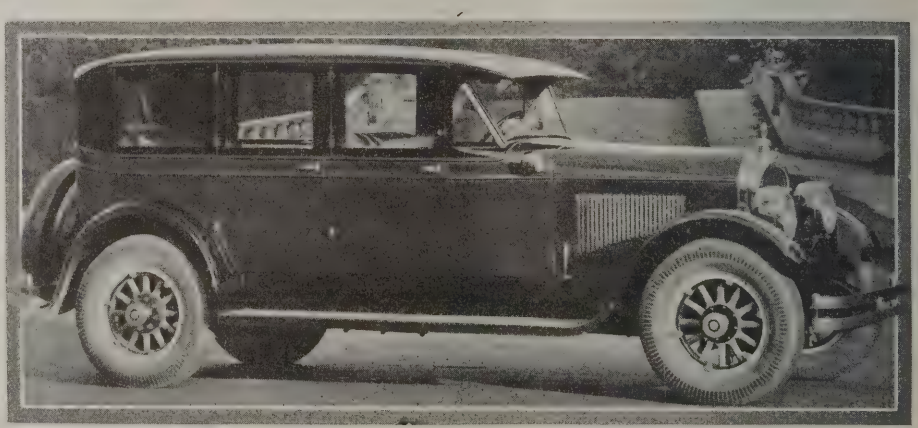
Randall Valve Guide

Announcement is made to the trade that John C. Hoof & Company, 157 W. Illinois Street, Chicago, have been appointed exclusive national sales agent for the Randall valve guides. These guides have been sold for equipment purposes, but are now to be sold to the replacement trade. They are made of close grained cast iron, machined all over and come in the plain or self lubricating type. In the latter helical grooves with compressed graphite flush with the bearing surface, lubricate the valve stem.

ABOUT BALL BEARINGS

The Fafnir Bearing Company of New Britain, Conn., manufacturers of Fafnir Ball Bearings is issuing a booklet called "Correct Mounting and Care of Ball Bearings for Automotive Service." The booklet has many illustrations and shows the correct and incorrect methods of mounting and removing ball bearings. The Fafnir Bearing Co. will be pleased to send a copy of the booklet to anyone interested.

Marmon Has New Body Model



The latest in the Marmon line is the seven-passenger sedan DeLuxe which is shown above

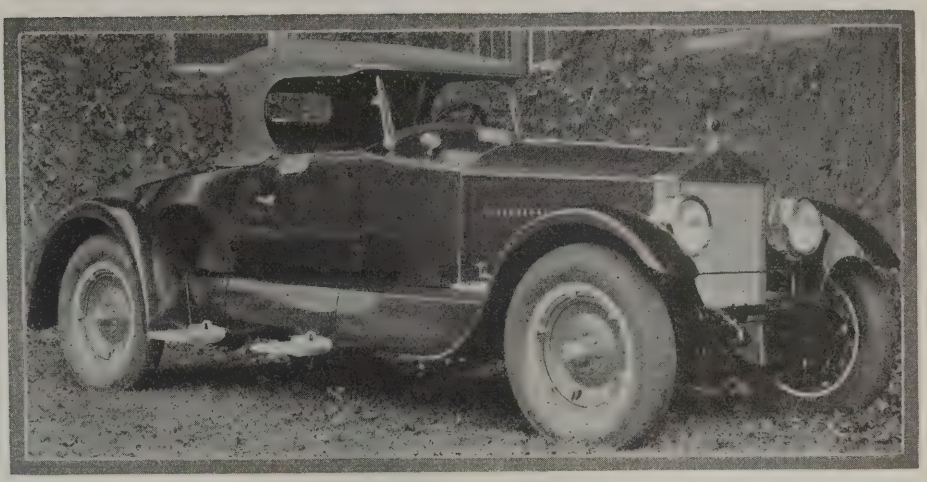
Roamer Eight Offered in Nine Body Styles

A RECENT addition to the field of eight-in-line models is the Roamer 8-88, built by the Roamer Motor Car Co., Kalamazoo, Mich. The car is custom-built and as is usual in such cases, upholstery and paint are largely optional with the purchaser.

The 8-88 is made with a standard wheelbase of 132 in. although 136 and 138 in. are available for special models. Tires are 32 by 6.20 balloons and Lockheed hydraulic four wheel brakes are fitted.

The engine bore and stroke are $3\frac{7}{16}$ by 4½ in. respectively giving a displacement of 287.3 in. Other engine specifications include; force-feed oiling; water pump cooling; chain drive on front end; Swan design intake manifold and lightweight pistons with four rings per piston. The clutch is a Borg & Beck and in unit with it is a transmission in which the gears are constantly meshed.

Many colors are standard and special colors are available at additional cost. The body styles include a five-passenger standard tourer; five-passenger sport; two-passenger speedster; 2-4 passenger roadster; five- passenger sedan; five-passenger special sedan; seven-passenger sedan; three-passenger cabriolet and four-passenger brougham.



One of the models of the 8-88 Roamer. This is the two-passenger speedster. Color is optional with purchaser

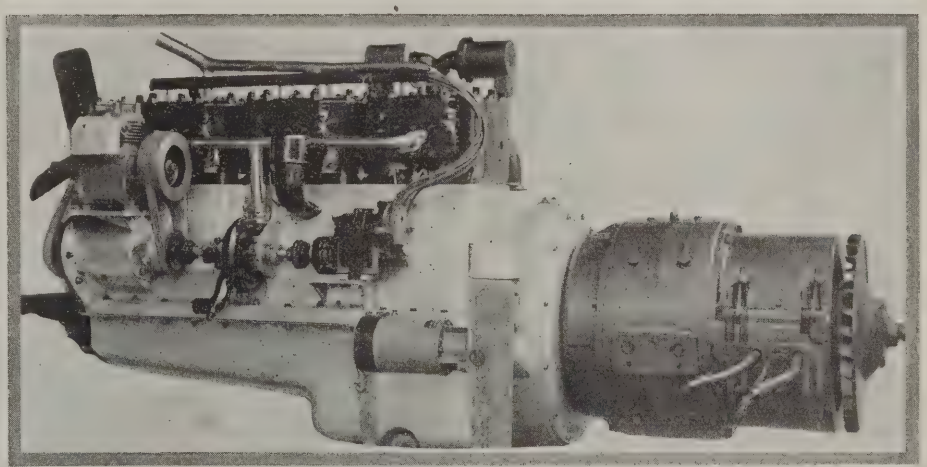
Tillings-Stevens Gas-Electric Drive Buses Introduced in This Country

TILLINGS-STEVENS design of gas-electric drive buses is being introduced into this country for the first time by the American National Omnibus Corp. who are the sole licensees for Tillings-Stevens Motors, Ltd. of England. The assembly of four chassis of this type has just been completed by the Gray Mfg. Co., holding the exclusive manufacturing rights.

Except for the English built electrical units, the chassis are an American product differing in principle from the General Electric Co.'s gas-electric drive buses in that it applies power from main electric motor through a propeller shaft to a conventional type of rear axle whereas a separate drive in the form two motors each connected to a rear wheel are employed on the General Electric chassis.

Because there is no positive mechanical connection between the engine-generator unit and the electric motor which actually operates the bus, it is a simple matter to vary the wheelbase length to take different types of bodies. The chassis is so constructed that it can be operated without the body, the latter being supplied as a separate and independent unit.

A four or six cylinder Waukesha high compression bus engine of the detachable "L" head type with the Ricardo combustion chamber furnishes the primary motive power. Forming a unit with the gasoline engine by being bolted to the bell housing, the electrical generator is connected direct through a patented spring drive employing two leaf springs located in the engine flywheel thus providing a flexible and resilient drive. This type of coupling permits of the generator being removed or replaced without disturbing the drive.



Power plant of the Tillings-Stevens bus. This is a Waukesha 6 cylinder engine to which the electric generator is connected

MOVEABLE BENCHES AID SHOP OPERATIONS

In the service station of the Howard Automobile Company in San Francisco there are special movable benches which have been equipped with a drill press, emery wheel, and a combination valve facer and seater, each having an individual electric drive, current being provided by extension cords. The drill press is provided with a special clutch to fit the valve cage for the purpose of cleaning carbon. The emery wheel is a combination emery and buffer, the buffer being used for cleaning valves, spark plugs, and the emery wheel for grinding tools.

Chrysler Has Device to Facilitate Cold Weather Starting

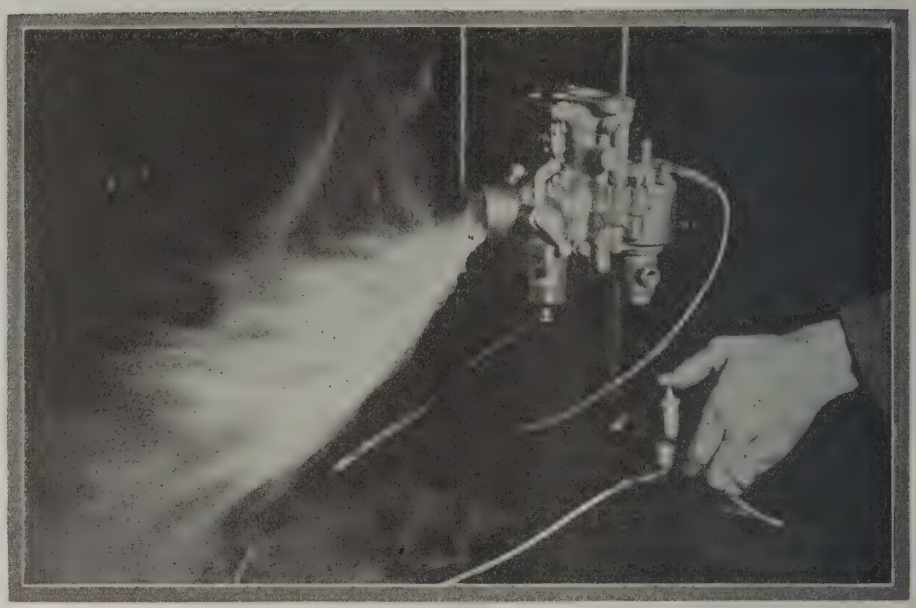
TWO new devices, a fumer and a manifold heater, to facilitate starting in very cold weather are now fitted on all six cylinder cars shipped from the factory of the Chrysler Corp.

These developments in combination bring the engine performance in winter up to practically the same standards of operation as during the summer months. In addition, crankcase oil dilution is reduced and improved fuel economy are claimed. Before the improvements were fitted to the cars, exhaustive tests were conducted by Chrysler engineers to prove their efficiency under the most severe conditions. In one case of the tests a stock engine and battery were placed in a cooling chamber for 20 hours with the temperature below zero. After this period, using standard gasoline, a successful start of the engine was made.

The primer or fumer is of simple construction, consisting of a double heating element and asbestos blocks enclosed in a brass sleeve. At the bottom of the sleeve there at two openings into which the gasoline is admitted. On the top is a perforated grid through which the gasoline fumes escape after contact with the heating element and from here escape to the body of the carbureter. The unit is placed in a well at the bottom of the carbureter.

Briefly, the action is as follows: When cranking the engine with the choke closed, there is a considerable amount of gasoline drawn from the carbureter jet. The suction at low temperatures, however, is insufficient to lift it up into the combustion chamber. Therefore, the gasoline drains back into the well in which the fumer is placed and fills it up to about half the height of the heating element. At this level, the heating of the gasoline is most rapid, and a drain hole is provided to prevent its filling any higher. To give the heating element time to heat and vaporize the mixture gradually, the unit is so constructed that the gasoline attains its maximum level slowly. The fumer is operated by means of a switch on the instrument board.

The other device for heating the incoming gases consists of a valve controlling the flow of heat from the exhaust manifold to a jacket surrounding the intake manifold providing a rapid, uniform heating of the mixture. A control on the instrument board operates the valve.



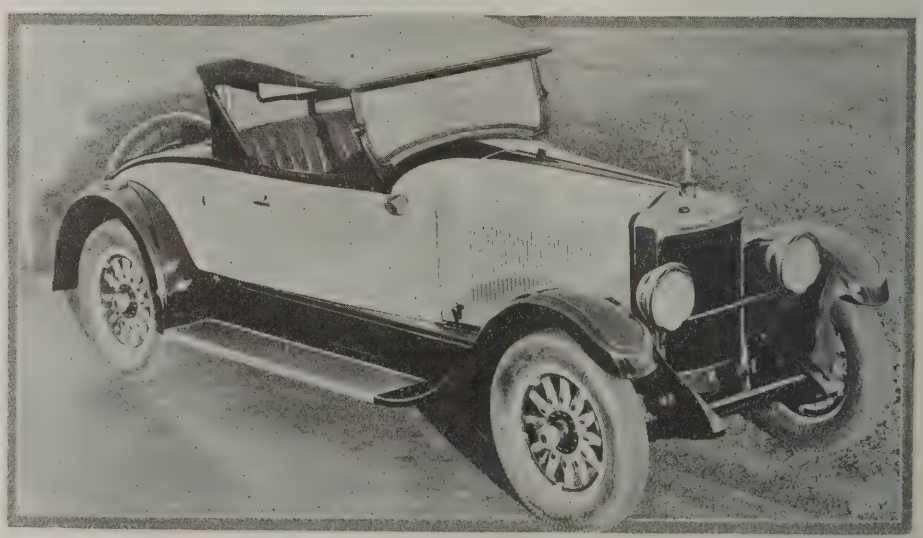
This shows the fumer attached to the Chrysler carbureter, the wires leading to the switch mounted on the instrument board

Offset Body Panels on Diana Give Distinctive Effect

THE Moon Motor Car Company announces something new in the way of a Diana roadster finished in black and white. As in other Diana models for 1926, moldings have been eliminated by offsetting the body panels at approximately the same location formerly occupied by the moldings, the offset eventually working itself over the cowl and the hood, forming an arrow head with its apex at the rear end of the radiator shell.

The upper portion of the offset panel is done in jet black, satin finish Duco. In contrast the lower panels of the body are finished in snowy white Duco. The beveled edge of the dividing line between the offset panels and the lower panels is striped with a contrasting color, green or orange, being optional. The arrow head on both the cowl and the hood is done in jet black. The hood louvres are striped in black while the entire rear deck of the car including the back of the rumble seat is black.

Equipment includes nickel plated headlights and cowl lamps of special design to conform to the line of the Diana radiator shell and hood, silver finished door handles of special design, seven-inch body rails on the rear deck just behind the gypsy curtain, two aluminum steps which afford easy access to the rumble seat, a removable tailored cape top.



Diana Eight roadster with satin finish black and white Duco. Molding has been eliminated by off-setting the body panels



Anyone who doubts the popularity of radio need only visit one of the shows which are held in different parts of the country. An example of how they "pack 'em in" is found in the crowd that attended the St. Louis exhibition, pictured above

Cleveland Police Use Radio in Work

CLEVELAND, OHIO, Nov. 27.—Jacob Graul, chief of police here, has announced that the department has adopted radio equipped police cars as an aid in the apprehension of criminals. This action followed installation and tests of radio receiving equipment in the police chief's private car. The radio equipment is to be installed in the seven other flying squadron department cars. Each of these cars will carry two receiving head sets and a loud speaker in addition to batteries and other radio mechanism. A sending station of special wave length will broadcast orders from police headquarters to the flying squads at the precincts or on the road.

"One of the chief advantages of the use of radio in the police cars," declared the Cleveland police chief, "is that it will enable us to pick up our squadrons anywhere, at a moment's notice and concentrate them to handle emergency work at a given point. It will enable us to cut down the elapsed time between the commission of a robbery or other crime and the pursuit of the criminals."

The Cleveland police plan calls for a radio head-set for use in the front seat. Another receiving head-set is installed in the tonneau of the car. A loud speaker installed under the cowl of the car and pointed toward the rear can be used for broadcasting to all passengers of the car. Tests of the police equipment showed it possible to hear clearly while the car traveled at a speed of 54 miles an hour.

The Headquarters Broadcasting Station, being equipped for sending by special wave length, will permit police to communicate from headquarters to flying squads without outside interference or tuning in by outside parties.

Collapsible Aerial

THE AERIAL made by E. D. LaSalle, 61 Washington St., Batavia, Ill., is in the form of an umbrella and contains 85 ft. of insulated wire. The feature of this antenna is that it is collapsible and can easily be erected or taken down.

Dallas Business Booms

DALLAS, TEXAS, Nov. 27.—Radio dealers in Dallas and trade territory, as well as jobbing houses, find it is not so much the interesting of a customer in radio but more of assuring him a suitable set for his money according to Hal Corey, secretary of the Dallas Retail Radio Dealers' Association. Mr. Corey says practically everybody is buying radio sets and they want something that will deliver the goods. The business in Dallas, which has been off for some time, is hitting on all tubes now. There are a score of retail establishments handling nothing but radio in Dallas, as well as ten wholesale concerns which distribute sets and parts to the entire Southwest from Dallas.

Mr. Corey said radio apparatus comes to Dallas in car lots daily. He declares that music dealers in all sections of Texas have taken on radio lines and that half of the automobile accessory dealers of the state handle radios.

According to Mr. Corey the volume of radio business done in Dallas this year will pass the $5,000,000 mark.

Cincinnati Show Success

CINCINNATI, O., Nov. 28.—After several postponements on account of conflicting events at Music Hall, the Radio Show of the Cincinnati Electric Club's radio division was finally held from Nov. 17-21. It was a great success and in the opinion of radio producers, jobbers and distributors the best radio show ever held in this region.

The success of the show was not so much in the attendance, which fell off towards the last day, but from the large percentage of buyers who were in the crowds and the numbers of orders for radio sets, tubes and general radio accessories which were taken by exhibitors. The crowd itself was not to exceed 26,000 for the five days. Radio distributors from all parts of the middle west were in attendance and numbers of jobbers large and small who represent the radio producers and manufacturers in Cincinnati and vicinity, together with an exceptionally large number of dealers who represent jobbers of the Cincinnati metropolitan district were on hand. Radio jobbers came from as far away as Boston and Canadian points and there was hardly a jobber in the five states around Cincinnati who was not in for at least a day or so.

The big attraction for the public was the mammoth radio set cabinet, said to be the largest ever constructed, part of which was used for the stage where the broadcasting was given. This cabinet was 36 feet long, 21 feet wide and 18 feet high and a part of the front panel was arranged with a dim light in the rear which gradually grew more and more brilliant until a curtain lifted and disclosed the broadcasting stage. The inner part of the cabinet was fitted with sound proof padding in the same manner as a broadcasting studio and gave the public an excellent impression of the manner in which stations broadcast their programs. Artists from the WLW, Crosley Radio Corporation, WKRC, Kodel Radio Corporation and the WSAI station of the U. S. Playing Card Company gave programs nightly and there was also an amateurs' contest which attracted considerable notice.

New Station at Hartford

RADIO is now well under way with Hartford, Conn., dealers. All indications point to a big volume of business this autumn and winter. New equipment is coming into the field and all dealers are making every effort to turn in a big volume during the winter season. The situation insofar as sales are concerned is being helped materially by the Travelers Insurance Co. which opened a broadcasting station a few months ago. WTIC hooks up with WEAF and some first calibre entertainment is promised for the winter. Dealers say this determination to hook in with New York on high class material is doing much to better the sale of equipment.

MOTOR AGE'S PICTURE PAGES

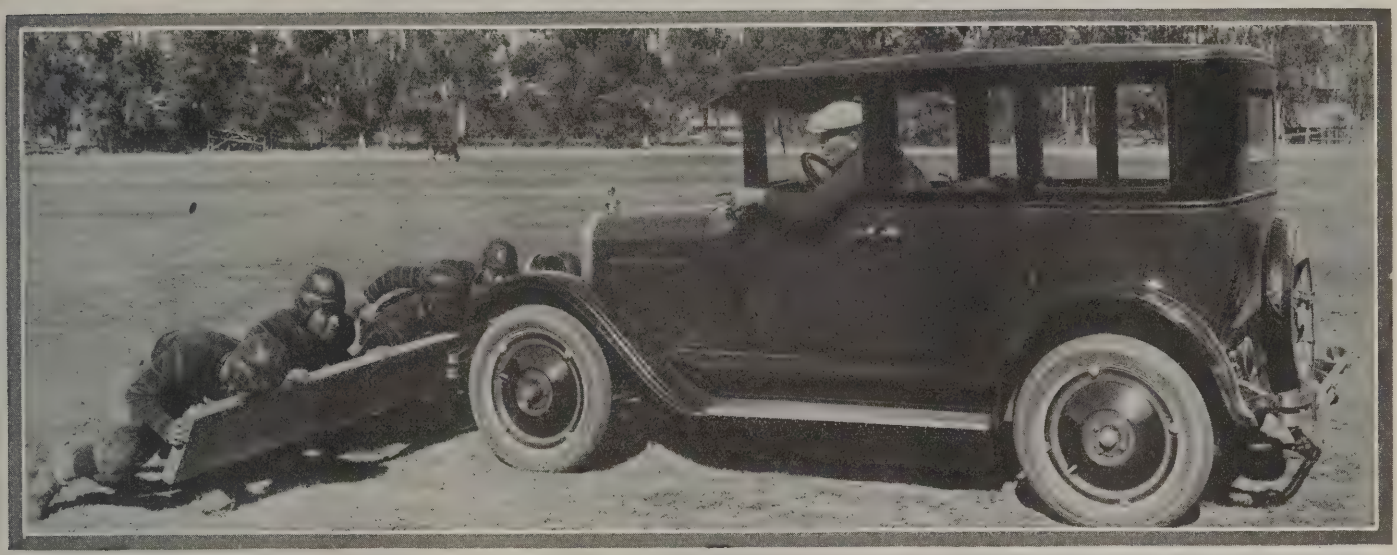


THE LAST WORD. Interiors of the new $300,000 Paris home of the Chrysler distributor for France, which also sells French makes. Upper left: American bar handsomely decorated in old English oak; upper right: View showing exhibition hall where cars are displayed in a tempting manner, with accessory gallery in background; lower left: One of the four tennis courts which are provided as an added attraction for the amusement of clients; lower right: The luxurious office of the president of the St. Didier Garage which has provided this most attractive setting for the automotive products it handles.



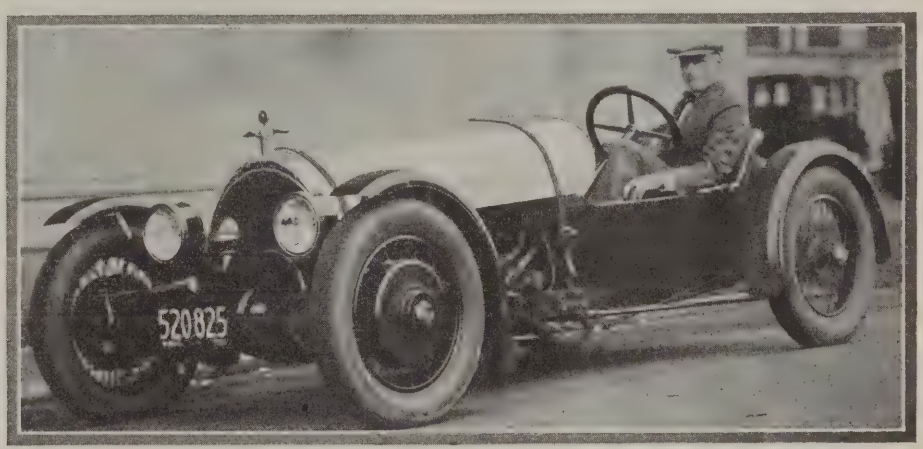
OMNIPRESENT. Helen Foster, leading lady of Educational-Lupino Lane Comedies, trying out the Ford polo car used in the Educational-Mermaid Comedy "Lickety Split."

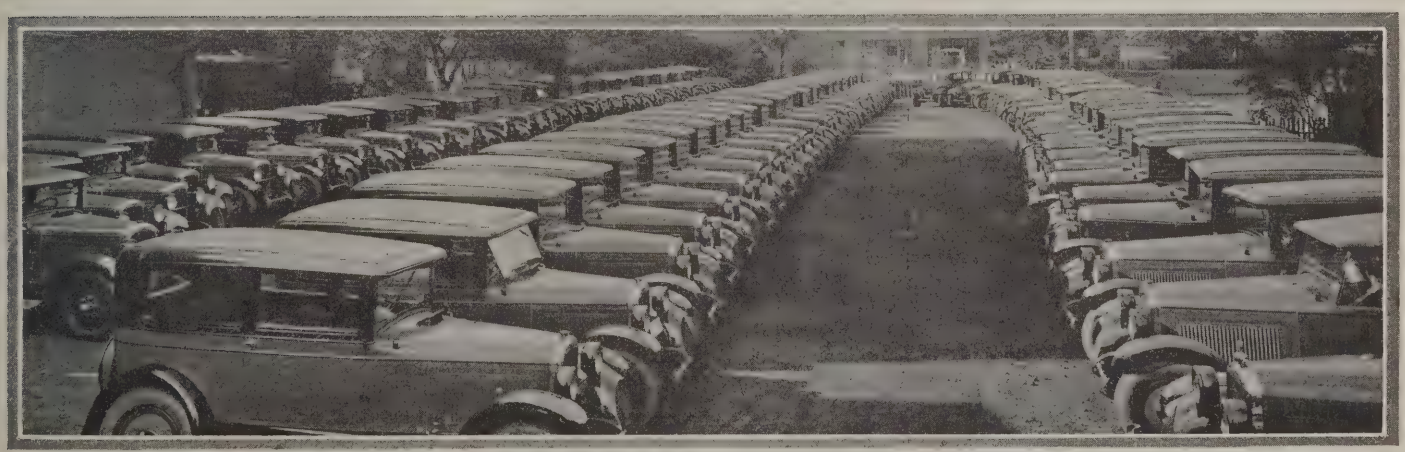
OF AUTOMOTIVE INTEREST



RESISTANCE PLUS. Coach D. Pierce, who directs the team of the Sherman Indian School, Riverside, Cal., attaches a long plank to the front bumper of a Chevrolet sedan, places the car in low gear and slowly pushes his husky linesmen down the field. This method, he says, teaches the players to dig in and to hit the line low. Now somebody page the "Four Horsemen."

A DISTINCTIVE CAR. A. A. Nichols of Waltham, Mass., freshman at the Massachusetts Institute of Technology, has designed a front-drive car in which many Ford parts are used and is being kept busy explaining its construction.





THE FRUIT OF SALES EFFORT. The Reeke Nash Motors Co., distributors in Cleveland, Ohio, recently delivered 80 cars in that city in one week. This company has found it necessary to increase its operating area to 100,000 sq. ft. of space, 60,000 of which is under roof. The photograph was taken in the immense yard back of their Euclid avenue headquarters.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING - ELECTRICAL - FLAT RATES
SHOP - LEGAL - PAINT & TRIM - ACCOUNTING

Using Extra Set of Spark Plugs on Essex

Q.—We notice in an issue of MOTOR AGE where a man in Canada had bored the head of an Essex to put in an extra set of spark plugs. We would like to know how this was done without drilling through the water jacket or disturbing the water circulation.—K. A. Miller, Box No. 1115, Brawley, Calif.

It is necessary to drill through the water jacket and put in bushings. We are giving you by separate letter the name of a man who has done considerable work along these lines and from whom you can get more detailed information.

Q.—We would like to know if it is possible to mix one pint of castor oil with eight gallons of gasoline so as to lubricate the piston and cylinder walls and yet not have enough oil to foul up the plugs. This question has reference to an Essex which has been changed for racing and on which we are having trouble due to missing and cutting out at high speed. We would like to know if there really is any value in mixing castor oil in the gas for speed.

We would not recommend this. Cylinder oil is sometimes mixed with the gasoline in accordance with your idea but for a different purpose. It is effectual in breaking in a new engine for the cylinder walls are thus thoroughly lubricated. It has the effect, however, of carbonizing the engine and plugs so that cleaning is soon necessary.

A Special Coil for High Speed Ignition

Q.—We have trouble with the missing as previously stated in spite of the fact that we have double springs on the valves and extra springs on the Delco ignition to help the points open faster. We also have a Winfield carbureter with air pressure, also a gear oil pump taken from a Chalmers.

The trouble with missing at high speed is due to the fact that the points are not in contact long enough to allow the current to build up in the coil. One way of remedying this condition would be to use an open circuit coil instead of a closed circuit. You might try an Atwater Kent open circuit coil such as formerly used on either Franklin or Hupmobile. The Franklin coil being designed for 12 volts, however, would apparently make the Hupmobile coil preferable. This coil will draw from 10 to 20 amperes with the ignition switch turned on and the interrupter contacts held together, whereas the normal closed circuit coil draws five or six amperes. This means that at low speed the points will spark very badly and will burn if the engine is operated for any length of time at low speed. Accordingly if it is necessary to operate under both low and high speed conditions it would be well to use a resistance or ballast which can be obtained from any good ignition shop and this could be connected in series with the coil. Then for high speed operation a switch could be used with wires connected to both sides of the ballast coil so that it could be shorted out for high speed operation. If there is any question about the way to connect this up we would be glad to submit a sketch giving the circuits.

Q.—We do not know whether the camshaft is a stock or special one, but we are having trouble due to the heads of the valves jerking off when the engine is run at high speed. This applies particularly when idling.

A tulip or semi-tulip type of valve should be used, preferably one made of a high grade alloy steel.

Sometimes Left Is Right

Why is it on Stromberg carbureters that you have to turn the idling adjustment to the right to make the mixture richer, but turning the high speed adjustment to the right makes the mixture leaner.—Chicago Mechanic.

The idling adjustment controls the air while the high speed adjustment controls gasoline which accounts for the opposite effect obtained.

The Readers' Clearing House

THIS department is conducted to assist dealers and maintenance station executives in the solution of their problems.

All questions are answered direct by letter, so the name and address should be given in full. This saves waiting for the answer to be published, which sometimes occurs several weeks late, depending upon the space available.

Readers' names will not be published with articles, if a request to this effect is received with the letter.

Inquiries not of general interest will be answered by personal letter only. Emergency questions will be replied to by letter or telegram.

Also state whether a permanent file of MOTOR AGE is kept, for many times inquiries of an identical nature have been made and these are answered by reference to previous issues.

Addresses of business firms will not be published in this department but will be supplied by letter.

Technical questions answered by B. M. Ikert and A. H. Packer; Legal, by Wellington Gustin; Paint, by G. King Franklin; Architectural, by Tom Wilder; Tires, by a Practical Tire Man; General Business questions, by MOTOR AGE organization in conference.

New Cars That Knock With Low Grade Gas

Q.—We have had several new Fords come back into our shop for what seems to be a carbon knock. We removed the head and found very little carbon, not enough to cause a knock, in our opinion. After this slight amount of carbon was scraped off the car ran all right for about two days and then the same knock came back. We have had the same trouble on several of the late cars and do not seem to be able to remedy it. We would like to have your opinion as to the cause and remedy.—Hugh Gordon, Healdton Motor Co., Healdton, Okla.

We believe this is a piston slap caused to some extent by present day gasoline which has a tendency to detonate. We would suggest your trying special fuel of some sort, either benzol or high test gasoline or some of the doped fuels which are on the market. If these overcome the condition it shows that detonation is partially responsible. Another thing to do would be to check up the clearance between the pistons and cylinders with a thickness gauge. If this is not appreciably over .004 inches there is nothing you can do unless you wish to try an inner ring in the second and lower ring groove. For example on Willys-Knight engines using aluminum pistons where there would otherwise be a tendency for the piston to slap when cold an inner ring is used to prevent this occurring.

Loose Bearings Cause Oil Pumping

Q.—Could loose main and connecting rod bearings on a model 59 Cadillac cause excessive consumption of oil. The cylinder blocks have been rebored and new pistons and rings fitted. Piston and rings were given the proper clearance and good material was used. Reboring was done by an expert machinist with expensive grinding equipment. The oil gauge shows a low pressure reading.

Loose bearings will cause excessive oil consumption because too much oil is splashed to the cylinder walls and will get by in spite of pistons and rings. On Cadillac cars the connecting rod bearings cannot be taken up in the usual manner. This statement applies to the blade rod. To check the operation of the oiling system, it is often considered desirable to use oil under pressure and connect from a tank to the oil pipe of the engine so that oil flows from an outside source instead of from the regular oil pump. The lower pan can then be removed and a mechanic under the car with a light can see how fast the oil is dripping from the various bearings. The oil should drip slowly from each bearing and should not come in a regular stream from any one.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

"Get Competitive Bids When You Build"

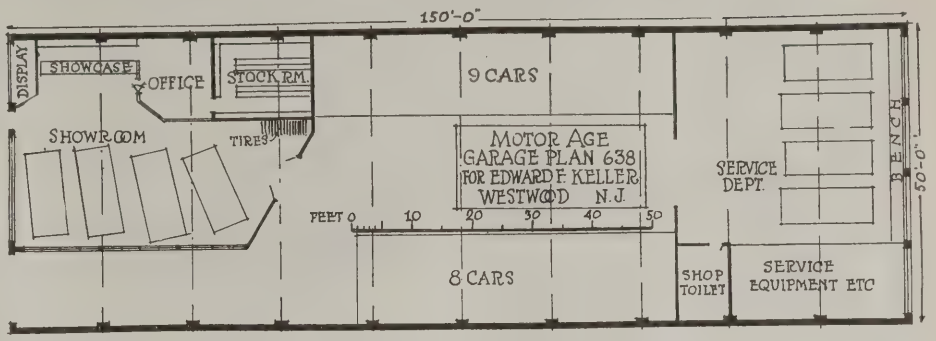
Q.—we are planning to erect a garage containing showroom, garage and storage space on a lot 50 by 150 with gas tanks in front. We would appreciate any suggestions you might make for a proper proportioning of building as well as arrangement in order to utilize the space to the best advantage. The owner of the land has a plot 100 by 150 and suggested that if he could put up one large garage on the plot, selling one half to us and the other half to someone else he could build and sell them much cheaper. The plot is on a main road and faces west. We planned to show accessories in the front of the showroom and have the building set back so that gas customers could drive in off the street. Any suggestions would be greatly appreciated.—Edward F. Keller, Westwood, N. J.

We are enclosing a pencil sketch showing a layout for your proposed garage. We would not favor a filling station in front of this building for the reason that a good filling station cannot be built on so narrow a space. Only the small cars could make the turn and get out without backing, and it would be especially undesirable with a front entrance as you must have. You should either get a corner lot or one that is 60 to 70 feet wide.

Savings Effected Through Bids

Regarding the lower price, by having two buildings put up together we do not believe there is much in this as there would be practically no saving except possibly a party wall and the cost of building runs about so much per square foot. The best way to make a saving is to get several competitive bids and then take the lowest. You will be surprised to find that there is sometimes a difference of nearly 50 per cent in the estimates of different contractors, even when bidding on the same specifications.

There is not much choice in the layout of a building on a lot of this sort, the display space here being very limited and if it is at all possible we would advise you as above, to get a corner lot, and then you can have an entrance on the side and use the whole frontage and part of the side to display new cars and accessories. A side street always offers better parking facilities and less congestion around the entrance. If there is a good wide alley behind this lot it would help out as then you could get along without the front entrance using the whole frontage for showroom. You could place the shop just back of the showroom where it would be handy to the stockroom and use the rear part for garage purposes.



A building of this size requires material in large enough quantity to insure prices as low as would one double the size

Not Enough Oil

Q.—We have a few questions regarding a 6-46 1917 Paige using a Continental 9N engine. This engine gives perfect satisfaction only for the fact that it will destroy a rod bearing about every 5,000 miles or so. It has done this five times in 25,000 miles, two years driving. The bearings do not seem to get hot and run as if dry of oil and the motor has plenty of oil and the pressure on oil gage is from 2 to 5 pounds each time. The bearings seem to crack up and fall out in pieces and does this in about one mile. The trouble has never happened to the same rod the second time.—Wilson W. Culver, 8 Alvena Avenue, Cortland, N. Y.

We have taken this question up with the local Paige-Jewett maintenance organization and they are of the opinion that the connecting rod bearings do not have sufficient dip in the oil. With each connecting rod at the bottom dead center position the scoop on it should extend into the oil ⅛ of an inch. If the car is to be used for driving at high speed for any length of time it is advisable to increase its dip to ¼ of an inch. The increase in dip may be secured by blocking up under the sub-base inside of the regular oil pan or crankcase lower half. Place a gasket of the necessary thickness between the sub-base carrying the trough and the regular oil pan and then gage the amount of dip.

Increase the Dip

Q.—Would it be practical to install a Dodge Brothers oil pump on front of the timing gear case and drill the crankshaft for pressure lubrication? This engine does not smoke or use too much oil nor does it ever run hot. I drive the car from 35 to 40 miles per hour most of the time.

It will be possible to install a different pump and to drill the crankshaft but you will find that the cost of drilling the shaft alone would run in the neighborhood of $40. Our suggestion is that you increase the dip and that you make sure that the connecting rod lower bearing shells are properly fitted to the rod and cap before they are fitted to their respective crankpins. The fact that the engine does not smoke strengthens the impression that the rods do not have sufficient dip. When checking the oil dip we would advise that rods be checked individually so as to get it the same all over.

AUTOMOTIVE FACTS OR FABLES

Q.—I have heard it claimed that leaky valves will have a tendency to cause a motor to pump oil. What is the theory behind this conclusion? — West Coast Reader.

Leaky valves will cause poor combustion. Poor combustion may fail to burn the oil which works past the pistons and consequently may make it appear as if an abnormal amount of oil is getting into the combustion chamber.

Q.—Why should a cool running engine be hard on an exhaust valve?

With a certain carbureter setting the mixture will be leaner when the engine is cold. A lean mixture burns slowly and is still burning when the exhaust valve opens. For this reason and because the flame is an oxidizing flame there is more tendency for the valves to burn when the engine is cold.

May Be Poor Ignition

Q.—It is claimed by the makers of a certain motor car that an air leak in the exhaust manifold system, as for instance at the joint between the exhaust manifold and the exhaust pipe will case popping back in the muffler. Why should this be so?

This does not seem to be a possibility unless poor ignition or some other similar condition is permitting raw fuel to get into the muffler. If this is the case the addition of air might make it combustible and then additional flame coming from one of the cylinders might cause an explosion in the muffler. If this theory were universally correct there would be explosions in the muffler when the muffler cutout is operated.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Here's the System on Spiral Bevel Adjustment

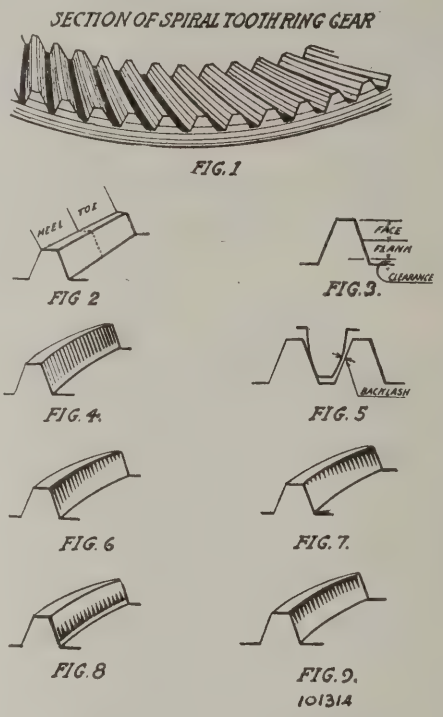
Q.—I am having trouble with a Jewett 1924 model differential. I have put in a new gear but cannot get the noise out of it. When I step on the gas when the car is moving it gives a singing noise to it and when a let up on the throttle the noise is gone. Have tried to get this noise out but did not have very good luck. I know the adjustments on it but I do not know if it is too close or too far apart to make the singing noise and when I get the singing noise out it makes a noise when the car slows up.—North Dakota Reader.

If at any time the rear axle has run without oil it may be that wear in the bearings has occurred so that a perfect adjustment is very difficult to get. If the axle is taken apart the bearings should be laid on a surface plate to see if there is any movement of the inner race possible. That is, there should not be any play sidways as an attempt is made to move the inner race back and forth. If the bearings are o. k. then the metal pinion and the metal ring gear should be rolled, one on the other to note the position which the pinion takes and to see whether it sticks or runs freely. The pinion and gear should then be assembled in the axle as nearly as possible in the same position, allowing from .005 in. to .008 in. backlash between them.

Place the axle under the car and at the same time paint the gear teeth with a fine coat of white lead. After this is done jack up the rear wheels and start the motor, throwing transmission into high gear, also throw in your brakes, which must be equalized so you get about the same load on each wheel. This will wipe the paint off the teeth. You may find a condition as illustrated in Fig. 9 in the sketch on this page. The shaded portion represents the contact of your gear. That means that the load is pulling on this portion of the teeth. In that case, move your pinion toward the gear, until the pinion wipes off the paint as shown in shading on Fig. 4.

Fig. 4 illustrates the most desirable condition where the contact is slightly heavier at the toe or small end of the tooth than it is at the heel. This is desired, due to the fact that, when the load is applied, the pinion has a tendency to lift and apply a greater load at the heel or large end of the tooth. If you have a contact as illustrated in Fig 8 or where the load comes on the base or flank of the gear tooth, it means that the pinion is too far in and should be backed out. Gears set up in this way, are sure to be noisy. If the contact is as shown in Fig. 8 the pinion is too far in and if the contact is as shown in Fig. 9, it is too far out.

If the contact on tooth appears as shown in Fig. 6, it means there is too much backlash between ring gear and pinion. This requires moving the ring gear toward the pinion and if this is not done, the extra heavy pressure at the large end of the tooth will cause it to break off. If contact is too heavy at the small end as shown in Fig. 7, the small end of the tooth will eventually break off.



The way the paint rubs off shows whether axle gears are correctly adjusted

AN S. O. S. FOR GAS MASKS

Q.—We have a number of Dodge cars, screen body models. The fumes from the exhaust come up from the rear and cause the drivers to have headaches. We are sure these fumes come from the rear of the car for this reason; if the rear curtain is down the driver is not affected. It is not caused by back pressure through the breather pipe as we have used new rings and the engine has been rebored. It seems to be the fumes from unburnt gasoline, yet the car goes about nineteen or twenty miles on a gallon of gas. We have tried all makes of carbureters, but the trouble has not been entirely eliminated, although one make of carbureter eliminated about forty per cent of the fumes and increased the mileage.—Louis Wanner, 251 Main St., Garfield, N. J.

The fact that one carbureter improved the condition would seem to indicate that burnt gas and not raw gas is producing the fumes. One suggestion is to squirt kerosene into the air intake of the carbureter so as to produce smoke. Then observe the exhaust outlet tracing from the manifold through the exhaust pipe to the muffler and at both front and rear of the muffler to see if smoke is coming out at any point. Observe especially the connection between the manifold and exhaust pipe and between the exhaust pipe and muffler. If there is no evidence of leakeage then it might be advisable to put a flexible extension on the tail pipe of the muffler so as to carry the fumes farther away from the car.

Speed Data for Speedometer Testing

Q.—What are the revolutions of a speedometer at 10—25 and 50 miles per hour or about three speeds on popular makes of instruments such as Stewart, North East, Johns Manville, A-C, Warner, Jones, Waltham and Van Sicklen? I wish this information for checking speedometers on the car as I will build a rig with variable speed and master tachometer and connections for the different heads without removing from instrument board. We are often asked to do this so that they may be sent in for correction if necessary.—Auto Electric Shop, Cedar Rapids, Iowa.

On receipt of your letter, various circular letters were sent out and the following information was thus made available.

Speedometer	R.P.M. at 60 M.P.H.
Corbin	2560
Standard (Cent. type)	2000
Standard (Magnetic type)	1000
Stewart-Warner	1009
Waltham	1008
A-C	1008
North East	1026

As these figures are given for a speed of 60 miles per hour you can get the other speed by proportion. For example at 30 miles an hour it would take just one half of this speed or at 10 miles per hour, 1/6 of this speed.

ENGINE CONTINUES TO FIRE

Q.—What would case a Monroe motor, engine No. 15333, car No. 15361 that has been completely overhauled to fire several times after the ignition switch is turned off. The water circulation is o. k. because the water never boils. This motor is fitted with a Zenith carbureter, both the low and high speed jets being size 90. The timing is o. k. as the motor seems to have plenty of power.—North Side Auto Repair, 2110 N. Michigan St., Kokomo, Ind.

If the ignition switch operates properly it will cut off the battery current and will prevent the ignition coil from firing. Then continuation of firing in the various cylinders will indicate overheating. A projecting piece of metal in a cylinder will cause this condition for it gets red hot. Carbon will also cause this condition. Overheating is further aggravated by a lean mixture and as this carbureter requires a No. 90 main jet and a No. 110 compensating jet, we think that this may be all or part of the trouble. The other specifications are No. 20 choke, No. 50 idling and No. 38 seat. We would also recommend your checking the valves when the engine is hot to make sure you have clearance between the valve stems and tappets.

Clearing Up Electrical Troubles

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Making a Coil Testing Outfit

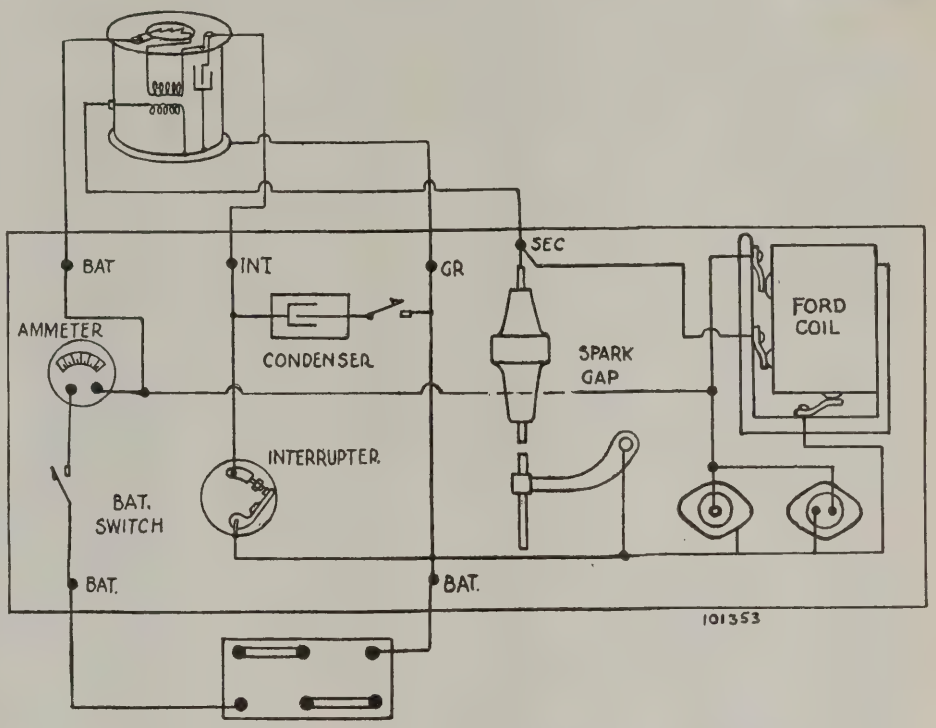
Q.—Will you kindly give me some information as to how to make a home-made tester for a high tension non-vibrating coil. I want to be able to test the coil and also the condenser and also wish for a tester to test Ford coils and spark plugs, also single and double contact lamp bulbs.—Frank Vote, 1359 Palace Street, St. Paul, Minn.

We are showing an illustration of an ignition test board which you can easily construct. It requires the center portion of a spark plug, an ammeter and an interrupter. If you can drive the interrupter by means of belt from a small motor, or by means of a horn motor or by some such method, it will be better than turning it by hand, for you can make an endurance run on any coil which seems to be giving trouble. In the illustration we have shown an ignition coil connected and you will notice that it is necessary to know what is inside of the coil before you can properly connect it.

The coil shown has a condenser in it and the common connection of the primary and condenser should go to the Int. terminal. The other end of the condenser should go to the GR terminal and the other end of the primary which in this case comes from the ballast resistance on top of the coil should go to the Bat. terminal. Where there is a condenser inside the coil the condenser switch shown on the test board is left open, otherwise it will be closed. The spark gap is shown as being adjustable, so that you can determine the greatest distance the spark will jump and also set the gap at ⅛ or $\frac{3}{16}$ inches for an endurance run. At the right on the test board there are shown two sockets, one for single contact and the other for double contact bulbs.

One Test At a Time

There is also shown at the right a Ford coil setting in a wood frame which has three spring brass clips so that contact is made to the three terminals of the Ford coil. When testing such a coil no other ignition unit should be tested at the same time. You can test a spark plug by opening the gaps wide and putting the spark plug in parallel with the gap. For a good test however, a piece of mica should be put in between the points to see if the spark will jump a greater distance than the normal point setting. Another way is to bend the points apart to ⅛ inch or more. Such a test board may also be used for testing a high tension magneto armature. Under these circumstances the interrupter is removed and the high tension slip ring connected to the Sec. terminal. The terminal marked Bat. is then connected to the magneto interrupter screw which is replaced in the end of the armature shaft while the GR terminal is connected to the frame of the magneto armature or to the end of the shaft.



An ignition testing outfit may be made up in this fashion. The interrupter is preferably motor driven. Provision is also made for testing bulbs and Ford coils

The Cutout Worked With a New Armature

Q.—I would like to have you explain something I encountered with a common Ford generator. With the engine running at a fair rate of speed and with normal wiring the ammeter did not show any charge. Taking the wire that is connected from the ammeter to the cutout and connecting it from the ammeter to the generator terminal the indication was from 10 to 15 amperes charge with the engine running at fair speed. However, with the normal wiring, that is the wire put back on the cutout and the cutout points closed by hand the ammeter would show a reading but under no conditions could I make the generator current flow from the ammeter without closing the points by hand. The various cutouts that I used were all in first class condition and they worked all right after a new armature had been put in the generator. I would like to have this condition explained thoroughly. W. R. Moore Garage, Benjamin, Texas.

When the cutout points are not closed by hand it is necessary for the generator to build up without having its field excited from the battery. When a generator has been stopped there is but little magnetism left in the field poles, so that when the armature first starts to turn it generates a very small voltage. This may be only half a volt or less and it is necessary for this small voltage to send current from the armature to the brushes and through the field winding in order to strengthen the magnetism and generate more voltage.

Accordingly if the brushes are oily or if there is a poor connection in the field circuit or if the wires in the armature or commutator are poorly soldered so that there is a high resistance there will be very little preliminary current flow and the magnetism may not be increased enough to enable the generator to build up. As you overcame the condition by using a new armature, we will assume that the generator had been overheated at some time and the solder had been thrown out from the commutator bars, to such an extent that a high resistance existed. When you closed the cutout points by hand you allowed enough current from the battery to flow to the field winding of the generator to enable the machine to generate 6 volts instead of ½ volt or less, and this higher voltage was enough to start current through the shunt field winding and keep the generator operating after you had once primed it. A thorough test of the old armature on a growler combined with the use of phones to see if there are open circuits in the armature might check up the theory we have advanced.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Selling Cylinder Refinishing Jobs

EVEN though the shop has flat rates for refinishing cylinders, fitting new pistons and rings, etc., it sometimes is quite a job to sell the customer on the necessity of doing such work.

One shop gets around this by having on hand an old cylinder block cut away to show the interior of the bores, valve mechanism, etc. In one of these bores is left an old piston, rings, valves, connecting rod and so on, showing the sloppy fit of the parts.

In one of the other bores, the latter is reground, a new piston and rings, valves and connecting rod are fitted to show the customer exactly the difference between a cylinder in good condition and one in bad condition. The foreman of this shop says no amount of talking will convince a customer half as much as such a cutaway cylinder block.

The Little Things That Count

Requisitions for parts are a necessity, of course, but it can be overdone. Many shops have found it unwise to have the men make out requisitions for small parts like cotter pins, washers and certain bolts, because the work involved in handling the requisitions is not warranted by the cost of the part.

But, it pays to watch certain things. For example, it is wasteful to hand a mechanic a full sheet of emery cloth when he asks for it. Generally a piece 4 in. square is all he needs. Have it cut into squares that size.

Books on Flat Rate

Meriden, Conn.

To the Editor of MOTOR AGE:

Enclosed please find check for 50 cents for MOTOR AGE's Flat Rate Manual. Can you inform me who publishes flat rate books for Dodge Brothers motor cars and how I can buy one; also who manufactures special tools for Dodge Brothers cars. I am going to specialize in Dodge Brothers and Ford repair work. Can you suggest where I can get some advertising material someone has used successfully in a direct-by-mail campaign advertising flat rates. Where can I purchase a book with instructions covering brake adjustments on new types of cars? Any material you will send me will sure be appreciated. Please do not be offended at my battery of questions as I have been saving these up for quite a while.

JOHN DE FRANCIS,
Joe's Brake Service Station.



Enclosed cars, especially those which operate in regions where roads are dusty, accumulate quite a bit of dirt and foreign matter on the upholstery. This is difficult to clean properly unless facilities are at hand. Many service stations have a fixed price for cleaning the interior of closed cars and make use of a vacuum cleaning process

We do not believe any concern outside of Dodge Brothers publishes a book listing flat rate operations on that particular make of car. Usually the manufacturer of the car compiles the flat rate manual pertaining to his product. However, the MOTOR AGE's Flat Rate Manual sent to you lists practically all the operations you will be likely to encounter in the servicing of the Dodge Brothers car.

MOTOR AGE has published from time to time reproductions of cards, booklets and letters sent out by various concerns to advertise their flat rate service. We cannot direct you to any particular concern and practically all such advertising is prepared locally. There really is nothing very difficult about preparing it. What people are interested in is "what will it cost." To that end you could prepare a list of typical operations, such as valve work, brake adjustment and relining, lubricating chassis, rebushing front axle knuckles and tie rod yokes, etc., and set the price after them. The definite charge is what the motoring public likes. Give them that and they will do the rest.

MOTOR AGE has within the last few weeks run a series of articles pertaining to the adjustment of the brakes on the late models. The brake manufacturers have manuals covering the adjustment of their brakes. We are sending you their names by letter and also the names of concerns making special tools for servicing Dodge Brothers cars.

MOTOR AGE'S FLAT RATE FORUM

No. 43

FLAT RATES FOR DODGE BROTHERS CLUTCH OPERATIONS CONT.

(Continued from Dec. 3 issue)

Manufacturer's Official Designation		Time
3119	Clutch driving disc pin (on flywheel), remove and install one	14 hrs.
3119-A	In addition to Job No. 3119, to remove and install each additional flywheel pin, add	½ hr.
3120	Driven disc pin (on spider), remove and install one	7 hrs.
3120-A	In addition to Job No. 3120, to remove and install each additional clutch spider pin, add	½ hr.
3117	Clutch pressure plate and hub, remove and install	7 hrs.
3106	Clutch driven spider and shaft, remove and install	7½ hrs.
3108	Clutch pedal shaft, remove and install	2½ hrs.
3107	Clutch release fork shaft, remove and install	4 hrs.
3109	Clutch shaft end play, remove	7½ hrs.
3115	Clutch spring, remove and install	7 hrs.
3105	Clutch, wash with gasoline and treat with rosin and turpentine	1½ hrs.
3110	Clutch release bearing grease tube assembly, remove and install	1 hr.

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Oakes Water Pump for Fords

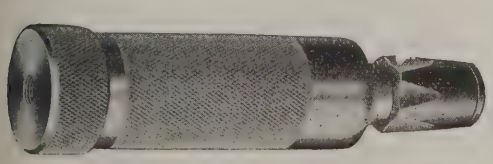
A CIRCULATING water pump for Ford cars and trucks which the makers recommend as being thoroughly efficient and dependable is being manufactured by the Oakes Company, Indianapolis, Ind. Installation is said to be easy as well as adjustment, no special tools being required for either operation. The regular Ford fan belt and hose connections are used. It is said that the pump operates at the proper speed at all times with consistently correct pressure while the heavy construction and ample internal clearance make it impossible for foreign matter or ice particles to clog or injure the pipe. List price, $5.



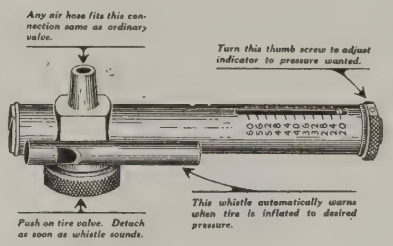
Oakes Circulating Water Pump for Ford Cars and Trucks

Dot Compressor Adapter

EVOLVEMENT of an adapter which converts any make of service compressor into a Dot compressor is announced by the Carr Fastener Company, 31 Ames Street, Cambridge, Mass., manufacturers of the Dot High Pressure Lubricator. An eight-inch pipe thread is tapped in the end of a standard Dot lubricator for inserting nipples of other makes of lubricating systems. The price complete to service stations is $3.



Dot Compressor Adapter



Clymer Automatic Tire Gage

CLYMER Motor Products Company, Denver, Colo., is making a new type of tire gage the chief feature of which is that it registers the air pressure as the tire is undergoing inflation instead of after inflation has been accomplished. This instrument, known as the Clymer Automatic Air Gage, is carried either in the pocket or tool kit and when inflating a tire is attached between the tire valve and the air hose so that the air passes through the gage as it enters the tire. Another interesting feature is a signal whistle which warns the user when the desired pressure has been attained. Before inflating the pressure desired is set with a thumb screw indicator and when the proper pressure has been reached the air supply is shut off automatically—and the whistle is heard. This gage is packed in a small leather pouch, the outfit weighing 15 ounces. The instrument is five inches long and nickeled and said by the manufacturers to be unfailingly accurate. Retail price, $2.50.

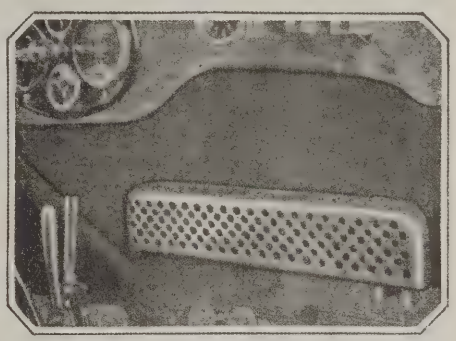
Piston Pin Retaining Springs

PISTON pin retaining springs for car and truck engines requiring such springs are now available in labeled, packaged lots from the G-H Tension Ring Co., Inc., Baltimore, Md. The retaining springs are packed in labeled boxes containing 100 springs and can be obtained either in packages or in a counter display carton containing an assortment of packages of each of the 27 different numbers.

Additional Descriptions Will Be Found On Following Page

Kingston Universal Car Heater

THE Kingston Universal Car Heater will fit and heat any car according to the Kokomo Electric Company, Kokomo, Indiana. It also is pointed out by the makers that the heater may be installed almost anywhere in the car. One of the popular installations is on the vertical dashboard where the heat first warms the feet of the passengers in the front compartment, then circulates throughout the vehicle. Just as handily however, it is said, the heater may be installed in front of either the front or rear seat or behind the front seat. The Kingston heater has an exceptionally large radiation surface, it is said to be gas-proof and also that the valve is positive in action and will not leak. The list price for this heater is $8.50, including eight feet of flexible tubing.

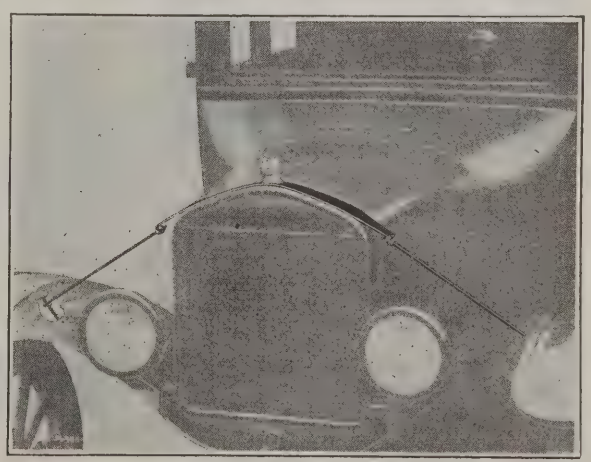


Kingston Universal Car Heater

Oakes Fender Brace for Fords

Cut Shown Below

ELIMINATION of fender rattle and vibration and effective fender protection can be realized through use of the Oakes Fender Brace for Ford cars and trucks, according to the Oakes Company, of Indianapolis, Ind., the manufacturers. Built of spring steel and finished in glossy baked enamel this brace is declared by the producers to be strong enough to withstand road shocks, very durable and neat. It is easily and quickly installed. List price, $1.50.



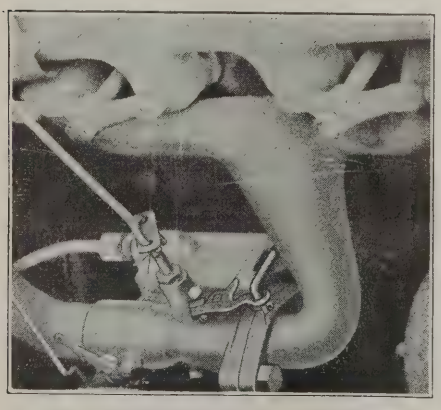
THE MARKET'S NEW OFFERINGS

Accessories -- Equipment — Supplies

Continued from page 29

Model 229-A Ford Carbureter

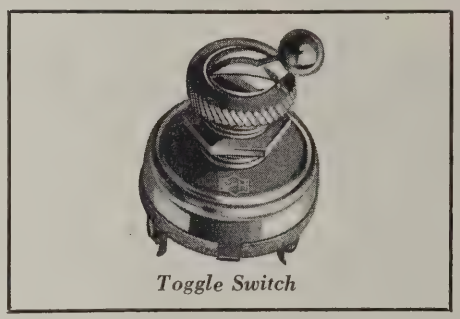
AMONG the new products of the Stewart-Warner Speedometer Corp., Chicago, is Model 229-A Carbureter for Fords. This is a replacement for the regular Ford carbureter unit and it is said to incorporate a number of highly valuable features which contribute to increased power, smooth running, easy starting, improved acceleration and diminished consumption. The carbureter is installed the same as the original unit. Acceleration from low speed is made powerful and positive through the aid of a fuel passage arrangement whereby the mixture is automatically enriched to a suitable amount to secure strong response on opening the throttle. While a single main adjusting screw controls the fuel flow at all times over the whole range of operation a supplementary adjustment screw permits of setting the idling mixture independently of the main needle. This permits the setting to be such as will give maximum power at all points, without getting the mixture too rich for idling. The only working parts in this model are those in the float mechanism which have been built into a unit with the float chamber cover to facilitate removal and inspection. The whole float chamber is readily dismounted without removing the carbureter. The fuel passage upon which the main adjusting needle seats is made of a size that prevents the operator from making the mixture much too rich even if he should open the needle several turns beyond the position giving the best all around performance.



Model 229-A Carbureter for Fords

Fits 1926 Fords

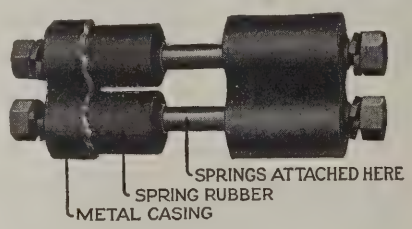
ANNOUNCEMENT has been made by the W. H. Thomas Mfg. Co., Spencer, Iowa, that the Improved Bull Dog Foot Accelerator fits the 1926 Ford models as well as all previous Ford models. The company says that the change in the brake pedal design on the new Ford models makes operation of the Bull Dog accelerator still easier and more comfortable.



Toggle Switch

Powell Rubber Shackles

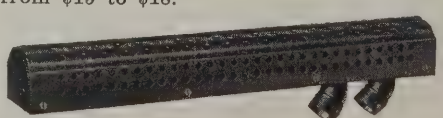
THE Powell Rubber Bushing Co., Utica, N. Y., is manufacturing rubber shackles for Ford cars. These are so made that all weight of the car rests on bolts that go through 16 rubber bushings. The rocking of the springs is taken up by the twisting of the rubber. The manufacturers claim that they can be attached in 20 mins., and that the riding qualities of the car will be greatly improved. List price $17.50 per set of four.



Powell Rubber Shackles

Rail-Type Heater

A NEW Rail-Type Heater, made by the Stewart-Warner Speedometer Corp., 1826-52 Diversey Boulevard, Chicago, is built in three models, designed for easy installation on all types and sizes of cars. Model 268-A is 26 in. long by 3¾ in. wide and is adapted to cars of large and medium size. Model 268-B is 22 by 3¾ and for smaller cars. Model 268-C is 22 in. by 3¾ and is designed especially for Fords, with a special valve for Ford installation. The entire heating unit is installed above the floor, utilizing all the heat. The heat is controlled from the instrument board, the control arrangement communicating with a valve which can be opened to any degree. The heating element is of drawn steel which heats quickly. The valve is gas tight and can not jar loose. Prices range from $15 to $18.



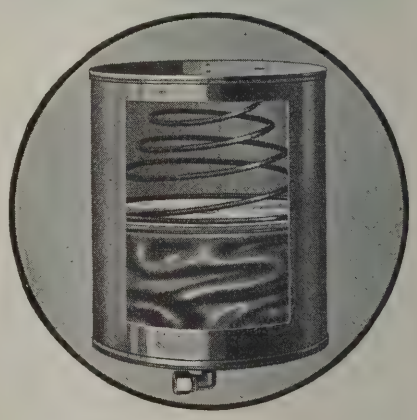
Rail Type Heater

Cutler-Hammer Toggle Switch

MOUNTED on the dash the Cutler-Hammer Toggle Switch controls such circuits as the spotlight, parking lights, courtesy lights, dome lights, running board lights, electric windshield cleaners, etc. The product is made by the Cutler-Hammer Mfg. Co., Milwaukee, Wis. The toggle lever actuates a large fan-shaped make-and-break wiping contact giving smooth, quiet operation. Ease of operation, a one-hole dash mounting, a large fan-shaped wiping contact, sturdiness and widely spaced terminals are the distinctive features claimed for the device by the producers. The entire mechanism is enclosed in a dust-proof cover, and the metal parts are attractively finished in nickel. Made in two sizes of stem, $\frac{5}{16}$ in. and $\frac{9}{16}$ in.

Alemite Radiator Condenser

IN the Alemite Radiator Condenser, a product of the Bassick Manufacturing Company, 2650 North Crawford Avenue, Chicago, is found a salvaging device which is said to hold to a minimum the expense of supplying alcohol solutions in winter and to be effective in conserving the water supply in both winter and summer. The condenser is attached to the overflow pipe of the radiator catching, condensing and thereby "saving" fluid and fumes that otherwise would be lost by evaporation from the circulating system. After condensation the solution is returned to the radiator by the pressure of a coil spring which tends to empty the container. With this appliance in use the makers say one filling of alcohol solution will last all winter for efficient service. The Alemite Radiator Condenser is 8¾ in. high by 6½ in. wide and may be installed on the frame of the car or on the cowl dash under the hood. The retail price east of the 100th degree meridian is $6.50 and $6.75 west.



Alemite Radiator Condenser

EDITORIAL

Tax Cut in Sight

THE industry seems to be pretty well agreed upon what it expects to get from Congress in the way of tax reduction. The bill as reported by the Ways and Means Committee of the House provides for reduction of the tax on passenger cars from five per cent to three per cent of wholesale price. On the basis of experience the first half of this year that means an average saving of $11.60 on every passenger car sold. Of course in practice it will be more on some cars and less on others, depending upon the price. But the important thing is that it is a substantial reduction and it is equivalent to a price reduction.

The industry was inclined at first to carry its fight for complete elimination of the tax to the floor of Congress, but a careful survey of the situation showed this probably would be unavailing. The industry, therefore, has agreed to accept what is offered it and in return the Ways and Means Committee has provided a way for dealers to be reimbursed for the difference between the old rate and the lower rate on all cars bought by them before the reduction becomes effective but still on hand at that time.

Although the passenger car must continue to bear a tax burden, all other branches of the industry are to be given complete relief. Tires and accessories will be tax free so far as the Federal Government is concerned and industry will be given an impetus that ought to swell income tax receipts.

A Christmas "package" holding an automotive gift will be much more fitting this year than one of the wobbly kind from the Old Crow reservation.

At Worst—A Bad "Spot"

FARM prosperity, which is regarded by economists as an important element of general industrial prosperity, seems to be involved somewhat in arguments as to the effect of a slump in the corn market. The situation is not serious enough to warrant any national uneasiness although it stands to reason that if a great proportion of the farmers of Iowa and other states are to check out losses on their 1925 corn a regional lowering of farm buying power will result.

Just where the Iowa farmer stands financially on a comparative basis is a point on which authorities do not agree. On the one hand we hear it said continuance of the present low price level will put the Iowa corn farmer considerably in the hole, while again it is advanced that this largest corn crop in the history of the state will produce an income 10 per cent greater than that realized last year. If that 10 per cent means "net" the situation manifestly is not so bad as it has been reported but if it means that the gross income is 10 per cent greater—more or less of the excess must be charged to the cost of the larger operations.

It is difficult to say, therefore, what the comparative status of the corn farmer is. We can only hope that he will be able to find his way out with a compensating return.

Automotive interests of the Mid-West are watching the situation but they are not worrying. Leading bank reviews of business conditions see nothing in the Iowa situation to cause disquietude or stop the march of general national prosperity. Mail order houses established records in November and expect December to set new marks—which would seem to indicate that the nation's rural dwellers, on the whole, have surplus money. At worst it would appear that the Iowa corn situation is simply a bad "spot" in a picture which generally is good and inspiring.

Sullen service never brought a customer back—unless to kick.

Association Merger Rejected

BEHIND the action of the Motor and Accessory Manufacturers' Association in rejecting the proposed merger with the Automotive Equipment Association appears to be the desire of the members of the first named association to continue its identity as a group composed exclusively of manufacturers. The Automotive Equipment Association has both manufacturers and wholesalers as members and has been unusually successful in bringing about cooperation of these two branches of the industry which are naturally somewhat inclined to view each other with a certain amount of antagonism. Making them realize their mutual dependence in the struggle for business advancement has been the great work of the A. E. A. On the other hand the M. & A. M. A. has performed a valuable service for the industry in promoting the efficiency and standing of a large manufacturing group. It is to be expected that both associations will continue as strong and influential groups in the respective fields.

When an automotive merchant sees a new competitive product in service he can mumble huskily to himself: "Someone else—has asked 'em to buy."

Factories Reduce Output for Inventory

Sales Continue on Good Basis for Time of Year

Dealers Stocking New Cars Steadily Following Assurance of Rebate on Taxes

NEW YORK, Dec. 9.—With many factories shutting down this month for the annual inventory and for various changes in machinery and plant layout it is likely that the production total of cars and trucks will be the lowest since early in the year, and well below the total of 379,300 units which was turned out in November, marking a new record for that month. Sales continue on a satisfactory basis, taking the country as a whole and considering the season of the year.

Dealers are stocking steadily with new cars. Their fears that they would have to absorb the difference between the old tax rate and the new one that is expected to be effective in March or April of 1926 have been dispelled by the action of the House Ways and Means Committee in deciding to make the reduction cover cars in stock when the new schedule goes into effect.

The production total for the year to date, 3,997,954 cars and trucks, exceeds the record total of 11 months in 1923 by 5.6 per cent. It is thus likely that even with curtailed output this month the total for the whole year will be from 20,000 to 50,000 higher than the previous record-breaking year.

Looking a little ahead, the favorable indications for the new year are the low prices and attractive quality of the cars now in production and the signs of industrial advance that apparently augur well for general prosperity. On the other side of the ledger are over-supplied used car market; a gain in repossessions of cars sold on time—which may, however, be merely seasonal; the possibility that too large stocks of new cars may be built up before the spring selling season begins, and the possibility that the price cuts and liberal selling terms of 1925 may have anticipated the normal 1926 market.

EXPORT SCHOOL HELD

WASHINGTON, Nov. 21.—A preliminary study of export and import conditions in foreign countries and the methods of the U. S. government in assisting the automotive industry in its acquisition of foreign automotive trade, was the subject of a two weeks course just completed by nine representatives of the Dodge Brothers Motor Company, who will leave the United States next week for foreign offices. Those here and their foreign territories were: H. G. Rohns and W. W. Stillson who will go to Calcutta; S. V. Schrappacasse, to Johannesburg; G. E. Blomquist, to Buenos Aires; William Childs, to Panama City; G. H. Krogh and R. Cook to Hamburg; T. Holst to Paris, and F. J. Yhuse to Shanghai.

NEW AUBURN DEALERS

AUBURN, Ind., Dec. 5.—Below are listed new dealers who have recently been added to the Auburn organization:

Service Garage, St. Augustine, Fla.; John Tobin, Augusta, Ga.; J. C. Kimmell & Son, Ligonier, Ind.; Long's Garage, Lorain, O.; Pershing Garage, Danbury, Conn.; E. Hope & Son, Tamaqua, Pa.; Auburn-Bridgeton Co., Bridgetown, N. J.; C. M. C. Motor Co., Franklin, Pa.; Watt Smith, Muncie, Ind.

NEW JEWETT PRICES

DETROIT, Dec. 5.—Following the introduction of the New-Day-Jewett car described in detail through these columns last week, the Paige Detroit Motor Car Co., announces the prices of the de-luxe touring model and the chassis. The open car lists at $1,095, the same as the de-luxe sedan while the chassis is priced at $825.

Rollin Motors Plans to Discontinue Making Cars

CLEVELAND, Dec. 7.—Rollin Motors Company, Cleveland manufacturer of Rollin cars, has discontinued production and plans for winding up the affairs of the company are being developed. This admission was made by Gardner Abbott, secretary and attorney for the company.

"Production has been discontinued simply because we are unable to sell cars," Abbott explained. "Plans for liquidating the business have not been developed as yet and I do not know what will be done. We have a good car and we have a good engineering staff. Beyond that I do not care to discuss the question at this time."

James G. Heaslet, president, said today he had forwarded his resignation to the company six weeks ago and that he had not been near the local plant since that time. It was said at the company's offices that Mr. Heaslet was still president. Mr. Heaslet is expected to tie up with an important manufacturer within the next week, but he said today he did not care to discuss his plans.

WARFIELD LEAVES GILL

CHICAGO, Dec. 5.—E. E. Warfield has resigned as vice-president in charge of sales of the Gill Manufacturing Co. His plans have not been announced. George A. Cramer, advertising and assistant sales manager of this concern, also has resigned.

M. & A. M. A. Directors Vote to Reject A. E. A. Merger Plan

Manufacturers Believe Membership and Industry Will Best Profit By Continuance

NEW YORK, Dec. 7.—Rejection of the proposed merger of the M. & A. M. A. with the Automotive Equipment Association, was voted by the board of directors of the former association at the meeting here Friday.

The board accepted the resignation as president and director of the Motor and Accessory Manufacturers' Association, of E. P. Chalfant, vice-president of the Gill Manufacturing Co., who has accepted the executive vice-presidency of the National Standard Parts Association. Mr. Chalfant has been an M. & A. M. A. director for two years and was elected president last January.

The board also accepted the resignation as director of E. V. Hennecke, vice-president of the Moto-Meter Co., who was elected in November a director and vice-president of the Automotive Equipment Association. These vacancies probably will be filled at the annual meeting in January.

The statement of disapproval of the proposed merger, as sent to the members of the M. & A. M. A. was as follows:

"When the merger of this association with the Automotive Equipment Association was first suggested, the idea met with a certain amount of favor. On the surface it seemed to be a progressive move for both associations. Several months have now been given to intensive study and investigation of the subject, and your board of directors, after thorough consideration of all the advantages and disadvantages of such a merger, has concluded that the interests of our membership and of the industry, would be served best by continuance of this association as constituted at present, that is, as an organization of manufacturers.

"The board, therefore, at its meeting held in New York December 4, unanimously voted to disapprove the proposal to consolidate or merge this association with the Automotive Equipment Association."

PIERCE ADDS EQUIPMENT

BUFFALO, N. Y., Nov. 28.—An especially designed Winterfront is now being issued as standard equipment with both the series 33 and the series 80 Pierce-Arrows. Houdaille shock absorbers are also being issued at present as standard equipment on the series 80. Some recent improvements have also been made in the gasoline system and in the appearance of the gas tank on the series 80.

Compromise Is Reached on Automotive War Tax Relief

Bill Before Congress Provides Way to Rebate Dealers for Loss on Unsold Cars

NEW YORK, Dec. 8. — Automobile manufacturers will seek no further reduction in the tax on passenger cars than that provided for in the bill already prepared by the House Ways and Means Committee and now before Congress. While maintaining the principle that automobiles as necessities rather than luxuries should not be submitted to federal tax, they have decided to discontinue their efforts to remove the remaining 3 per cent tax on passenger cars in return for certain concessions from the committee, regarded by the manufacturers and dealers as essential to the continuance of good business conditions in the industry.

The committee has inserted in the bill a provision under which the 2 per cent reduction on passenger cars will not become effective until 30 days after the passage of the act. The committee has also provided a rebate of the tax on all cars in the hands of dealers at the expiration of the 30 days.

There had been every indication that the 2 per cent reduction would induce prospective buyers to hold off until the entire tax had been removed. For this reason dealers feared a business slump, and they also raised the question as to whether they or the manufacturers, the latter having pledged themselves to pass the reduction along to the consumer, would bear the loss involved on cars already taxed but still on dealers' floors when the reduction became effective.

Present indications are that the law will be passed by March 15. This would mean that the relief on the passenger cars would not begin until April 15. Under the agreement dealers and agents would then be permitted to apply for a refund of the tax they had paid on passenger cars, on hand, on April 15.

The date of the relief on truck and accessories' taxes was not altered and will be taken off on the date that the bill becomes effective.

The manufacturers participating in the discussion included H. H. Rice, president of Cadillac and chairman of the legislative committee of the N. A. C. C.; F. J. Haynes, president of Dodge Brothers; A. T. Waterfall, vice-president of Dodge Brothers; H. H. Bassett, president of Buick; Lawrence P. Fisher, of the Cadillac company; S. E. Ackerman, sales manager, Franklin Motors; Alvan Macauley, president, Packard; B. E. Hutchinson, treasurer, Chrysler, and J. L. Pratt, vice-president of General Motors.

A CORRECTION

In connection with the description of the New-Day-Jewett in the December 3 issue of MOTOR AGE the tire diameter as stated on page 18 was given as 27 in. This should have been 29 in.

BUICK STARTS EXPANSION

FLINT, Mich., Dec. 5.—Marking the first step in its $2,000,000 expansion program, the Buick Motor Company has started construction of an addition to its engine plant to make possible the production of 1,200 engines per day. The engine production is calculated to take care of the recently announced daily production of 1,200 Buick passenger cars. This output is expected to be reached by next summer.

GRAHAM PLANS NEW TRUCK

NEW YORK, Dec. 5.—A 3½ ton bus and a truck of the same capacity, powered with large size Dodge Brothers engines, will be brought out by Graham Brothers about January 1, according to Robert C. Graham, director of the commercial car and truck division of Dodge Brothers and vice-president of Graham Brothers.

Hudson Is Launching Big Sales Drive in Carolina

CHARLOTTE, N. C., Dec. 5.—Approximately 500 automobile distributors, dealers, salesmen and officials of a number of banks in North Carolina were expected to attend a conference here December 9, when officials of the Hudson Motor Car Company, of Detroit, Mich., will launch an intensive sales campaign, according to an announcement by B. D. Heath, president of B. D. Heath Motor Co., Hudson distributor, of Charlotte. Harry G. Moock, sales promotion manager of the Hudson Motor Car Co., and R. S. Somerville, assistant service manager of the company, are on the program to deliever addresses at a banquet.

The six Hudson-Essex dealers in this state are W. H. Wray, of Gastonia; W.-S. Motors, Inc., of Winston-Salem; Hudson-Essex Sales Co., of Wilmington; Weaver Motor Co., of Asheville; Motor Sales Co., of Wilson, and Heath, of Charlotte.

The bankers were invited to the conference to participate in discussions relative to the financing of motor car purchases. Mr. Heath is carrying large advertisements in the newspapers of this city, in which he is emphasizing that a Hudson coach may be bought for $295 down and the Essex coach for $195 down. This policy is indicative of the vigorous efforts being made by several of the more important distributors here to move their cars into owners' hands through the deferred payment plan's operation. In consequence, the automobile financing companies' branches here are reporting an unprecendented and increasing volume of this class of business.

ROBERTS JOINS MILLER

AKRON, Dec. 5.—Arthur O. Roberts has been recently placed in charge of the dealer service division of the advertising department of the Miller Rubber Company. The new dealer service man brings to his new position a wide knowledge of advertising and especially of the problems faced by dealers. This knowledge he gained through close contact with many phases of advertising in various fields.

N. A. C. C. Frowns Upon Hotel Room Exhibits During Show

Directors' Resolution Says Such Displays Are Designed to Distract Needed Attention

NEW YORK, Dec. 7.—Directors of the N. A. C. C. have adopted resolution denouncing the practice of making exhibits of parts and accessories at hotel rooms during the national automobile shows in New York and Chicago as antagonistic and a menace to the shows.

These exhibits in hotel rooms, say the directors, "are designed to take advantage of the shows without contributing anything to their well-being and therefore unworthy members of the industry.

"They are an attempt to transact, at other places, business for which, in part, the shows are promoted.

"They are an attempt to distract the attention of factory representatives whose business requires their attendance regularly at the shows.

"They will, if continued, have a serious effect on the display of parts and accessories and are, therefore, a menace to the success of events which have for 25 years played an important part in the upbuilding of the industry.

"They are disloyal to the car manufacturer who properly expects his efforts in connection with the shows to be supported by a display of the component parts of his car.

"The directors believe, further, that the cultivation of more intimate acquaintance between members of the industry is essential to the continued success of the national shows."

OVERLAND VOTES DIVIDEND

TOLEDO, Ohio, Dec. 5.—Liquidation of an obligation of $6,559,726 in accumulated dividends on the preferred stock of Willys-Overland Co., through issuance of common shares on a basis of $25 a share, was approved by directors at the meeting here. The back dividends of 29¾ per cent have been piling up since October, 1920. In addition the regular quarterly cash dividend of $1.75 is made payable to the preferred stockholders on January 2 to those of record December 20. Certificates of rights which will be negotiable will be issued for the common stock distribution at the same time. No action was taken on any dividend for the common shareholders.

FRENCH PRICES RAISE

PARIS, Nov 21.—(by mail)—By reason of the depreciation of currency, automobile prices are on the upgrade on the French market. The Talbot Company has increased all prices 10 per cent; Unic has added 2,000 francs to the price of all chassis; Citroen has increased the price of his 5 h.p. model 1,500 francs, the larger model remaining unchanged. Up to the present Renault has made no change, but an increase is expected.

Sectional Meetings of S. A. E. Are Announced for December

Many Subjects of Importance to Industry Will Be Discussed in Various Cities

NEW YORK, Dec. 5.—The Society of Automotive Engineers has just issued a list of its December sectional meetings, together with the subjects to be discussed.

The Pennsylvania section will meet at Reading, Pa., on Dec. 8, will make an inspection trip through the plant of the Carpenter Steel Co., and will listen to a paper on "Automobile Steels," by Dr. B. H. DeLong. The Indiana Section will gather at the Hotel Severin, Indianapolis, Dec. 10 and hear a talk on "High Duty Engines," by F. S. Duesenberg. The City Club at Los Angeles will be the scene of the Southern California meeting on Dec. 11, and, following a dinner addresses will be delivered by R. E. Haylett and J. B. Terry on "Manufacture and Utilization of Gasoline". The Washington Section will meet at the Cosmos Club, also on Dec. 11. On this occasion a paper on "Steam Cooling" will be read by A. G. Herreshoff.

"Gas-Electric Drive" is the topic to be taken up at the Cleveland meeting on Dec. 14 and the speakers will be J. C. Thirlwall and E. M. Fraser. The Buffalo section, on Dec. 15, will listen to Ernest Murphy, who will have as his subject "Transportation Service". At the Engineers' Club, Dayton, O., O. T. Kreusser will speak Dec. 16 on "Organization and Operation of General Motors Proving Ground". December 17 the Detroit Section will gather in the General Motors Building to hear a discussion of "Cylinder Lapping" by factory representatives of Ford, Dodge, Packard, Hupp, Paige, Chrysler and White companies.

The Chicago meeting will take place Dec. 18 at the Engineers' Club when F. S. Duesenberg will speak on "High Efficiency Engines". The final meeting of the month will be that of the Northern California Section on Dec. 29 at the Engineers' Club, San Francisco, when Harold Jarvis is to address the meeting on "Problems of Fleet Operation".

FIAT TAKES 6-DAY MARK

PARIS — (by mail) — Averaging 48¾ miles an hour for 144 consecutive hours, a standard 10 h.p. Fiat captured the world's six-day record on Monza track, yesterday evening. The Fiat, which had a four-cylinder engine of 14550 cc. (88.4 cubic inches) was fitted with the Silvani head, with pushrod-operated overhead valves, and was handled by the four drivers Silvani, Botta and Mangiarotti, and Belgir. After breaking all world's records from 1,500 to 7.000 miles, thus capturing 38 world's records and 48 international records for the 1,500 cc. class, the Fiat continued after the 144th hour and came to a stop with a total distance of 7,145 miles to its credit.

DEALER HOLDS CONTEST

PORTLAND, Ore., Dec. 5.—"Eight Hundred or Bust" is the slogan of a sales contest inaugurated by employes of Braley & Graham, Dodge Brothers dealers. The purpose of the contest is to show a total of 800 retail deliveries in Portland of Dodge Brothers cars for the calendar year. The sales force has been divided into two teams of nine each.

PAIGE DEALERS MEET

WASHINGTON, Dec. 5.—Paige and Jewett dealers from the District, Maryland, Virginia and West Virginia, 100 in all, together with Paige-Detroit factory officials and members of the staff of the local distributor organization were guests of Washington-Virginia Motors this week at a luncheon and banquet held at the Mayflower Hotel. T. T. Mott, president of the Washington-Virginia Motors, introduced the speakers; C. P. Gaunt, sales manager for the Paige-Detroit Company; Robert Seymour, vice-president of the Commercial Investment Trust Company of New York, and H. H. Hill, district advertising representative for the Paige-Detroit Company.

Indianapolis Dealers See Excellent 1926 Business

INDIANAPOLIS, Dec. 5.—With November new car selling certain to be from 15 to 20 per cent better than the same month last year, and with October corrected figures showing a gain of 25 per cent over the October, 1924, records, and with every promise that December will show a very substantial gain over this past month Hoosier automotive sales circles are looking forward to the new year with considerable cheer.

December is always a good month in this state as compared to November. The new registration year begins December 10 and many sales of November are carried over for December registration. This gives an otherwise dull season a friendly boost and helps dealers and salesmen.

The last month, and in fact the entire last quarter so far has witnessed a large gain in accessory selling over last year's record. The biggest jobber here is elated over the biggest month's business in the long history of the organization.

ACCESSORIES MOVE WELL

CHARLOTTE, N. C., Dec. 5.—Accessories dealers of the Carolinas are reporting a steady demand as the holiday season approaches, and the slight softening of the market, developing late in October, proved only temporary, according to leading jobbers here. The demand is well spread out over the jobbers' lines, and it is hardly accurate to say that any class of products is a leader at this time, it was explained. The demand for garage supplies and equipment, as well as other heavy items of the trade, is brisk. That was accepted as an indication that the automobile repairing industry is expanding in keeping with the unusually heavy demand for new automobiles. All orders are being filled promptly.

Ford's New Steel Rolling Mill Running in Detroit

Plant Adds Almost Final Link in Policy to Make Everything Needed in Cars

DETROIT, Dec. 5.—Henry Ford has entered the ranks of the steel magnates. At the River Rouge plant of the company, rolling steel has begun in the new steel mill, adding almost the final link in the company's policies to manufacture every article that goes into the manufacture of its cars.

The new mill is housed in a building more than a quarter of a mile in length and 460 feet in width. It is one of the largest structures of the River Rouge plant. It will produce bars of various sizes, all of steel made according to Ford specifications and intended for the manufacture of the various parts to be used in assembling Ford cars.

The rolling mill, which has a capacity of handling between 15,000 and 20,000 tons of steel in a month, is the first unit of the steel plant to start operation. Not until March or April of next year will the plant function as a whole.

Electricity from the Ford lines has been harnessed to provide power for all the jobs which formerly demanded manual labor. Even the furnace, once stoked by man, is now fed by a turn of a valve. Throughout, the process seems comparatively simple and, aided by electricity, the work is done in such a manner as to cause the steel men of former days to wonder.

TRUCK OUTPUT GAINS

FORTWAYNE, Ind., Dec. 5.—The International Truck Company's plant here is now producing an average of 25 motor trucks daily, an increase of previous production records. Contemplated additions to the staff at the plant, which was opened about 18 months ago, will bring the December production above the 30-truck-daily mark, according to officials. Indications are that orders on hand will necessitate a production schedule of not less than 50 trucks daily during January.

NEW DURANT OFFICE

ATLANTA, Dec. 5.—Star and Durant dealers in the central Tennessee and central Kentucky territory will henceforth obtain their equipment through a new wholesale office opened by Durant Motors, Inc., at 1312 Starks Bldg., Louisville, Ky., it has been announced by the southern branch of the company in Atlanta.

HEADS AIR EXPRESS

LOS ANGELES, Dec. 5.—Harris M. Hanahue, until recently manager of the Apperson Automobile Company's branch in Los Angeles, has accepted the post of general manager of the Western Air Express, Inc., which has been organized largely by automotive men to promote commercial aviation.

New Car Sales Show Big Increase in San Francisco

Gain of 40 Per Cent Over November Last Year Reported by Northern California Dealers

SAN FRANCISCO, Dec. 5.—Sales for November in central northern California show an increase of about 40 per cent over November of last year and 20 per cent over October, 1925, which in turn showed an increase of about 30 per cent over October last year.

Used car sales are holding up well with rebuilt cars taking the lead and dealers in new cars doing the greater part of the used car business. Dealers in used cars only are having rough going and a number have been forced out of business.

Truck sales show an increase of about 20 per cent over November of last year due largely to late rains and the marketing of almost the entire fruit crop without loss. The state as a whole is very prosperous and sales of cars priced above $2,000 here show a gain proportionate to that of cars sold at $1,500 or under for the first time in five years.

Delay in distribution of the new model Fords turned many unexpected sales to other companies. Dealers all say that many prospects bought cars for Thanksgiving instead of waiting for Christmas and that as many cars were sold for Thanksgiving delivery this year as were sold for Christmas last year.

Indications are that December in nothern and central California will be as good as or better than November.

Velie Holds Session of District Representatives

MOLINE, Ill., Dec. 5.—A two-day conference of district sales representatives of the Velie Motors Corporation opened here last Monday. Sales services and advertising plans for the coming year were discussed under direction of C. W. Hadden, general sales manager.

C. M. Gustine, service manager and H. C. Snow, chief engineer, addressed the gathering along their respective lines. On Tuesday advertising plans were discussed by A. M. Taylor, advertising manager, and LeRoy T. Goble, representing Critchfield & Company, advertising agents for the Velie also spoke on this phase of the business.

District representatives who attended were: G. C. Morgan, Chicago; R. A. Spillane, New York; G. E. Anderson, San Francisco; Al Kinnear, Omaha; C. F. W. Poggenburg, Philadelphia; Willard L. Velie, Moline and J. C. Muir, Pittsburgh.

FORD PLANT SPEEDS UP

CLEVELAND, O., Dec. 5.—Between 175 and 225 Ford automobiles are being assembled here daily in the Ford Motor Company assembly plant, A. B. Pease, general manager has announced.

Heads New Oakland Department



W. L. Buck, manager of Oakland's new used car department

Chevrolet Sees 1925 Gain Of 60,000 in Production

DETROIT, Dec. 5.—By the end of December, Chevrolet Motor Co. will have manufactured upwards of 500,000 passenger cars and trucks. This number will exceed previous Chevrolet production by approximately 60,000 cars.

According to W. S. Kanudsen, the company's total production to date for 1925 is greater than its combined production during the entire first eight years of its existence. Much of the 1925 output is attributed to the series of record breaking months during which production consistently remained around the 50,000 mark each month.

The outlook for 1926 is said to forecast an even better business than that done during the present year.

GUAYULE PLANT RUNNING

MARATHON, Tex., Dec. 5.—Crude rubber at the rate of one ton a day is being extracted from wild guayule shrubs at the plant of the Border Rubber Company at Marathon. This company is subsidiary of the Thomas T. Wilson Company, Inc., of New York. Its plant here was constructed in 1905 and was operated almost continuously for about nine years. The growth of wild guayule shrubs in this part of the upper Rio Grande border region was exhausted and it was not until last July that operation of the industry was renewed. In the meanwhile a new and very prolific growth of the rubber-producing shrub had sprung up and there is enough of the raw material to keep the factory running for several years, it is stated.

Entry Blanks Mailed for Big Memorial Day Classic

Cars This Year Will Have Half Piston Displacement of Ford Engine—Builders Busy

INDIANAPOLIS, Dec. 5.—Racing cars half the displacement of a Ford engine, with a speed of upward of 120 miles an hour is the prediction of racing car builders of Europe and America, who are busily engaged in making the vest-pocket motors for the 1926 Indianapolis race.

The preliminary starting bomb of the Fourteenth Annual International Sweepstakes was fired today, when entry blanks were sent to every driver of prominence in America and Europe. The race will be held next year on Monday, May 31.

The outstanding feature of the announcement is that the piston displacement of the competing cars has been reduced from 122 cubic inches, where it was placed for 1923, 1924 and 1925 Internationl Sweepstakes, to 91½ cubic inches.

There will be no change in the distance, which is 500 miles; there will be no change in the prize money which is the largest amount ever offered by any racing organization. The one-day change in time is due to Memorial Day coming on Sunday in 1926 and the Indianapolis Motor Speedway clings rigidly to its rule of scheduling the race for the next day.

H. W. Booth Joins Ajax as Assistant Sales Manager

RACINE, Wis., Dec. 5.—Announcement is made by George C. Hubbs, general sales manager of Ajax Motors Company, of the appointment of Harold W. Booth as assistant sales manager and of W. H. Shadburne as factory representative. Mr. Booth comes to Ajax Motors from the Willys-Overland Company, having been in charge of retail sales of Overland and Willys-Knight cars in St. Louis for some months past. Prior to that, Mr. Booth for a number of years was associated with Mr. Hubbs at the factory of the Dodge Brothers in Detroit. Mr. Shadburne comes to Ajax Motors from Studebaker, having been in charge of retail sales for the Studebaker Chicago distributor for some time past. He is well known in motor car circles and an authority on retail sales.

"COURTESY SERVICE" OPENED

BOSTON, Dec. 5.—The Courtesy Service Corporation has been incorporated at Springfield, Mass., and it has taken over the business conducted under the name of Those Motor Twins. The Courtesy Service Corporation operates service and rental stations in Boston and Cambridge and it sells its customers yearly maintenance contracts. C. S. McDonald is general manager, and Stephen E. Couch, for years with the Western Massachusetts Cadillac Company, is manager of the service department.

Los Angeles New Car Sales Reported on Average Level

Time Payment War Ends in Agreement to Reduce Period to 18 Months

LOS ANGELES, Dec. 5.—New car sales throughout Southern California were maintained at a satisfactory level during November, with an increase over the same month last year. As compared with October, however, November sales showed a decrease, in accordance with the usual seasonal influences. There has been an appreciable increase in used car stocks during the last two months, and a large number of dealers are admittedly overloaded. Most of these dealers have slashed their prices to the bone, taking heavy losses in order to move them. Even at ridiculously low down payments and attractive prices buyers for used cars are hard to find.

Of outstanding importance in the Southern California market is the return by virtually all dealers to a maximum 18-month time payment plan after a veritable "finance war" between various leading distributors, which was climaxed when one distributor offered 27 months. It is known that several factories "requested" their Los Angeles distributors, who had extended their payment periods to meet competition, to immediately return to a maximum 18-month basis.

Officers of the leading finance companies in Los Angeles, realizing that unless they shortened the payment periods serious business reverses would occur in Southern California automobile merchandising, because the used car was losing its market, called a meeting and agreed to make 18 months the limit. One Los Angeles distributor, who is credited with having started the "time payment" war still features the same low down payment, however, but necessarily has increased the amount of monthly payments owing to the contraction of the payment period.

It is generally agreed by Los Angeles distributors that competition this year in Southern California is the keenest on record, and that if the "time payment" war had continued there undoubtedly would have been serious business consequences. Now that the situation has been relieved, the outlook for the remainder of the winter in this territory is considered very favorable.

CADILLAC DEALERS MEET

DALLAS, Tex., Dec. 5.—Cadillac dealers from all parts of the Dallas territory were here this week to hear G. E. Mapes, sales expert from the factory, outline the company's sales system, recently adopted after tests extending over a period of two years. While here the visiting dealers were entertained by the Munger Automobile company, Cadillac distributors. The dealers were here from Fort Worth, Lubbock, Vernon, Wichita Falls, Waco, Waxahachie, Brownwood, Breckinridge, Gainesville and Paris.

He Holds Distance Record

NEW YORK, Dec. 5.—F. S. Mann of Adelaide, Australia, is travelling 11,500 miles to participate in the second Motor Transport Congress to be held here Jan. 11-13 at the time of the automobile show. Mr. Mann represents the Motor Traders of South Australia. At the beginning of 1925 it was estimated that there were 28,300 motor cars and 3,000 commercial vehicles in South Australia.

F. P. McGough Is High Man For U. S. in Velie Contest

MOLINE, Ill., Dec. 5.—In a delivery contest staged by the Velie Motors Corporation during the month of October, the following sales men were awarded prizes:

High man for the United States, F. P. McGough of the Velie Bell Co., Chicago.

High man, Minneapolis district, J. S. Malchow of the R. C. Smith Automobile Co., Minneapolis.

High man, Philadelphia district, Melvin Yearly of Triple Towns Garage, Riverside, N. J.

High man, Pittsburgh district, D. A. Heindel, Youngstown, O.

High man, Moline district, Harry Alpaugh of Dean Motor Company, Inc., Moline.

In the New York district, F. J. Cunningham of the New England Velie Co., Boston, and P. V. Becker of Schenectady, tied for first place. In the San Francisco district, Philip Gerst and J. C. Kail, both of the Edward Roesch Co., Seattle, Wash., tied for first place. In the St. Louis district, Frank T. Dugan of Curran Motor Co., Kansas City, and H. D. Kennedy of John Peter Heiser, Inc., Denver, Colo, tied for first place. Under the rules of the contest, prize money in case of tie was divided.

NEW DIANA COLOR SCHEME

ST LOUIS, Dec. 5.—An innovation in Duco color combinations was introduced by the Diana Motors Co., recently when a number of special Diana roadsters finished in black and white Duco, were placed on display by several of the larger Moon-Diana distributors, as an experiment in special body finishes. The black and white roadsters were intended mainly for show purposes but have been so quickly absorbed that a second lot, considerably larger than the first is being brought through the Diana plant for immediate delivery.

LACQUER PLANT ENLARGED

BUFFALO, N. Y., Dec. 5.—Pratt & Lambert, Inc., 75-year-old varnish making firm has begun the construction of a new unit to the vitraloid plant, which will double the plant capacity. It will cost not less than $50,000.

Cincinnati Buys Used Cars As Investment for Spring

In Many Instances Same Man Purchases Three or Four and Stores Them for Strong 1926 Market

CINCINNATI, O., Dec. 5.—Briskness of the used car market in the Cincinnati district is occasioning considerable comment. Used car sales in October and November constituted the largest factor in the auto trade, according to the statement of dealers, and this month is taking precedence over new cars sold by a substantial margin.

Explanation given by dealers is that the fans are picking up bargains in used cars wherever they can find them. In several instances buyers have taken on three or four used cars and have had them delivered direct to their garages for storage. No effort has been made to obtain license tags for them or to operate them. They are apparently being held as an investment.

This situation is apparently general for used car dealers say they are selling everything they had to offer in cars of all standard makes from 1923 and up. They say that the demand is the most brisk they have ever experienced. Several dealers took the trouble to inquire from purchasers why they were buying two and three and even four used cars at this time. It is said the buyers replied that used car prices would not be so cheap next year and they expected to turn their purchases at a nice profit next spring or summer.

Dallas Dealer Gives Free Gas With Used Cars Sold

DALLAS, Tex., Dec. 5.—The Worsham-Buick Company of Dallas has inaugurated a new sales idea in connection with its used cars. With every used car sold the company gave 100 gallons of gasoline. The company told the public of the new proposition through considerable display and want ad space in local daily papers.

The company did not pad the prices on used cars during the "free gas sale." All prices were marked in plain figures and the 100 gallons of gasoline went to the purchaser no matter whether he brought a reconditioned Ford coupe at $300 or a Cadillac at $2,500.

One hundred gallons of gasoline at retail prices prevailing in Dallas meant a saving of $20 to the buyer of a used car. Many buyers took advantage of the "100 gallons free gas sale" the company officials said.

WHITE VISITS COAST

LOS ANGELES, Dec. 5.—Walter C. White, president of the White Company, Cleveland, recently made his first trip to Los Angeles and the Pacific Coast since 1913 for the express purpose of attending the formal opening of the new branch of The White Company established in Los Angeles.

Dodge Brothers Announce Refinements in B Sedan

Overall Height Reduced, Pillars Made Smaller, and One-Piece Windshield Added

DETROIT, Dec. 5.—A number of improvements have been incorporated in the Dodge Brothers type B, all-steel sedan which add materially to its appearance. The body is now finished in sage brush green lacquer with a fine red stripe and the top and running gear is black.

The overall height has been decreased about two inches and a reduction in the size of the pillars has resulted in increased visibility. A one piece windshield, hinged at the top, has replaced the former two-piece design and a cowl ventilator has been added. Rear quarter windows are operated by lever regulators instead of the crank type previously used.

Changes in the tilt of the seats make them more comfortable and the doors overlap the floor as a protection against draughts. The windows on this model are now interchangeable and the doors are hung with three hinges instead of two.

Shipments from the factory are stated to be at the rate of 400 daily.

CANADIAN TIRES UP

TORONTO, Dec. 5.—Following immediately on the heels of the 5 per cent advance on smaller size tires last week, prices on 30x3½ tires are again advanced approximately 20 per cent. Prices are now over 50 per cent higher than those which ruled in April of this year on this size of tire. Tubes, which were advanced last week, were not changed to correspond with the further advance of tires. Tire manufacturers also have announced an advance in the price of gums, combination vulcanized and unvulcanized patching rubber and fabrics for repairing cord tires. These advances are directly due to the strong crude rubber market.

NEW HUDSON DEALERS

COLUMBUS, O., Dec. 5.—The Walter B. Zimmerman Co., central Ohio distributor for the Hudson and Essex has announced a number of agents in the territory, outside of Columbus, which is covered by it. The dealers and localities are:

Logan, F. C. Ambrose; Milford Center, L. W. Anderson; Washington C. H., The H. & E. Motor Co.; Ashley, C. L. Bennett; Adelphi, C. B. Boyd; Groveport, Buchman & Gloyd; Chillicothe, O., L. Cartright Motor Co.; Circleville, O. L. Cartright; Fredericktown, H. E. Cassell & Son; New Straitville, P. C. Clark; Mt. Sterling, Mt. Sterling Hudson Co.; Delaware, J. M. English, Cresline, W. W. Gallentine; Plain City, F. H. George; Danville, H. K. Darrah; Dresden, Ryan Motor Sales; Shelby, W. C. Gump & Co.; Pickerinton, Hanna Garage; Hebron, Hebron Garage; Upper Sandusky, Charles Johnson; Mt. Vernon, Singer Hudson Motor Sales Co.; Lancaster, George W. Johnson Motor Co.; Gahanna, Clotts & Sindel; Johnstown, Johnstown Hudson Co.; Crooksville, Gordon Appleman Co.; Roseville, Golden Rule Garage; Marion, Lott & McKim; New Washington, Ludhart & High; London, W. J. Meech; Mansfield, McMullen Motor Sales; Galion, George C. Patterson; West Jefferson, Pence & Barber; Richwood, Perry Auto Sales, Bucyrus, A. J. Pfeifer; McConnellsville, Robinson Bros. Motor Co.; Nelsonville, Rodebush Garage; Marysville, The Scheiderer Motor Co.; Mt. Gilead, C. D. Schaff; New Lexington, Schuster Motor Sales; Utica, Smith-Wolfe Oil Co.; Zanesville, Shannon Motor Sales; Centerburg, Thorp's Garage; Pataskala, The Van Motor Co.; Newark, B. V. Weakley; Sunbury, John Williamson & Sons; Westerville, N. C., Farber; Frazersburg, Riley Motor Sales and Zanesville, Triangle Motor Sales.

Visits His Dealers By Plane

SAN FRANCISCO, Dec. 5.—An advertising stunt which received much notice in California, was staged by D. C. Warren, Velie distributor for central and northern California, when he used an airplane to call on his agents in several towns, and announce to them the arrival of new models of the Velie. Warren called on dealers in San Rafael, Santa Rosa, Marysville, Sacramento, and Stockton, all the towns in which there were landing fields.

Demand for Tractors in South Promises Record

ATLANTA, Dec. 5.—Due to the heavy demand for tractors this year in the south for industrial use, this business is estimated to be at least 100 to 125 per cent better than last year. Tractor dealers in the southeastern territory are almost certain to enjoy one of the best years in the history of the business, providing sales continue to hold up the next six weeks as they have the last four or five months.

In addition to this industrial demand for tractors there has also been a marked increase the last two or three months in agricultural tractor sales, the total business of the southeastern dealers from August to October, inclusive, estimated to have exceeded the corresponding period of last year by at least 60 per cent.

With both tractor and power farming equipment sales in this district during November certain to exceed the volume of business enjoyed during November, 1924, this will make the eighth consecutive month that dealers in the Southeast have enjoyed a substantial gain in this business over the corresponding months of last year, the average gain in sales for this eight month period estimated at close to 50 per cent.

HAS NEW MANIFOLD

MISSOURI VALLEY, Ia., Dec. 5.—The Patent Model Co. of this city has begun the manufacture of an intake manifold carbureter heater which is designed to give quick starting in cold weather.

Hoover Reports on Work of Automotive Division in 1925

Review of Activities Shows Continued Expansion in Service Given by Bureau

WASHINGTON, Dec. 5.—Continued expansion and improvement of the facilities of the Automotive Division with improved export statistics and informational services is reported by Secretary of Commerce Herbert Hoover in his annuel report just made public here.

Reviewing the activities of the Automotive Division during the fiscal year ended June 30, 1925, Secretary Hoover points out that representatives of the division visted more than 50 automotive plants and conferred with executives at Detroit, Cleveland, Toledo, Pittsburgh, Philadelphia, Cincinnati, Chicago, St. Louis, Indianapolis, South Bend, Lansing and Springfield, Ohio.

"To obtain direct information on foreign competition," says the portion of the report relating to the Automotive Division, "the chief of the division visited nine European countries, attended international motor shows at Paris and London, inspected more than 30 automotive manufacturing plants, and interviewed numerous foreign government and trade-association officials, manufacturers and dealers.

"Conferences have been held with officials of the National Automobile Chamber of Commerce, the Motor and Accessory Manufacturers Association, the National Association of Engine and Boat Manufacturers, and the Motorcycle and Allied Trades Association.

"Special information has been furnished various legislative and executive departments on exportations, importations, tariff restrictions, labor, consumption of material, use of motor cars, etc."

BELKNAP JOINS McFARLAN

CONNERSVILLE, Ind., Dec. 5.—Robert B. Belknap, who, for the last several years has been identified with the Lexington Motor Company in various executive capacities, leaves the position of assistant to the general manager of that organization to accept the second vice presidency of the McFarlan Motor Corporation.

CRAIG SUCCEEDS GLENNY

MINNEAPOLIS, Dec. 5.—With the appointment of E. F. Glenny as supervisor of territorial organization for the Olds Motor Works, G. M. Craig has been made his successor as manager of the Minneapolis Oldsmobile branch and supervisor of the Northwest zone with Minneapolis headquarters. The branch includes Minnesota and North Dakota, 20 counties in Wisconsin and eight in Montana. The zone includes supervision of distributors in Sioux Falls, S. D., who cover the state and part of Iowa; also distribution from the Billings headquarters, which includes the state and the northern half of Wyoming.

Orders Still Lead Output On Central Eastern Coast

Deliveries Big Problem in Carolinas After Three Months of Cautious Progress

CHARLOTTE, N. C., Dec. 5.—A demand for automobiles and motor trucks of proportions seldom equalled in this territory at this season of the year is emphasizing the unpreparedness of dealers and distributors for unseasonal conditions and slow progress is being made in reducing the accummulation of orders as the year enters its closing month.

The automotive trade, which proceeded cautiously three months ago, now is struggling to obtain deliveries to meet the retail demand. Deliveries from the factories are increasing. Dealers' reports agree that the volume of retail orders is holding about steady. Sales effort apparently is increasing somewhat in vigor.

Explanations of this condition cover a wide range of opinion and none of them appears to be entirely satisfactory. While all lines of industry and trade are prosperous in this state, South Carolina conditions, recently somewhat unsatisfactory, are showing improvement, especially in the Piedmont section, where the demand for motor trucks is decidedly better than it was a month ago.

The movement of accessories into dealers' and consumers' hands was increasing rapidly with the approach of the Christmas holidays and the steady fall of the temperatures, according to jobbers' reports. Gift accessories were selling rapidly when December arrived.

Denver Reports Improved Conditions for November

DENVER, Dec. 5.—Trade conditions in Colorado continue to improve. November has shown approximately a 10 per cent increase over October, and 15 per cent over November 1924. Early frosts in the Horn District, comprising the territories surrounding, Boulder, Loveland, Longmont, Greeley and Fort Collins have cut the potato crop in two, and the early drouth made a light beet crop, so this section is below the average for five years, with little prospect of improvement this season.

Northeastern Colorado and the San Luis valley are much above par, and all business is excellent. From Denver south to Pueblo conditions are fair, and on the Western Slope they are good. Denver itself is going ahead in spite of several failures during November.

Local dealers report considerable advance buying of cars for Christmas. All over the state the used car market is improved, due to caution in trading, and reasonable prices on resales. Installments are being paid promptly and the last month showed very little repossessing in this section.

"SILVER SHELL" APPEARS

ST. LOUIS, Dec. 5.—The first issue of "The Silver Shell," designed for Moon and Diana distributors, dealers and salesmen and issued by the Moon Motor Car Co. made its first appearance last week. Harry Ford, is managing editor of "The Silver Shell". The paper is to be issued twice a month and will contain information and news of particular interest to members of the Moon and Diana organization. Factory announcements, comments on current conditions by Moon executives, pictures of various activities of the Moon Co. will be contained in the paper.

Citroen Introduces New Four Wheel Brake Car

PARIS, Nov. 21—(by mail)—With the appearance this week of the new model 10 h.p. Citroen, every French automobile manufacturer now uses four-wheel brakes. The Citroen is a modification of the chassis which has been in production since 1919, having a special front axle, semi-elliptic front springs in place of quarter elliptics, and new frame members. The mechanical front wheel brakes are cable operated by a brake camshaft mounted on the axle itself. With four passenger phaeton body and balloon tires the new Citroen sells at 21,500 francs.

The first to get into big production after the war, with a car having been designed during 1917 and 1918, Citroen was unable to follow the move towards front wheel brakes as rapidly as other French manufacturers, and because of this he has been at a disadvantage during the last two years, for rival firms, Renault in particular, have directed an active campaign against all cars not equipped with four-wheel brakes.

To make the change over to front brakes it was necessary, in addition to a new and stiffer axle with closed eye ends and inclined steering pivots, to abolish the quarter elliptic front springs in favor of semi-elliptics, and this involved changing the chassis side rails. The small 5 h.p. Citroen remains as before with a transmission and rear wheel brakes.

BAKER R & L CHANGES NAME

CLEVELAND, O., Dec. 5.—The Baker R & L Company has changed its corporate style to The Baker-Raulang Company. The company is a quantity-producer of closed bodies for automobiles under the name "Raulang" and also a complete line of electrical industrial material-handling tractors and trucks under the "Baker" name. Both products have been widely and consistently advertised for many years and the name-change has been made to effect a closer and unmistakable tie-up with the company's advertising. The change is a change in name only, as ownership and management continues as before. E. J. Bartlett, for many years vice-president and general manager, was recently elected president, F. W. Treadway, the former president, becoming chairman of the board.

Firestone Shows Sales Gain of $40,000,000 in Year

Net Income in Fiscal Period Increases More Than $5,000,000

AKRON, O., Dec. 5.—Report of the Firestone Tire & Rubber Co., showing an increase in sales of approximately $40,000,000 for the fiscal year ended Oct. 31, is regarded as an indication of what may be expected from statements of other rubber companies for the year.

Sales of the other big rubber and tire companies, including Goodyear, Goodrich, United States, and Fisk, have been about 35 per cent higher this year than in 1924.

Total sales of the Firestone Co. for 1925 were $125,597,993, compared with $85,610,000 in 1924.

Net income, after depreciation, federal taxes and interest, was $12,800,412, against $7,116,689, in 1924.

Announcement is made of the sale of $10,000,000 additional 7 per cent preferred stock. Officials of the company explained that the expansion of business and the high cost of crude rubber requires a larger working capital.

The Oct. 31 balance sheet shows a surplus of $39,762,281. Total assets are $72,298,535, of which $43,500,000 are net quick.

200,000 Attend Motor Car Show in Beaumont

BEAUMONT, Tex., Dec. 5.—The automobile dealers of the cities of South Texas and Western Louisiana associated themselves with the Automobile Dealers' Association of Beaumont in staging the annual motor car show here. The show was staged in connection with the South Texas Fair and was attended by more than 200,000 persons.

All the latest motor vehicles were on display. The passenger cars occupied the greater part of the space for show purposes and were the center of attraction, but the dealers exhibited the latest trucks and trailers to merchants and oil men who rely on motor cars for rapid transportation.

In the passenger cars, closed bodies predominated. Gay colors featured the finishings. More convenience, more room and a general trend to smaller cars appeared in evidence from an inspection of the newest models.

A. A. A. APPOINTS CLARK

WASHINGTON, Dec. 5.—The appointment of Charles P. Clark as assistant general manager of the American Automobile Association, to take effect immediately, is announced from the national headquarters of the A. A. A. Although the appointment is just officially announced, Mr. Clark has been acting in the capacity of assistant general manager for several months, especially during the absence of General Manager Ernest N. Smith from Washington in connection with important organization problems.

Revenue From Industry in 10 Months Gains Heavily

Government Receives $64,578,981 More Thus Far in 1925 Than in Same Time, 1924

WASHINGTON, Dec. 5.—A decrease of $3,417,458.22 is noted in the internal revenue collections from the automotive industry during October, 1925, as compared with those of October, 1924, but an increase of $8,103,668.61 still stands in collections from the automotive industry for the period from July 1, 1925 to October 31, 1925 as compared with the period from July 1, 1924 to October 31, 1924, it is announced here. The October, 1925, collections are given as $7,319,443.42.

A study of the collections shows that trucks, automobiles and motorcycles contributed the bulk of the $3,417,458.22 while automobile parts and accessories came nearest to holding their own. The October, 1924, collections from "automobile trucks and automobile wagons" is set at $580,027.97 as compared with $1,301,298.25 in October, 1924; "other automobiles and motorcycles" during October, 1925, paid $5,089,306.35 as compared with $7,468,652.72 in October, 1924 while "automobile parts and accessories" in October, 1925, paid $1,650,109.10 as compared with $1,966,950.67 in October, 1924.

Total collections for the month of October, 1925, amounted to $109,045,342.92 compared with $113,548,599.44 for the month of October, 1924, a decrease of $4,503,256.52. The collections from July 1, 1925 to October 31, 1925 amount to $800,746,404.80, compared with $736,167,423.68 from July 1, 1924 to October 31, 1924, an increase of $64,578,981.12.

AUBURN REDEEMS STOCK

AUBURN, Ind., Dec. 5.—The Auburn Automobile Company has filed certificates with the secretary of state, redeeming $500,000 preferred stock, and also has filed certificates increasing the capital stock from $1,500,000 to $3,000,000. The increased issue is of common stock.

McKINNON BUYS WILLIAMS

ST. CATHARINES, Ont., Dec. 5.—An industrial merger of importance is announced by General Manager B. W. Burtsell of McKinnon Industries, Ltd., which company has secured by purchase outright, the entire plant and business of the J. H. Williams & Co., Ltd., in this city. The latter employs 80 men and manufactures small tools. Both plants will be continued in operation under the McKinnon management and extensions are planned at the new acquired factory. The McKinnon Company is one of the oldest of St. Catharines, having been conducted here for 51 years. In April, 1920, the interests of Whitman & Barnes Mfg. Co., of Chicago, and St. Catharines, Ont., were merged with those of J. H. Williams & Co.

CHEVROLET SALESMEN TIE

PORTLAND, Ore., Dec. 5.—September was an exceptionally good month for Chevrolet sales on the coast and there were ties for both first and second place in what is known as Zone 19, which comprises western Montana, Idaho, Washington and Oregon. B. L. Sanderson of the Pierce-Harrison Motor Company of Medford, Ore., and H. George of the Nugent Motor Company, Everett, Wash., tied for first place in their zone with a percentage of 325 of their quotas. A. D. Martin of the Fields Motor Company, Portland and C. Alexander of the Mount Hood Motor Company of Hood River, Ore., tied for second with a percentage of 275.

R. M. W. Shaw Is Appointed Olds Advertising Manager

LANSING Mich., Dec. 5.—The appointment of R. M. Wilmot Shaw as advertising manager of Olds Motor Works is announced by D. S. Eddins, general sales manager of the company. Mr. Shaw has been connected with the Oldsmobile organization for nealy four years as assistant advertising manager. Previous to that he was with newspapers, in both the business and editorial departments for five years. Mr. Shaw succeeds E. J. Shassberger, former advertising manager, recently was appointed territory analyzation manager.



R. M. Wilmot Shaw

AJAX DEALERS MEET

ST. LOUIS, Dec. 5.—George C. Hubbs, general sales manager of the Ajax Motors Co., Racine, Wis., told salesmen and associate dealers of the Southwest Nash Motor Car Co., Nash and Ajax distributors here, of plans of the Ajax Company to enlarge its factory to enable the company to meet the nation-wide demand for the Ajax car, at a luncheon meeting at the Warwick Hotel arranged by the Southwest Nash Co. The production of the Ajax, Hubbs declared is still far behind the demand.

Chicago Dealers Report Good Business Throughout Month

Stocks Show Slight Increase in Preparation for Holiday Sales Rush

CHICAGO, Dec. 5.—In general, November sales were more numerous than those of October. There was little or no trouble from the standpoint of delivery, as production in nearly all factories has been sufficiently heavy to supply the demand.

Stocks in the Chicago territory are increasing to some extent. Dealers are working under the theory that stocks naturally should increase slightly at this season in order to give immediate delivery on holiday business.

The increase in sales over November averaged about 10 per cent. As compared with last, November sales were about 25 per cent greater.

Collections are good and repossessions few. A tendency toward more lenient terms has cropped up, but has been frowned up by all recognized authorities and has not become general as yet.

November sales of accessories are about even with October and from 10 to 15 per cent greater than November last year.

Tire sales have shown a decided increase, believed largely due to recent increases in original equipment prices and the reports of further potential increases in retail lists.

Optimism predominates among the dealers and wholesalers, and the campaigns to boost Christmas business have already justified themselves beyond expectations.

ELECTRICAL MEN TO MEET

DETROIT, Dec. 5.—D. W. Burke, president of the Auto Electric & Service Corp., and secretary of the Automotive Electric Service Association, announces that the 1926 convention of the association will be held on Feb. 2 and 3, during the Chicago Automobile Show, in the Florentine room of the Congress hotel, Chicago.

NORTH EAST OPERATING

TORONTO, Dec. 5.—The North East Electric Co. of Canada, Ltd., has begun the manufacture of North East starters, generators and ignition equipment. The company will supply electrical equipment to car manufacturers of Canada who are using North East products as standard. The new company occupies the entire building that formerly housed the Canadian branch of North East Service, Inc. In addition to the manufacture of equipment it will take over the service work in Canada formerly handled by the Toronto branch. J. W. Neun who was formerly manager of the Toronto branch is in charge of the new company.

Along Automobile Row

BOSTON.—The Commonwealth Overland Company has been organized here to market the Overland and Willys Knight lines in Boston with salesrooms and service departments at 838 Commonwealth Avenue in the heart of automobile row.

LITTLE ROCK, Ark.—R. B. Lavender, for seven years connected with the American Southern Trust Company, has resigned to join the sales force of the S. R. Thomas Auto Company, local Dodge Brothers agency.

MOLINE, Ill.—The Service Motor Sales Company of Rock Island has opened its new showroom and garage on Moline's main thoroughfare, Fifth Avenue. Julius Gottlieb of Rock Island is president of the company which has agencies for the Star, Durant and Flint cars in Rock Island, Henry and Mercer counties, Illinois, and Scott and Clinton counties in Iowa.

RALEIGH, N. C.—The interests of B. S. Aronson and O. R. Brown in the H. and E. Motor Company, of Raleigh, were bought by the Horton Motor Company, Inc., which will operate the business purchased at the same location. By this transaction, James Horton, who was a Hudson dealer in 1916, again acquires that line, as well as the Essex.

PENDLETON, Ore.—A contract has been let by G. W. Byers for a new garage building at East Court and Vincent Streets which will provide a new home for the East Oregon Motor Company, Ford dealer.

DECATUR, Ill.—C. H. Wilson has joined the sales force of the Gardner car with the Reo Motor Sales Co., 250 East William Street. The Reo agency handles the Gardner, Gray and Reo.

SPOKANE, Wash.—N. E. Rioth is now the sole owner of the Rickenbacker agency here and the name has been changed from Hume & Rioth to the Rickenbacker Spokane Agency. D. F. Hume no longer serves the firm in any capacity, it is announced. The agency has moved into enlarged quarters at 226 E. Sprague avenue.

SYRACUSE, N. Y.—George B. Tyler, manager of the Ford Buffalo branch addressed a meeting of 75 Ford dealers in this part of the state at a meeting at the Hotel Syracuse.

TOLEDO.—The Overland East Toledo Co., has been chartered with an authorized capital of $25,000 to deal in autos and accessories.

ROCKFORD, Ill.—Salesmen and field representatives of the Burd High Compression Ring Company, manufacturer of parts for motor vehicles, met here in a two day convention. Lectures and factory demonstrations were features, and there was a sales conference in conjunction.

ST. LOUIS.—Gamache Motor Car Co., 2626 Sidney Street, has been named as an authorized Oldsmobile dealer by the De Luxe Automobile Co., Oldsmobile distributors here. J. E., J. A. and D. T. Gamache are proprietors of the concern.

BIRMINGHAM. — Announcement has been made of the installation of a battery department, top and body department, and wood working department in the Packard division of the McCormack Brothers Motor Company of Birmingham.

DETROIT.—Horace Potter, one of the best known Packard salesmen in this city and formerly connected with the Detroit branch of the Packard Motor Car Company, has been named to aid in handling the custom body business of the company, R. E. Chamberlain, general sales manager has announced.

HARTFORD, Conn.—James W. Mayers, proprietor of the Sigourney Garage, in observance of seven years he has been in business entertained his sales service force at dinner at the Hotel Bond Annex. Mayers is an associate dealer in Hupmobiles.

LOS ANGELES.—Canon A. Doyle, formerly general sales manager for Union Motors, Inc., erstwhile Maxwell distributor, and more recently retail sales manager for Geer-Robbins, Chrysler distributor, has joined forces with Arthur J. Shafer, of the Liberty Automotive Service, in the establishing of a metropolitan Hudson & Essex agency.

CLINTON, IA.—The Van Epps Sales Company, for four years Velie agent in this city, has accepted the Peerless agency also and will display both cars on its floors.

ELLENSBURG, Wash.—Valley Chevrolet Company has been organized by J. H. Padavich, Vern Ewan, M. V. Padavich and C. F. Trower.

MILWAUKEE. — The Moore-Overland Co. of Milwaukee, has established a used car department at 778-782 Twentieth Street, between Fond du Lac and North Avenues. The entire building will be devoted to the reconditioning, display and sale of used cars exclusively.

SPRINGFIELD, O.—H. J. Brubaker, president of The Brubeker-Saunders Co., dealer in Willys Knight and Overland cars, announces that Karl Frankenberg will be sales head and that LeRoy McCoy will have charge of the service department.

SPRINGFIELD, Mass.—Sdward J. Donovan has purchased the business of the Parmenter Co., wholesale and retail dealer in automotive parts. Mr. Donovan was for five years treasurer of P. D. Powers, Inc., Hudson and Essex dealer in North Adams and later had the franchise for the same cars in Great Barrington, Mass. For the past two years he has been in charge of Hudson and Essex sales for the Arrow Co. of Springfield.

ST. PAUL, Minn.—The Mack International Motor Truck Corp., 2234 University Avenue, has bought an acre and a half of land at University and Cromwell Avenues, one block from the Overland building, on which it will erect a $400,000 building next year for assembly, sales and service.

PHILADELPHIA. — The Penn-Flint Company of Philadelphia, Pa., announces the appointment of Thomas B. Seaton of Merchantville, N. J., as a Flint dealer.

MONTREAL.—Clermont Motor Sales, Ltd., 4450 St. Denis Street, has been appointed authorized agent of McLaughlin-Buick cars.

GRAND FORKS, N. D.—Buick dealers throughout this district recently attended a conference held by the J. E. Sandlie Co., Inc., wholesale distributors, here. Speakers included Jalmar Evenson, assistant sales manager of the Pence Automobile Co. of Minneapolis, Sam Walton, service manager and Chester Walker, territorial manager of Pence, A. A. English of the General Motors Acceptance Corp., and W. A. McMillan, manager of the Pence branch at Fargo, N. D.

CHICAGO.—A digest of the laws of Illinois which particularly affect the automotive industry, is being published by the Illinois Automotive Trade Association. The book will contain about 24 pages and a feature will be several pages devoted to legal forms of various kinds used by dealers in connection with their business transactions.

PROVO, Utah.—F. J. Russell, Chrysler agent at Kamas, has taken over the Provo agency of this car, succeeding the Richins Motor Co.

SAN FRANCISCO.—F. J. Helderle, formerly secretary and treasurer of the Sterling Products Corp. of St. Louis, manufacturers of replacement parts, has joined the George W. Miller Co., known as the "House of a Million Parts," as general manager here.

SPOKANE, Wash.—C. Lloyd Lockwood, formerly with the Lockwood Motor Company of Missoula, Mont., has been appointed retail sales manager of Ajax cars for the Spokane Nash Company.

CAMBRIDGE, Ill.—T. M. Bloedorn has been named sales manager for the Tracy-White Motor Corporation in this city, joining the firm with which he was associated three-and-a-half years before the Tracy Motor Corporation was taken over by the Kelly Motor Company.

SYRACUSE, N. Y.—The Bresse-Chevrolet Co. of this city is erecting a new four story sales and service building in the heart of the downtown district. The building will be ready for occupancy in four months.

BIRMINGHAM.—J. J. Jordan has been appointed Durant-Star dealer for the cities of Birmingham and Bessemer. Mr. Jordan is well known in this section and will maintain show rooms in both cities.

MILWAUKEE. — The Anger-Chevrolet Co. of Milwaukee has gained distinction of being the first exclusive used car organization to establish downtown Milwaukee headquarters, through leasing of 12,000 square feet of floor space at 614 Grand Avenue. Headquarters of the company have been maintained for many years at Eleventh Street and Grand Avenue, but this site has been purchased for a new hotel.

HILLSBORO, Ore.—Ralph S. Wittenberg is the new Chevrolet dealer, having opened the Tualatin Valley Chevrolet Company.

ST. PAUL, Minn.—The E. B. McGill Motor Co., University and Lexington Avenues, sales agent for the Chrysler, has been bought by W. S. Morris, banker of Wheaton, Minn.; S. C. Odenberg, attorney of Wheaton, and R. W. Sunbeck, district manager for a Duluth wholesale grocery house.

QUINCY, Ill.—Don A. Wheeler and Otto Mohrenstecher have organized the Wheeler Motor Sales Company to handle the Cadillac and Chrysler sales in this vicinity.

SYRACUSE, N. Y.—R. M. Schiele, formerly with the Thomas B. Jeffrey Co. at Kenosha, Wis., has been appointed district manager for the Franklin Automobile Co.

DECATUR, Ill.—The Spiess Auto Sales Co., 244 East Wood Street, has purchased lots at the corner of Church and Wood Streets, and announced that within a short time construction will begin on a one-story and basement garage and display rooms for its Hudson and Chrysler salesroom.

TACOMA, Wash.—The following automobile concerns have recently added the Matched-Unit radio instruments and accessories manufactured by Stewart-Warner Speedometer Corporation, which they will handle in addition to their automobile business; Manley Motor Car Company and Neilsen & Hansen.

With the Associations

Sales Directors Meet

ST. LOUIS, Dec. 5.—Joseph N. Kellerman was elected chairman of the Sales Directors' Bureau, recently formed branch of the St. Louis Automobile Dealers' Assn., at its first meeting held at the Coronado Hotel. L. M. Stewart was named vice chairman. Robert E. Lee, manager St. Louis A. D. A. was named secretary. Sales executives of about 50 of the leading automobile firms of the city were represented by their sales executives.

Lee, who was largely instrumental in forming the bureau, presided. He stated that the name "Sales Directors' Bureau" had been adopted to avoid conflict with the Sales Managers' Bureau of the St. Louis Chamber of Commerce.

"A sales manager is the court of last resort in the contest between the salesman and the owner of the business," Lee said. "He is of necessity a diplomat, a tactician, a psychologist, a glad hander, a philosopher, friend and guide and perforce a master salesman, and a master salesman is one who can show others how to sell, who can bring his own skill and experience and tact to the aid of men on his staff who are on the verge of failure."

Portland Picks Officers

PORTLAND, Ore., Dec. 5.—Members of the Portland Automotive Trade Association chose George L. Sammis of the Sunset Electric company as president, at the annual meeting. Sammis succeeded Edward Burke, who was presented with a Morris chair by the membership in appreciation of his work during the past year.

Other officers chosen were Henry Ward, vice president, Thomas Bradshaw, second vice president, J. E. Nelson, third vice president, A. E. Foss secretary; R. W. Lee, treasurer; Fred Dundee and W. R. Bevens, directors, and the following vice presidents for the various crafts included in the organization:

E. J. Berg, garage and repair shops; E. H. Allen, battery and electrical shops; H. B. Black, machine shops and regrinders; Paul Staiger, paint shops; S. O. Armstrong, sheet metal works; and Paul Bossart, top and trim shops.

Illinois Trade to Meet

PEORIA, Ill., Dec. 5.—The annual meeting of the Illinois Automotive Trade Association has been fixed for Feb. 9 at Springfield. A nominating committee has been appointed to prepare a slate of officers. Considerable business of importance is to be transacted and there will be talks by several men, prominent in the automotive industry.

Pushes Winter Accessories

GREENSBORO, N. C., Dec. 5.—The North Carolina Automotive Trade Association, with headquarters here, is active in its efforts to serve the motoring public while at the same time serving its own interests. One of the association's activities having this dual nature is related to sales of accessories, and, at this season of the year, the organization is endeavoring, largely by means of newspaper publicity, to increase the sales of cold weather necessities and aids to comfort for the motorist.

Among the articles stocked by the accessories dealers to which the association is pointing public attention are heaters, winter fronts and hood covers, automatic windshield wipers, anti-freeze mixtures, chains, robes and gloves.

The association also is particularly active now in its efforts to eliminate, as nearly as possible, the unregulated bright headlights and the lack of tail lights, which are emphasized as dangers to traffic.

Electric Report Soon

CLEVELAND, Dec. 5.—Announcement of the reports of the standardization committee of the Automotive Electric Association on its projected booklet on headlights and on specifications for electric equipment of motor coaches may be expected January 11, according to announcement by Earl Turner, manager of the association, following a meeting of the committee here.

Among the electric experts collaborating on the reports are: Burns Dick, chief engineer of the Wagner Electric corporation, St. Louis, who is chairman of the committee; C. F. Gilchrist, chief engineer of the Electric Auto Lite company, Toledo; T. L. Lee, chief engineer of the Northeast Electric company, Rochester, N. Y.; F. H. Prescott, chief engineer, Remy Electric company, Anderson, Ill., and W. P. Loudon, assistant chief engineer, Dayton Engineering Laboratories company, Dayton, O.

Montreal Boosters Elect

MONTREAL, Dec. 5.—At the annual meeting of Automotive Boosters' Club No. 11, Eastern Canada, held at the Old Colony Club here, the following officers were elected for the coming year:

President, R. M. Oxley, Canadian National Carbon Co.; vice president, Charles Morgan, Raybestos Co.; secretary, T. J. Burke, Pres-O-Lite Company of Canada; treasurer, Fred Hadley, Hall Thompson Co.; directors, W. P. Kearney, Dominion Chain Co., Art Brittain, Lyon Bumpers Equipment, R. Sewell, Champion Spark Plug Co.

The office of president was made vacant by the retirement of A. J. Hopkins who has left for Florida.

Milwaukee Has Celebration

MILWAUKEE, Dec. 5.—Development of automobiles from the infant stages of the industry to its present relative maturity was traced at the dinner celebrating the fifteenth anniversary of the Milwaukee Automotive Dealers' Association held at the Elk's Club. Many amusing features of the early days of the industry were reviewed at the meeting.

The dinner was attended by about 300 of the leading dealers and distributors in the Milwaukee territory and by some of the prominent manufacturers in Wisconsin. In addition special invitations were extended I. G. Hickman, first president of the association, who was an honored guest, and Alfred Reeke, former president of the association, now a Nash distributor in Cleveland.

Mr. Hickman told of the great changes wrought in automobile merchandising since 1910 when the association was formed. James T. Drought, attorney for the organization, vivdly told of some of the early day automobile endurance tests held in this district.

Mr. Reeke lauded the progress made by the Milwaukee dealers' association since the formation of the organization which he directed. Mr. Reeke was also a guest of honor and entertained the dealers with several songs after his talks were completed. Bart J. Ruddle, executive secretary of the dealers' association spoke on the progress and improvement of automobile shows. His talk was illustrated with pictures of the early day motor expositions held in Milwaukee, which drew many laughs from the dealers. Frank Cannon, executive secretary of the Wisconsin Good Roads Association described the progress made by the Wisconsin road construction enterprises of the past few years.

Dr. F. W. B. Achen, president of the association, presided at the banquet.

Radio Trades Organized

LOS ANGELES, Dec. 5.—The Radio Trades Association of Southern California, which embraces in its membership jobbers, distributors, manufacturers' agents, retailers and broadcasters, was formally launched at a meeting held at the Alexandria Hotel in Los Angeles. Meetings will be held once a month throughout the year.

At the organization meeting, Earle C. Anthony, president of Earle C. Anthony, Inc., Packard distributors and operator of one of California's leading broadcasting stations, delivered a report on the recent radio conference held at Washington.

Short addresses given by various jobbers and retailers indicated that the radio business is unnusually active throughout Southern California this year.

Coming Motor Events

Automobile Shows

New York.....Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.....Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Buffalo, N. Y.....Jan. 16-23
Buffalo automobile show by Buffalo Automobile Dealers' Association in 174th Regimental Armory, Carlton, C. Proctor, manager, headquarters, Hotel Statler.

Milwaukee .....Jan. 16-23
18th Annual Automobile Show, Auditorium.

Cincinnati .....Jan. 16-23
Cincinnati Music Hall, Cincinnati Automobile Dealers Association.

Philadelphia .....Jan. 16-23
25th Annual Automobile Show at Commercial Museum Under Auspices Phila. Automobile Trade Assn.

Columbus, O. .....Jan. 18-23
Show in Motor Hall by Columbus Automobile Dealers Co.

Elmira, N. Y.....Jan. 18-23
16th Annual Show, Elmira Automobile Merchants Assn., Inc., N. Y. State Armory.

Kalamazoo, Mich.....Jan. 19-23
Automobile Show in Armory by Kalamazoo Automobile Trade Association

Baltimore .....Jan. 23-30
20th Annual Automobile Show and Second Annual Motor Boat Exhibit, 5th Regiment Armory, Baltimore Automobile Trade Assn., Inc.

Brooklyn .....Jan. 23-30
Fifteenth Annual Automobile Show in 23rd Regiment Armory, under auspices of Brooklyn Motor Vehicle Dealers Association.

Detroit .....Jan. 23-30
Detroit Auto Show in Convention Hall by Detroit Automobile Dealers Assn.

Cleveland, O.....Jan. 23-30
1926 Automobile Show under auspices of Cleveland Automobile Manufacturers' and Dealers' Association. Herbert Buckman manager, in Public Auditorium.

Rochester, N. Y.....Jan. 25-30
18th Annual Automobile Show, Edgerton Park, Rochester Automobile Dealers Assn.

Williamsport, Pa.....Jan. 25-30
Automobile Show by Williamsport Automobile Dealers Assn.

Lowell, Mass.....Jan. 25-Feb. 1
Twelfth Automobile Show in Memorial Auditorium, Automobile Merchants Assn. of Lowell, Inc.

Chicago.....Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

Washington.....Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

San Francisco.....Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bldg., manager.

Washington .....Jan. 30-Feb. 6
Washington Trade Association Show in Auditorium Building.

Cumberland, Md.....Feb. 1-6
Automobile Show in New Armory, Automobile Dealers Assn. of Cumberland.

Scranton, Pa.....Feb. 1-6
Passenger Car Show in Armory, Scranton Motor Trades Assn.

Denver .....Feb. 2-6
Anual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Atlantic City, N. J.....Feb. 2-9
Auto Show on Million Dollar Pier by Atlantic City Auto Dealers Assn.

Springfield, Ill.....Feb. 3-6
Seventh Annual Show in State Arsenal by Springfield Auto Dealers Assn.

Providence, R. I.....Feb. 6-13
Providence automobile show under auspices R. I. Automobile Dealers' Association, Chester I. Campbell, manager, 617 Industrial Trust Bldg.

Toledo, O.....Feb. 8-13
Annual show of Toledo Automotive Trades Association in Civic Center Garage, T. J. Cooper, manager, 925 Jefferson Avenue.

Schenectady, N. Y.....Feb. 8-13
Fifth Annual Automobile Show in State Armory by Schenectady Automotive Dealers Assn.

Syracuse, N. Y.....Feb. 8-13
18th Annual Auto Show, State Armory, Syracuse Automobile Dealers Association, Inc.

Kansas City, Mo.....Feb. 12-19
American Royal Bldg.—20th Annual Show, direction of K. C. Motor Car Dealers Association.

Des Moines.....Feb. 14-20
17th Annual Automobile Show in Coliseum by Des Moines Automobile Dealers Association.

Indianapolis .....Feb. 15-20
Auto Show Bldg.—15th Annual Motor Show, direction Indianapolis Auto Trade Association.

Louisville, Ky.....Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Great Falls, Mont.....Feb. 16-20
Eleventh Annual Show by Montana Auto Distributors Association.

Hartford, Conn.....Feb. 20-27
Automobile show by Hartford Automobile Dealers' Association in State Armory, Arthur Fifoot, manager, Hotel Bond.

St. Louis.....Feb. 20-27
19th Annual Automobile Show, City Market Bldg., St. Louis Automobile Dealers Assn.

Grand Rapids, Mich.....Feb. 22-27
Seventeenth Annual Show by Passenger Car Dealers Association.

Peoria, Ill.....Feb. 22-27
Fifteenth Automobile & Accessories Show, Peoria Automobile Dealers' & Accessories Assn.

Omaha .....Feb. 22-27
Twenty-first Annual Automobile Show under auspices Omaha Automobile Trade Association, Inc., in Municipal Auditorium, A. B. Waugh, manager.

Wilmington, Del.....Mar. 1-6
11th Annual Show, Hotel duPont, Wilmington Automobile Trade Assn.

Boston.....Mar. 6-13
Boston Automobile Show under auspices of Boston Automobile Dealers' Association, Inc., and Boston Commercial Motor Vehicle Association, Inc., in Mechanics' Building, Chester I. Campbell, manager, 329 Park Square Bldg.

Ft. Worth, Tex.....Mar. 6-14
Show in Auto Building at Southwestern Fat Stock Show and Rodeo by Ft. Worth Automotive Trades Assn.

Conventions

New York.....Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago.....Feb. 9-16
American Drivurself Association Annual Convention.

Chicago.....Feb. 1-3
Ninth Annual Convention of National Automobile Dealers Association in La Salle Hotel.

Galveston, Tex.....May 12-13
Tenth annual convention of Texas Automotive Dealers' Association in Galvez Hotel.

Foreign Shows

London and Birmingham.....Feb. 16-26
British Industries Fair of 1926.

Montreal.....Jan. 23-30
1926 Motor Show under the auspices of Montreal Automobile Trade Association, Theo Dorian, manager.

Coming Feature Issues of Chilton Class Journal Publications

January 1—National Shows Number—Automobile Trade Journal.

January 7—Motor Age—National Shows Number.

January 14.—Motor World Wholesale—New York Show Report.

February 4—Motor Age—Chicago Show Number.

February 4—Motor World Wholesale—Chicago Show Report.

February 18—Automotive Industries—Statistical Issue.

JOINS MUSIC MASTER

PHILADELPHIA, Dec. 5.—In order to better take care of its rapidly expanding business, and also help solve the many problems in sales service, the Music Master Corporation has recently established a distribution department. It is expected that the new department will be of great assistance in sales promotion as well as in expediting deliveries to Music Master dealers. H. N. McMenimen has been appointed manager of distribution and placed in full charge of all sales plans and operations. The sales department will hereafter function under his guidance.

RECLAIMING CAPACITY RAISED

AKRON, O., Dec. 5.—To supply the steadily growing demand for reclaimed rubber the Akron Rubber Reclaiming Co. is preparing to increase its capacity 200 per cent by the installation of additional machinery and the construction of another storage room, according to C. E. Bishop, vice-president and superintendent. Other Akron rubber companies, notably the Firestone Tire & Rubber Co., B. F. Goodrich Co. and Goodyear Tire & Rubber Co., are combatting high crude rubber prices by continuing to salvage rubber from discarded manufactured articles.

PACIFIC SHOW PLANNED

SAN FRANCISCO, Dec. 5.—The Tenth Annual Pacific Automobile Show will be held in the Exposition Auditorium here January 30 to February 6 next year. As usual the show will be held under the auspices of the Motor Car Dealers' Association of San Francisco and George A. Wahlgreen, veteran manager will be in charge. Virtually all space is already subscribed. The show will be devoted more extensively than ever to merchandising, to the general public and to meetings, conferences and sales talks. This means that it will be a show for dealers as well as the general public.

Cleveland Car Makers Say November Best on Record

Sales of New Automobiles and Tires Show Slight Decline Early in Month But Recover

CLEVELAND, O., Dec. 5.—The best November on record. Cleveland's entire colony of automobile manufacturers, with one exception, were agreed on this point today as they checked production records for the eleventh month. The single exception is the Cleveland Motor Car Company where 100 workmen have just been laid off temporarily because of a lack of bodies and the inability of the body makers to make prompt deliveries. This unfortunate circumstance prevented the company from hanging up the production record orders on hand warranted.

In the matter of retail car sales the tune must be changed somewhat. The first three weeks of November, although excellent for this season of the year, didn't produce as much business as the first three weeks in October. The final week of the month saw prospects brighten, this being attributed to the holiday season which seems to be getting an early start hereabouts.

Retail tire sales, like retail car sales, showed a noticeable decline over the volume of business for the previous month. Jobbers and retailers of parts all report unusually good business, which seems to coincide with the story told by the parts manufacturers.

Summing everything up, the month of November was most satisfactory for the car and parts manufacturers and the parts wholesalers and retailers, and certainly very far from discouraging for those who retail automobiles.

DEALER LICENSES INCREASE

OLYMPIA, Wash., Dec. 5.—Not only has there been an increase in the number of automobile dealers this year, but License Director C. R. Maybury's record shows that the number of licenses issued to dealers, representing cars used by salesmen, has increased more than 10 per cent. There were 841 automobile dealers licensed last year and they took out 2,997 sets of extra plates at $10 per set. This year the 903 dealers asked for 3,385 extra sets of plates and thus far in 1925 they have paid $76,874.80.

Roadster Plays a Comeback

(Continued from page 12)

closed models but the writer believes that those firms producing an attractive roadster with plenty of speed and power will find a substantial business in this line during the coming year."

Then this one from a company featuring a rumble seat body: "The roadster of today is in reality a five passenger car due to the rumble seat arrangement. The increasing interest may also be attributed to the fact that the roadster is the ideal car for the golf foursome and the compartment is a handy place in which to stow golf clubs. The gypsy curtain at the back of the roadster when removed tends to bring the party closer together so that a party of five riding in a roadster may be as sociable as the same party riding in a closed car. In some weather it is most certainly much cooler riding in a roadster than in a closed car even though the windshield and all windows of the closed car may be open. These advantages may be added to the reasons for the roadster's tremendous popularity in the last year particularly."

BACK IN THE CENTER OF THINGS



The Grand Central Palace, where New York's National Automobile Show will be held Jan. 9 to 14, is in the heart of the city and is readily accessible from the leading hotels and the large railway terminals. It is also close to the Broadway theatrical district. Dealers from other cities who attend the show will appreciate the convenience of this location as compared with that used for the show the last two years. The last two years the show was held in the Bronx Armory, more than a half hour's ride from Times Square by subway and elevated. The trade days at the show this year will be Monday and Tuesday and manufacturers of cars, accessories and equipment are making arrangements to meet dealers at the show on those days when the general public will be excluded. The map above shows the location of the Palace and other points of interest.

NEW PAIGE-JEWETT DEALERS

DETROIT, Dec. 5.—The Paige-Detroit Motor Car Company has appointed new dealers as follows:

Dayton Motor Sales, Dayton, Ohio; T. F. Dreher, Patterson, New Jersey; Taylor County Paige-Jewett Company, Crafton, W. Va.; Stevens Garage, Cadiz, Ohio; R. W. Bort Auto Company, Lyons, N. Y.; E. E. Morrow, North Canton, Ohio; Bernard Lichnir, Bronx, N. Y.; Jones-Amos Company, Columbus, Nebraska; Carl Bingham, Vancouver, British Columbia; and Paige-Jewett Company, Leavenworth, Kansas.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
2850	4-p	Sport-Roadster	1,495
2860	6-p	Touring	1,395
3020	5-p	Brougham	1,595
3070	5-p	Sedan	1,795
3070	.....	Wanderer	1,845
		"8-88"	
3180	3-p	Sport Roadster	1,975
3200	6-p	Touring	1,995
3380	5-p	Brougham	2,250
3450	5-p	Sedan	2,350
3450	.....	Wanderer	2,400
3750	7-p	Sedan	2,550
BUICK		"Standard"	
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
3350	2-p	Roadster	1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Brougham Sedan	1,925
3940	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line	
		(132 in. W. B.)	
4040	2-p	Coupe	$3,045
4155	5-p	Sedan	3,195
4240	7-p	Sedan	3,295
4075	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
4115	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
3920	.....	Roadster	3,250
		(128 in. W. B.)	
4300	7-p	Touring	3,250
3960	.....	Phaeton	3,250
4190	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th Cent'y Sed.	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2415	5-p	Touring	$895
2565	5-p	Touring DeLuxe	1,025
2520	3-p	Coupe	975
2695	5-p	Sedan	995
		"43"	
2775	5-p	Touring	1,095
2950	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2890	3-p	Coupe	1,175
3120	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS		"90"	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
3100	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
.....	7-p	Sedan (135 in. W. B.)	.....
DODGE BROTHERS			
2473	2-p	Roadster	$855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,085
2823	5-p	Spec. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	4-p	Phaeton	$6,650
3920	4-p	Phaeton	†
3980	4-p	Sp. Phaeton	†
.....	4-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT		"D"	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		A-22	
.....	2-p	Sp. Roadster	$900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$765
2395	5-p	Coach	795
FLINT		"55"	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
		With Starter and Dem. Rims	
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN		"11-A"	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER		6A	
3290	5-p	Brougham	$1,595
3070	5-p	Touring	1,395
3030	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	.....	DeLuxe Sedan	1,895
		8A	
3620	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3350	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		D-1	
3360	5-p	Sedan	$1,795
HUDSON		"Super Six"	
3400	7-p	Phaeton	$1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4 d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE "A"			
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3185	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		"23-25"	
3060	4-p	DeLuxe Road.	$1,500
3000	5-p	DeLuxe Touring	1,320
2990	5-p	Coach 2d.	1,245
3160	5-p	DeL. Coach 2d.	1,400
3325	5-p	DeLuxe Sedan	1,680
JEWETT (Continued).		"New Day"	
.....	5-p	Sedan	$ 995
.....	5-p	Sedan de Luxe	1,095
JORDAN		"J"	
.....	4-p	Playboy Road.	$1,695
.....	5-p	Sedan	1,845
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		"55"	
3130	2-p	Speedster	$1,795
.....	2-p	Sp'dster DeLuxe	2,085
.....	4-p	Speedster	1,895
.....	4-p	Sp'dster DeLuxe	2,185
3530	2-p	Enc. Speedster	2,085
.....	4-p	Enc. Speedster	2,185
.....	4-p	Enc. Spdstr. DeL.	2,685
.....	2-p	Enc. Spdstr. DeL.	2,585
3190	4-p	Tourster	1,795
.....	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
.....	7-p	Touring	1,685
.....	7-p	Touring De L.	1,885
3430	4-p	Coupe	2,085
.....	4-p	Coupe De Luxe	2,485
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,485
.....	5-p	Brougham 2 d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Berline Sed. DeL.	3,185
3530	5-p	Victoria	2,185
.....	5-p	Victoria DeLuxe	2,485
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster DeL.	2,585
.....	2-p	Enc. Speedster	2,485
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Enc. Speedster	2,585
.....	4-p	Enc. Sp'd'r DeL.	3,085
.....	4-p	Tourster DeL.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Duxe	2,885
.....	5-p	Brougham Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,095
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,885
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,845
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4460	2-p	Roadster	$4,000
4580	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	.....	Sport Touring	4,500
4750	4-p	Coupe	4,600
4885	4-p	Sedan	4,800
4960	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,300
LOCOMOBILE "48"			
5280	4-p	Sportif Tour	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Drive Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,785
.....	4-p	Coupe	2,265
3400	5-p	Sedan	2,285
3350	5-p	Brougham	2,285
		"90"	
.....	....	Touring	5,500
.....	....	Roadster	5,900
.....	....	Coupe	6,950
.....	5-p	Sedan	7,300
.....	5-p	Sedan (divided)	7,450
.....	7-p	Limousine	7,500
.....	....	Brougham	7,500
.....	7-p	Cabriolet	7,500

MOTOR AGE

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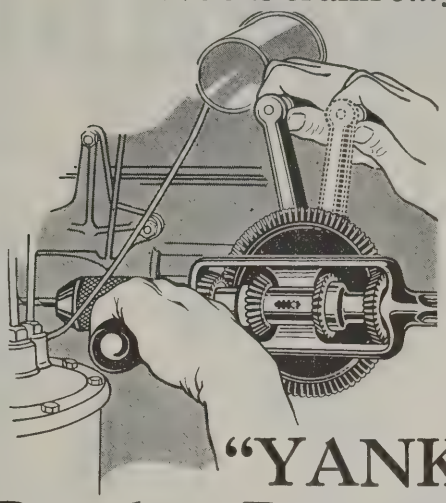
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Even where you can
move the crank *only an inch*



"YANKEE"
Ratchet Breast Drill
Cuts Continuously

That's why garages are buying a second and even a third "Yankee" Drill.

The "Yankee" DOUBLE Ratchet enables you to drill in places too cramped for other drills to operate. It saves lost motion because every movement of crank, whether back or forth, sends drill into work.

And that's only one of five ratchet adjustments. A touch on Ratchet Shifter gives Plain Drill, Left-hand Ratchet, Right-hand Ratchet, DOUBLE Ratchet, or Gears Locked.



A finger touch on Ratchet Shifter gives any one of five adjustments.

Two speeds; you can change instantly without removing drill from work. Just shift lever at base of hub.

No. 1555 (Illustrated) 3-jaw; No. 555, 2-jaw. Hold ½ in. drills. No. 1545, 3-jaw; No. 545, 2-jaw. Hold ⅜ in.

For smaller drilling jobs use "Yankee" Ratchet Hand Drill No. 1530, with five ratchet adjustments.

Some other "Yankee" Tools
Automatic Feed Chain Drills
Automatic Feed Bench Drills
Ratchet Bit Brace
Ratchet Screw-drivers
Ratchet Tap Wrenches
Vises, with Removable Base

Dealers everywhere sell "Yankee" Tools
"Yankee" on the tool you buy means the utmost in quality, efficiency and durability

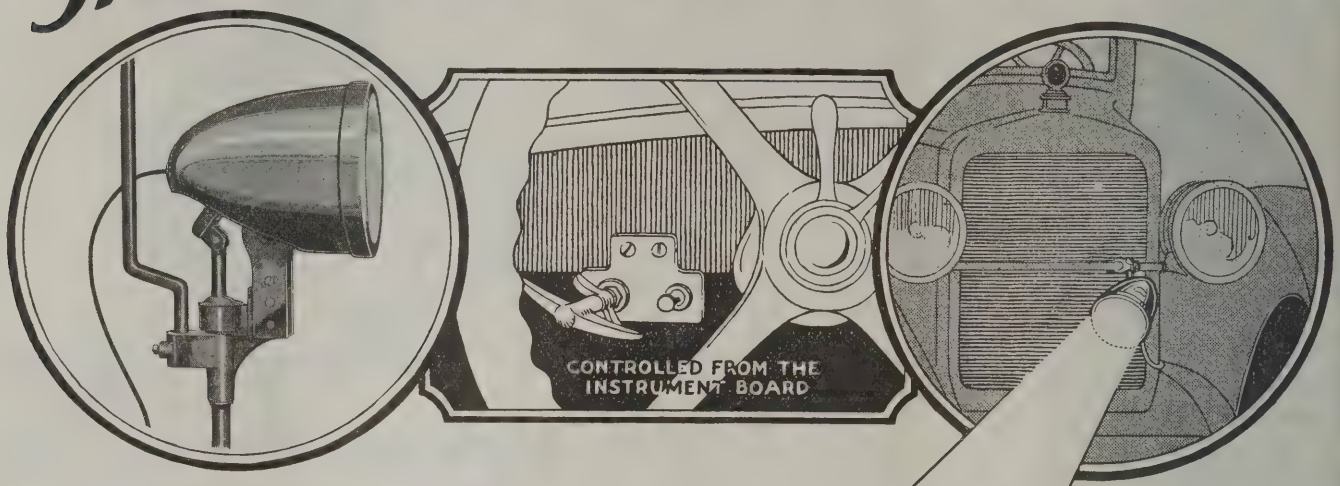


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Make Better Mechanics

The Walden Fore-Lite



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AT

$18.50

The Walden Fore-Lite
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Trade Mark Reg U.S. Pat Off.

Owners Want the Walden Fore-Lite

There is an established and an active demand for the Walden Fore-Lite. It is one of the things that owners WANT to buy.

For that reason it is particularly important for jobbers and dealers to know about and stock it.

Having the Walden Fore-Lite on hand—ready to sell—is not unduly expensive. And even if it were, the quick turn-over dealers are getting makes the initial cost of stocking it relatively unimportant.

The fittings for the Walden Fore-Lite are practically universal. The popular Bullet Type is made in only one model. It operates on any car. There is no dead stock.

For further information, and descriptive literature—if you are not already familiar with the purpose and principle of the Walden Fore-Lite—write us. WALDEN FORE-LITES SELL!

The Walden Company

1114 S. Michigan Ave. Chicago

MOTOR AGE

Vol. XLVIII Chicago, December 17, 1925 No. 25

Summary and Index of Important Events in

This Week's Automotive News

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Utah expects excellent holiday business from rural trade as result of fine crop returns. Page 39.

Introduction of Pierce-Arrow's smaller model aids sale of larger car, recent sales records show. Page 39.

Rebuilding Used Cars to Sell New Ones

Community Motors, Chicago Oakland Distributor Has Struck Medium Between Doing Too Much and Too Little to Trade-Ins In Making Them Salable and Satisfactory



Above is shown a car as it appears before reconditioning. It is a typical example of a car taken in for rebuilding and shows in this case, a mechanic refinishing the cylinder bores. This happens to be the same car shown in the oval.



Here is the way the car looked after passing through the shops of Community Motors, Inc. It is virtually a new car and several refinements have been added. The cowl lights, for example, have been put on. The car carries a new car guarantee.

By B. M. IKERT

SELLING the used car customer a reconditioned vehicle, carrying what practically constitutes a new car guarantee, in the hope that the satisfaction he will have with it may induce him to buy a new car from them is one of the sales promotion plans of Community Motors, Inc., Chicago Oakland representatives.

But in addition to this the company believes firmly in developing a used car clientele and to that end seeks to give customers who buy these cars the same treatment as that handed out to the purchasers of new vehicles. Community Motors feels that as long as it has to contend with used cars it is far better to make a real business of merchandising them than to curse them as a necessary evil.

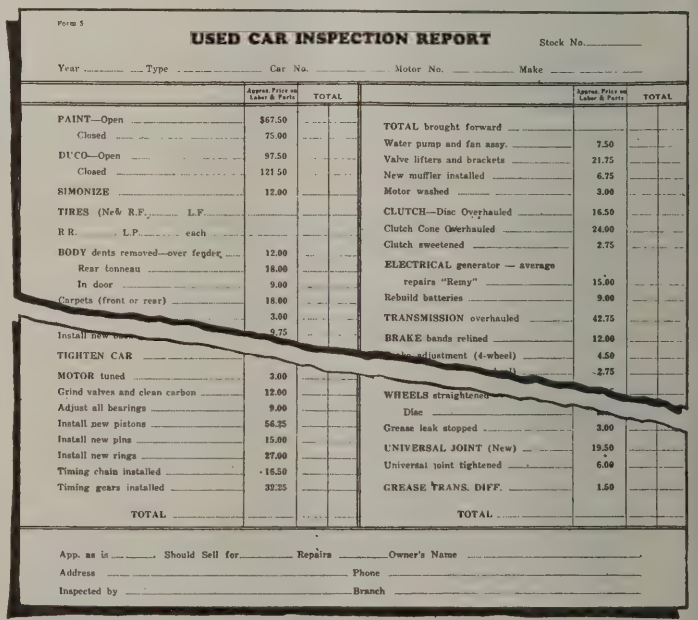
This company is in business primarily, of course, to sell Oakland cars. Clean sales naturally are the most desirable. At the same time Community Motors knows as well as all dealers know that trade-ins are inevitable.

Instead of making these trade-ins liabilities and deadwood, they are turned into assets—salable merchandise. All because this company uses good judgment in what it takes in as used cars and because it does a real job of rebuilding them.

There are those who say it is best to sell used cars in the condition they come in. Others do not bother with them at all, while still others go the extreme in rebuilding them.

Several enterprises of the past have shown it does not pay to tear used cars down to bed rock and rebuild them. It is too costly and you cannot get out of them the money that went into the rebuilding. It is generally a mistake to take a 1922 model and rebuild it into what virtually is a current model of that particular make.

It also is not sufficient in most cases to merely slap a new coat of paint on a used car when the chassis of that car is not mechanically right. True, the customer is



Form 5

USED CAR INSPECTION REPORT Stock No.

Year ... Type ... Car No. ... Motor No. ... Make ...

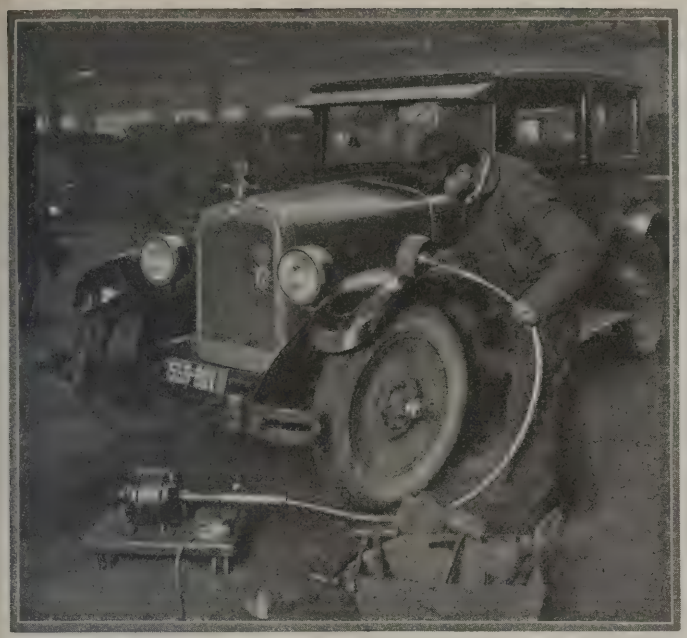
	Approx. Price on Labor & Parts	TOTAL		Approx. Price on Labor & Parts	TOTAL
PAINT—Open	$67.50		TOTAL brought forward		
Closed	75.00		Water pump and fan assy.	7.50	
DUCO—Open	97.50		Valve lifters and brackets	21.75	
Closed	121.50		New muffler installed	6.75	
SIMONIZE	12.00		Motor washed	3.00	
TIRES (New R.F. ... L.F. ... R.R. ... L.P. ... each			CLUTCH—Disc Overhauled	16.50	
BODY dents removed—over fender	12.00		Clutch Cone Overhauled	24.00	
Rear tonneau	18.00		Clutch sweetened	2.75	
In door	9.00		ELECTRICAL generator — average repairs "Remy"	15.00	
Carpets (front or rear)	18.00		Rebuild batteries	9.00	
	3.00		TRANSMISSION overhauled	42.75	
Install new ...	9.75		BRAKE bands relined	12.00	
TIGHTEN CAR			... adjustment (4-wheel)	4.50	
MOTOR tuned	3.00		...	2.75	
Grind valves and clean carbon	12.00		WHEELS straightened		
Adjust all bearings	9.00		Disc		
Install new pistons	56.25		Grease leak stopped	3.00	
Install new pins	15.00		UNIVERSAL JOINT (New)	19.50	
Install new rings	27.00		Universal joint tightened	6.00	
Timing chain installed	16.50		GREASE TRANS. DIFF.	1.50	
Timing gears installed	33.25				
TOTAL			TOTAL		

App. as is ..., Should Sell for ... Repairs ... Owner's Name ...

Address ... Phone ...

Inspected by ... Branch ...

The success of the plan used by Community Motors, Inc., in reconditioning used cars is largely due to the thorough manner in which the branch manager makes out the used car inspection report, shown above. The company knows from the report exactly what it will cost to recondition the car and from this can quote the car owner the proper allowance for his car.



Machinery and equipment play a big part in the shops of Community Motors, Inc., and no doubt the time saving effected by proper equipment is largely responsible for cutting down operating expenses. Here, for instance, is shown a motor driven wheel used for dressing down superfluous metal on a welding job. Naturally this is much faster than the hand operated rasp.

largely influenced by the paint, but there must be good value in the car under that paint. Paint means little when the battery goes to pieces or the timing chain slips a tooth.

There must be a happy medium somewhere between doing nothing to a used car and completely rebuilding it. From the success the company is having it would seem Community Motors neither does too little nor too much to its used cars. The work is commensurate with the price the company can get for such a used car and the buyer of it gets approximately a new car.

New Car Prospects

The company feels if the owner of one of its reconditioned used cars drives such a car for a year or more with satisfactory results he is very apt to come back to the establishment when he is in the market for a new car. The logic behind this is good and Community Motors is prepared to show that the plan works out in precisely that manner.

Discretion naturally is exercised in taking in used cars The company knows exactly the makes of cars that have a resale value and confines itself to reconditioning these cars only. There are five branches of Community Motors in Chicago and in every case the branch manager passes judgment on the cars to be taken in for allowance on new car sales. He either accepts or rejects them. If the car is too old or of a make difficult to sell it is not accepted.

A full report of the car's condition is made by the branch manager and back of every item is placed the approximate price to recondition it. The company knows what it can get for the car when it has been reconditioned and the mechanical report shows the cost of reconditioning. Hence subtracting this from the former indicates the price which the company can allow the customer for the car.

How Far to Go

Now, in the rebuilding of any motor car it is a question of just how far to go.

Some concerns have tried complete rebuilding, even to stripping the car down to the bare frame and then one by one rebuilding the various units until there was virtually a new car when all was complete. That is carrying the rebuilding plan to one extreme.

Then we have those who put on a little paint here and there, fit a new tire, install a new battery perhaps, and then call such a car a reconditioned car. The purchaser of such a car gets little more than he would had he bought it before this "reconditioning". This is the other extreme.

There must, then, be a point somewhere between these two extremes, where a purchaser of a rebuilt car gets exactly what the name rebuilt implies.

From our recent observations in the shops of Community Motors we believe this institution works on a



A view in the trim shop of Community Motors, Inc. In every case where the top structure is worn or is in need of refinishing, it is customary to put on new material, new moldings, etc., in order that the structure may be in keeping with the repainted body.



The company uses pyroxylin finishes in painting the cars and naturally these are applied by air brushes which saves time and insures a good durable job. The company also maintains a good wood working shop for rebuilding damaged bodies.



All of the machine work on connecting rods, bearings, etc., is done by skilled machinists. The machine shop of the Community Motors, Inc., is fully equipped with machine tools and other fitments to handle every conceivable kind of job likely to be encountered in reconditioning chassis.

plan whereby not too much nor too little work is done upon its cars rebuilt in its own shops.

Looks is no doubt the first requirement in a motor car and to that end Community Motors has an elaborate paint shop wherein its cars are refinished. But before any paint is applied the body is put into condition. All dents are removed and broken fenders are straightened and welded. The company has found welding such fenders is very practical. The welded joint is strong and all superfluous metal is brought down to the surface by an electrically driven wheel, which is by far a quicker and better method than the old hand operated rasp method.

While the car is being painted the radiator shell, lamp rims, hubs, and similar parts are sent to a nickel-plater and come back by the time the body is refinished. Meanwhile, if the top material does not pass inspection, it is removed and a new covering applied.

There is a carpenter shop which takes care of all body repairs requiring the forming of door pillars, sills, windshield headers, strainers, etc. This department is equipped with power-driven band saw, planer and other wood-working machinery.

Specialists take care of certain work. Thus there is the blacksmith shop wherein craftsmen take care of all such work as straightening axles, frames, welding, and forming special parts requiring forge work.

Well Equipped Machine Shop

The machine shop is excellently equipped and in this connection it is interesting to note that the machinists do all the fitting of parts requiring accuracy. Thus all piston and ring work, bearing work, valve work, etc., is done by machinists, leaving the other mechanics to do only the tearing down and assembling. By thus centralizing the work better control and uniformity of product are assured.

Little delay is encountered in the execution of the work owing to the thoroughness of the inspection report made out for each car. This report in a sense constitutes the repair order.

A copy of the used car inspection report blank is reproduced on these pages and it will be noted that this report has been arranged in about the way a person would judge a used car. Thus the item of paint comes first, because it is the finish which impresses one first. Then follow tires, body, fenders, etc., until the mechanical units are reached.

The prices quoted are those which a customer would have to pay in the shops of Community Motors if the work were done in the ordinary course of service. Thus, if a customer wished to have a windshield glass installed, the valves ground and carbon removed he would pay $9 and $12 respectively.

When the branch manager inspects the car he jots down the prices as given in the column marked "Total" and adding together these prices tells him exactly what it will cost to recondition the car.

Dragging Brake Tests

Naturally after brakes have been relined or adjusted a test must be made, because in correcting one fault the mechanic may have created another and the brakes may be dragging.

A simple rolling test by which the mechanic can test the brakes is given by Mr. G. C. Mather, chief engineer Paige-Detroit Motor Car Co. Here is what he says:

"Fortunately, brakes don't go bad all at once, and as they become less and less effective the driver just naturally applies them earlier and more energetically; however, in emergency, he cannot stop so quickly as he should, so that he is risking accident as long as the brakes are not at their maximum stopping efficiency.

"The opposite fault with brakes, on the other hand, may exist without the driver's realizing it, though if he did he would be just as eager to correct it as to repair brakes that fail to stop the car efficiently. This second fault is dragging brakes—brakes that are too tight, and therefore exert a constant drag on the engine, with a corresponding increase in fuel consumption. On an upgrade climb, the least drag affects the performance of the car.

"Here is a test that anyone can make:

"On a well-paved level highway, attain a speed of 30 m. p. h. then shift into neutral and coast. Begin timing the deceleration when the speedometer shows 25 m. p. h.; at the end of 60 sec. the car should still be rolling 5 miles an hour or faster. If it isn't, look for dragging brakes.

"A more certain test can be made, and is well worth while. Jack up both rear wheels, and with the shift lever in neutral, turn each wheel forward by hand, first one and then the other. If the brakes are free, the opposite wheels should turn backward, easily and evenly. Any 'swishing' sound or resistance indicates that the brake drums are making contact with the bands.

"If the bands are too tight, readjust them. In many cases, however, the dragging is due to out-of-round bands, which must then be trued up."

Business Cases Reported

Volume One of the Harvard Business Reports has been published by A. W. Shaw Company, Chicago, to be sold at $7.50 a copy. This volume of over 500 pages contains reports of 149 business cases selected from over 3,500 cases collected by the Harvard Graduate School of Business Administration through its Bureau of Business Research.

Each case presents an actual situation which arose in real business, the actual method by which the situation was met, and the reasons which inspired its selection as an example. The decision stated in each case is that of the business firm and in no instance has the Harvard school injected its own editorial opinion.

These reports are expected to furnish precedents and examples for the guidance of business men just as the law reports of the various states furnish precedents and examples for the guidance of lawyers and courts. Other volumes of business reports are to be published from time to time.

Here's How "Chet" Hassell Sells 'em Automotive Gifts For Christmas

A Few More Days to Go and Do Likewise

SHEPPARD GARAGE CORP.
240 SECOND STREET
NIAGARA FALLS, N. Y.

November 23, 1925.

Motor Age.,
5 So Wabash Ave.,
Chicago, Ill.

Gentlemen:

I am attaching copy of a letter that I am sending to all our customers, in conjunction with the "Give something for the car for Xmas" campaign.

First of all let me state that I am a firm believer in the "Ask 'em to buy" campaign. Motor Age sold me on that proposition quite some time ago, and I find that our Accessories sales have increased over 34% this year, principally due to the fact that when a customer comes into our service station, I look over his car, and determine just what certain accessory he can use to the best advantage, on that particular car. While I do not sell them 100%, nevertheless I do get a huge percentage of this business.

I am also enclosing a copy of a small "Add" that I am running in our paper for one month, ending Christmas night. The reason for my selling them "Chet" Hassell, along with their accessories, is because I believe if we make this sound more like a personal transaction, we can sell the Ladies. This is from past experience.

I would like for you to publish the copies attached, as I believe that should every Service Manager use something along this line, he will swell his sale of Accessories, which is incidentally good business for his house. Along that line, the more money he makes, the larger his salary can be.

Thanking you for this service, I am

Yours very truly,

SHEPPARD GARAGE CORPORATION.

A. Chester Hassell
Service Manager.

ACH/WFR

"CHET" HASSELL is a service manager. He was not satisfied with his income, so he decided to increase it by selling accessories to customers whose cars came into the shop. He looks over the car and decides what articles of equipment the vehicle needs. Then he makes his proposition to the owner. That's a year 'round business.

But at the Christmas season Mr. Hassell brings in added profit by promoting the sale of automotive merchandise for Christmas gifts. This year he started running an ad in the local newspapers a month before Christmas and will continue it up to the evening of Dec. 24, inviting the public to let him help them select their Christmas gifts. He also devised a very effective circular letter to send to all his customers and prospective customers. This letter is reproduced here.

Did you ever think of giving something for the car for "Xmas"?

Let "Chet" Hassell help you select some useful gift, at

SHEPPARD GARAGE CORPORATION
240 2nd Street,
NIAGARA FALLS, N. Y.

How "Chet" Hassell advertises to sell automotive gifts.

SHEPPARD GARAGE CORP.
240 SECOND STREET
NIAGARA FALLS, N. Y.

Well folks, no doubt you are doing considerable Christmas shopping at this time. We always remember Dad and Brother, also a great many of our friends, with a tie, a pair of socks, silk shirt, cuff buttons, an umbrella, etc.

Have you ever thought of "giving something for the car for Christmas." You know every car owner has a great pride in his car, and wants it dressed up so it will look it's best. If you ride in that car, you will feel a certain pride also, especially if you were the donor of say, a pair of cowl lights, dome lights, parking light, cigar lighter, step plates, rear view mirror, automatic windshield cleaner, skid chains, trunk, spring covers, motormeter, radiator lock cap, rear fender guards, or possibly a heater.

Why not call at 240 Second Street, and ask to see "Chet" Hassell, who will help you select what is most suitable for the car you have in mind.

We have small catalogs with numerous items listed. Call 'phone 147, leave your name and address, and "Chet" will be glad to mail you one of these catalogs, if you cannot come to the garage in person.

Don't forget, - "Something For The Car For Christmas" - this year.

Yours for better service,

SHEPPARD GARAGE CORPORATION.

By A. Chester Hassell
Service Manager.

ACH/WFR

Letter used by "Chet" Hassell to get Christmas business.

Monthly Flat Rate Service Plan Builds Big Business in Texas



N. J. NEWBY

Head of system servicing cars and trucks for flat rate monthly fees.

Proper Maintenance to Prevent Costly Repairs Is Keynote of System Established by N. J. Newby

SERVICING motor vehicles, under contract, for a flat rate of so much per month per vehicle and making money on it is what the Newby Garage System down in Texas is doing and making a great success of it.

N. J. Newby of Dallas inaugurated the flat rate monthly maintenance system for motor vehicles at Fort Worth some four years ago. Garagemen hooted at the idea, but Newby stuck. Today he operates seven flat rate service shops in as many Texas towns, is establishing the eighth and soon will extend his system to New Orleans, Kansas City, Oklahoma City and other larger cities.

The Newby system is unique and simple. The Newbys entered into a regular contract with individuals and corporations to service motor vehicles at a flat charge of $8 a month. They have simply applied the old adage of "an ounce of prevention is worth a pound of cure," or a "stitch in time saves nine," to the garage business and found it went over big. It has proved a big saving in repair bills to operators of motor trucks and shows a nice profit to the Newbys. The Newbys say they make money preventing repairs.

The Newby argument in soliciting business for the flat rate monthly service is simple, direct and appealing to most business houses.

For example a business concern operates a fleet of 20 trucks. Chances are this firm must employ two mechanics to service these trucks at a salary of $240 per month and rent a place where repair and service work can be done at $40 per month, making a total of $280. In addition the fleet owner must furnish tools and maintain tow-in and trouble cars at heavy cost. The Newbys do the whole thing for $160 a month.

Here is what the Newbys agree to do for a flat rate charge of $8 a month per motor vehicle:

To furnish skilled labor, tools and pull-in service necessary for repairs and upkeep of vehicles.

To inspect and grease once each week for the first four weeks after signing up, and once every two weeks thereafter.

To tighten and adjust all parts, replace broken and worn parts, including accidents, wrecks and burnt out bearings.

To keep their garages open and ready for service all hours, day and night.

To maintain a pull-in service all hours, day and night, by which clients' machines in city limits will be towed to garage without charge and from without city limits at reasonable cost.

To keep trouble car ready for service at all hours, day or night, for benefit of clients whose machines may go dead in action, and repairs must be made before trip is completed.

To furnish all parts used in replacing broken or worn parts, and all grease and oils used on clients' machines at regular manufacturers' list price.

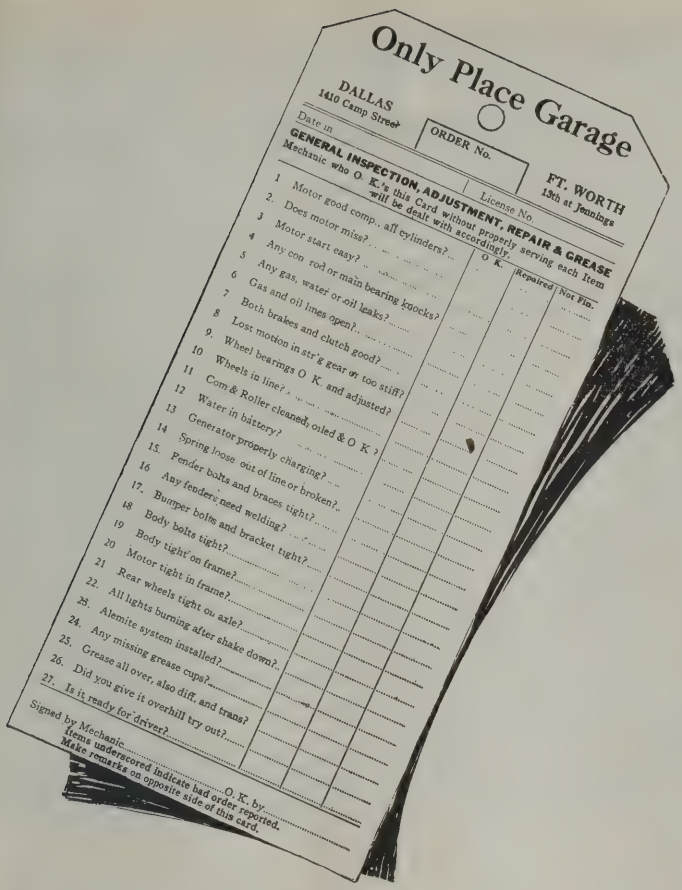
To make no extra charge for labor in connection with removing or replacing parts to be welded, soldered, heated or reground, and to charge not more than prices prevailing at reliable garages for welding, soldering, heating of such parts, or for boring cylinders.

The Newbys do not include tire trouble repairs, recharging batteries, magneto work, repairs on tops, curtains and bodies, washing, polishing and storage in the flat charge of so much a month per vehicle. They assure clients charges for that line of work will not be more than those prevailing at reliable garages.

The Newbys will not enroll part of the total number of motor vehicles of any individual or corporation used for commercial purposes. The entire number must be enrolled before the flat rate contract obtains.

The Newbys will not accept motor vehicles for the flat rate service unless such vehicles are in good condition. Vehicles offered not in good condition, will be placed in acceptable condition at prices prevailing at reliable garages for such work.

The flat rate per month service may be terminated by either party on ten days' notice. If the client terminates the service and there have been accident repairs or motor, front or rear end dissembled and repaired in 60 days prior



Inspection card used as guide in Newby's monthly flat rate service system

to the notice given, the regular charges prevailing at reliable garages for such work will be made.

The Newbys do not buy, sell or exchange motor vehicles of any kind. They are not accessory, parts, equipment, tire or battery merchants. They do not operate their shops in the ordinary manner. Their service is confined to persons or concerns having motor vehicles enrolled with them on a flat basis of so much a month per vehicle.

The Newby system is something like insuring motor vehicles against being out of commission because of damages or repairs. The owners pay a nominal sum monthly and are assured their vehicles will always be in running order. They take no risk. They simply enter into an agreement to pay the service charge monthly, plus the regular list prices for parts, oil and grease and cease to worry about repair bills.

Actual experience taught the Newbys that seventy-five per cent of repair bills on motor vehicles was due to lack of proper adjustments and lubrication at the proper time. Experience also taught them the life of the wearing parts of motor vehicles could be doubled by proper care. In the school of experience they learned that in the majority of repair jobs the labor necessary to remove and replace worn out or broken parts, costs more than the parts themselves.

With these things in mind the Newbys have established a service system for motor vehicles, designed primarily to prevent repairs, rather than making repairs after the damage is done.

Citing some examples of why they must keep machines in tip-top condition under the Newby system, N. J. Newby, originator of the idea, said nearly every Ford axle ever broken was broken near the hub and that the break was caused from lack of proper lubrication. He says any Ford service station charges $2 for towing in a Ford and makes a labor charge of $6 for replacing the axle. The axle itself is then charged to the customer at the regular list price. With the Newbys, the tow-in and the labor in connection with replacing the axle are included in the flat monthly charge. They make a profit of 34 cents on the axle. He says they can't afford to do an $8 labor job for 34 cents, hence they prevent the axle from breaking by proper lubrication and adjustments and make a profit on the lubricants.

For overhauling the rear end of a Ford the regular labor charge is $7, Mr. Newby says. In some cases the new parts to be replaced cost as much as $18. The Newbys make a profit of $4.50 on the parts in that case, but the labor is included in the monthly charge. He says for that reason they can't afford to let rear ends of trucks burn up. They keep them greased, oiled and adjusted and make a profit on the oil and grease.

They have worked the system down to where the shops pay a profit on service alone, because from 200 to 250 vehicles are serviced in each garage every month. From five to seven persons are employed in each garage and the salaries range from $18 to $60 a week. In addition to labor charges, included in the flat charge per month, the Newbys make a profit on parts and on work done on batteries, tires, tops, bodies, curtains, magnetos, washing, polishing, storage, welding, soldering, painting, cylinder jobs, and on oil and grease.

The Newbys are now operating seven garages in the larger cities of Texas. These are located at Dallas, Fort Worth, Waco, Wichita Falls, Houston, Weatherford, and Mineral Wells. Another garage is to be established at Cleburne and still another in New Orleans. About 80 per cent of the vehicles serviced in these shops are trucks. The remainder are passenger vehicles, usually driven by commercial travelers.

Shops Closely Related

These shops are closely related to each other. Each shop has a complete list of all the vehicles signed up by the other shops together with the secret marks on those vehicles. Any vehicle signed with one shop is entitled to service in any of the other shops.

All parts for the Newby garages are bought by the headquarters shop at Dallas. They are distributed among the shops on requisitions and charged to them at wholesale prices.

To facilitate the work in the Newby garages considerable amount of specializing is done. A certain line of trucks is attended to on certain days and nights. For instance department store trucks may be taken care of on Monday night and furniture store trucks on Tuesday night. Wednesday nights may be given over to bakery trucks and Thursday to gravel and cement trucks. As nearly as possible the same crew of men work on the same line of trucks all the time. The Newbys have found, under ordinary circumstance, one fast mechanic can service 10 to 13 trucks in one night.

The contract entered into by the Newbys with their clients is a heavy card form suitable for filling in special filing cases. These contracts are made in duplicate and numbered serially. As many as three sets of contracts may be made with one corporation, depending upon the kind of vehicles to be serviced. Such would be the case with a gravel concern operating ten 1-ton trucks in outside service, three 5-ton trucks in sundry service and fifteen trucks in gravel hauling because these would take a flat service rate of $8, $9 and $14.50 a month, per vehicle.

Refinishing With Pyroxylin *Over Old Paint*

By B. M. IKERT

A MATERIAL called Opex Binder Surfacer which makes it possible to refinish an automobile with pyroxylin paint without removing the old paint has been produced by the Sherwin-Williams Co. This material is recommended for that class of automobiles upon which an expensive repaint job is not justified. This method, however, is said to produce a good looking and durable finish at a price that almost any car owner can afford and that yields the dealer a good profit.

Because the old paint is not removed a great deal of time is saved and the cost is reduced. By this method a car may be refinished in two or three days at the most and although dealers can best determine the price they should get for such a job it is stated that many have found it can be profitably sold for around $35 to $40.

Dealers who are equipped with spray outfits and other devices for the application of pyroxylin paints no doubt will find this method a good one to use in refinishing used cars before offering them for sale. At the same time they have the satisfaction of knowing that the new finish will not peel and scale off, provided, of course, that the old surface is not already at the point of flaking or falling off when the pyroxylin material is applied.

The Sherwin-Williams Co., who developed this system for use with Opex enamel, does not offer it as a cure-all for every kind of repaint job, but does recommend several different methods of using the system, which if carefully followed, are said to produce highly satisfactory results at reasonable cost.

Three methods of applying pyroxylin paint over the old surface through the use of the Binder Surfacer, known as Opex methods A, B and C, are described as follows, by the Sherwin-Williams company:

METHOD A

Preparation—Clean and sand off the car thoroughly. All loose paint, grease, oil and dirt should be removed. The adherence of the product to the old paint will be perfect, providing rust, grease, dirt, oil are eliminated. However if you apply Opex to paint which is almost ready to fall off, there is no reason to expect that the new finish is going to hold the old on. Many refinishers are using ammonia to clean off the varnish and then sand off the remaining color varnish.

1st Operation—Apply one coat Sherwin-Williams Oil Metal Primer and Sealer No. 12. Air dries in 12 hours. Apply directly from can or slightly reduced with turpentine. If a forced dry system is employed, we recommend Sherwin-Williams Oil Metal Primer and Sealer Red No. 36, which will dry in 4 hours at 150 degrees F. When dry, sand lightly to knock off the nibs.

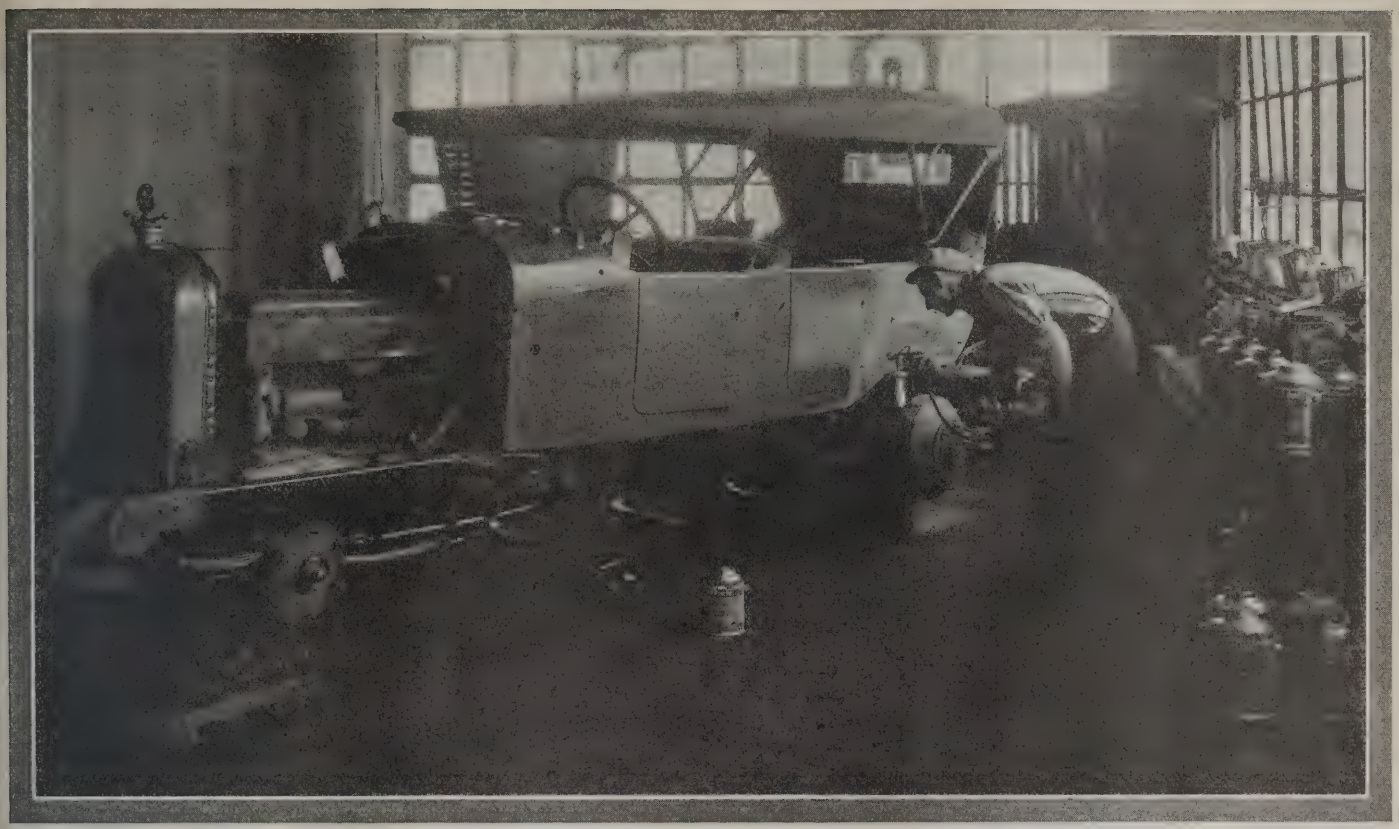
2nd Operation—Apply one light coat of Opex Binder Surfacer Gray, light or dark, reduced with equal parts of Opex Binder Thinner No. 2. This material dries for recoating and sanding in one hour.

3rd Operation—Apply successive coats, depending upon the condition of the original finish. Usually two or three coats of Opex Binder Surfacer Gray, light or dark, are sufficient to give a foundation which when sanded out, leaves a perfectly smooth finish ready for the application of the Opex Enamel.

4th Operation—Wet sand to surface



A corner in an Opex lacquer spray department. This shows, besides some of the equipment used, the manner of removing the hood, radiator shell and similar parts



Applying the Opex binder surfacer. The binder seals in the original finish and acts as an intermidate coat on which to build up the lacquer finish.

with fine sandpaper. Deep cuts or scratches should be avoided. A hard, glossy surface should be secured.

5th Operation—Apply Opex Enamel.

METHOD B

Preparation—Clean and sand off the body and car completely, taking all care suggested with regard to oil, grease, etc., as in Method A.

1st Operation—Spray one very light coat of Sherwin-Williams Opex Binder Surfacer Gray, light or dark, reduced with equal parts of Opex Binder Thinner No. 2 directly over the cleaned and sanded body.

2nd Operation—Apply successive heavier coats of Opex Binder Surfacer Gray, light or dark, reduced as above until sufficient material has been applied to sand to the proper surface.

3rd Operation—Apply Opex Enamel, reduced with equal parts of Opex Thinner No. 10.

METHOD C

Preparation—At times for the cheapest type of job, nothing is desired but a freshening up of the surface after all bare metal spots have been touched up with Sherwin-Williams Oil Metal Primer and Sealer No. 12, the Opex Enamel is applied directly over the old finish without surfacing. It must be understood that Opex Enamel will not in any way surface a car, but only gives it a new brightened up look. The car should be cleaned and prepared the same as in the two previous systems, taking special care that all grease, dirt, oil and loose paint are removed.

1st Operation—Spray one light coat Opex Enamel, reduced with equal parts of Opex Binder Thinner No. 2. A heavy coat will probably raise the old finish. A dust or very light coat if applied properly will never raise the old finish.

2nd Operation—Apply two or three additional coats of Opex Enamel, thinned with Opex Thinner.

In addition to these three there is the method as used by many of the large custom shops in and around New York City. This is known as the "Metropolitan Division Schedule For Passenger Car Finishing" and is described by the company as follows:

Operation No. 1—Wash off all dirt and grease from surface and in crevices and then sand with No. 0 dry sandpaper, dusting off the entire body and wiping same with a cloth dampened in gasoline.

Operation No. 2—After the entire surface is dusted and cleaned, apply the first coat of Opex Clear Binder CPL 130, thinned with equal parts of Opex Thinner, RX 04502, which is to be sprayed over the entire surface. Putty glaze where necessary.

Operation No. 3—Apply one or two, or possibly three, surfacer coats (depending on the condition of the body) with Opex Surfacer Light, RX 28703, thinned with equal parts of Opex Thinner RX 04502. Where a darker finishing color is desired, use RX 28704 Dark Surfacer. After one hour the last surfacer coat may be sanded with No. 220 Wetordry Tri-M-ite sandpaper wet.

Operation No. 4—After obtaining a smooth surface, apply another coat of Clear Binder, the same as the first coat. Give this Opex Binder coat a very light sanding with No. 320 Wetordry Tri-M-ite sandpaper wet, allowing one-half hour drying time.

Operation No. 5—Then use Opex color coats in the 31000 line, thinned with equal parts of Opex Thinner, Rx 04502. It will be necessary to apply two of these color coats if a dark color is used, and three coats if the shade is a light color. These colors should be allowed to dry at least one-half hour between coats. If an exceptionally high class job is required, we suggest sanding lightly these color coats with No. 400 Wetordry Tri-M-ite sandpaper wet.

Operation No. 6—Following this method you will obtain a fairly high natural gloss. If this gloss is not enough, a polish will be necessary which will give the appearance of a varnish job.

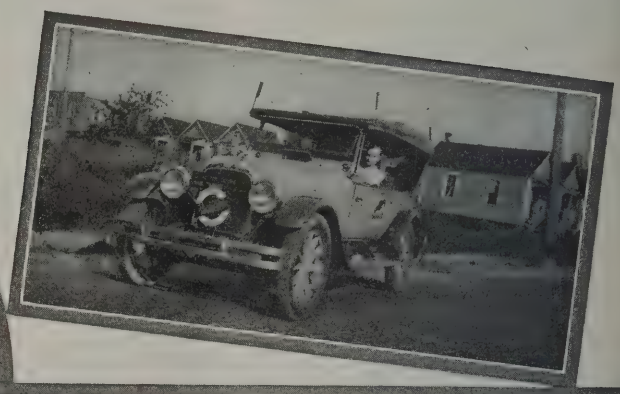
In this particular method reference is made to Opex Clear Binder CPL 130, which is a different product than the Binder Surfacer in that it has no pigment. In this system the Clear Binder and the pigmented Binder Surfacer are used together to obtain the proper surfacer. This method naturally costs the refinisher more money because there are more coats applied and more material used but this is the method that should be particularly recommended for the very best type of refinishing job.

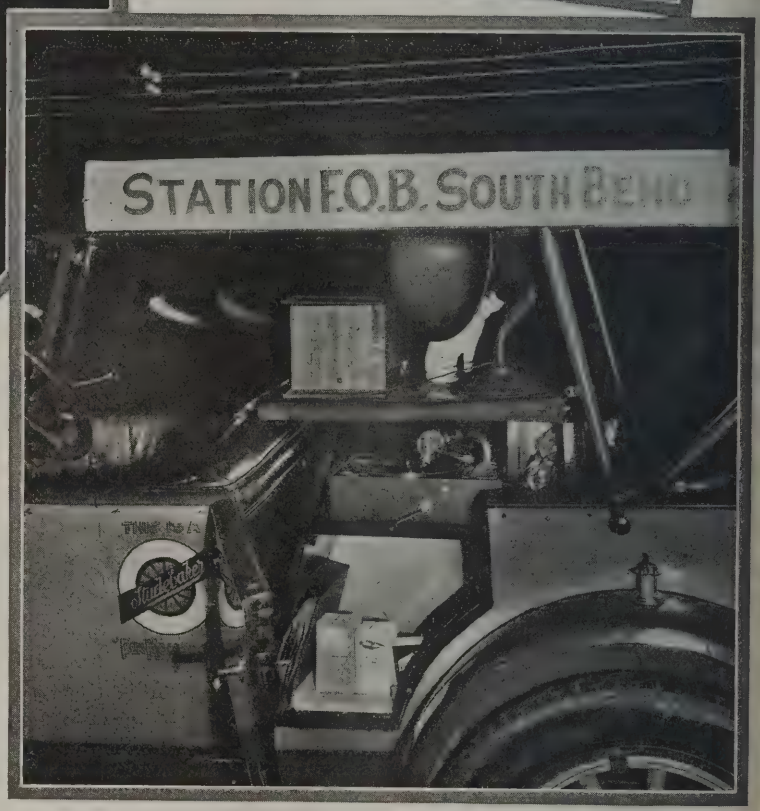
Then there is still another method that would be a little quicker and a little less expensive than the Metropolitan Division's schedule which combines the Clear

(Continued on Page 19)

Advertising Car a Big Hit in Florida







Studebaker Distributors in Southeastern State Send "Struttin' Stude" from Town to Town as Means of Attracting Attention.

Upper left: Night view of advertising car stressing lighting equipment; upper right: Front view of "Struttin' Stude" as seen in the daytime; lower right: Showing how musical equipment is installed in the advertising car. The car, which undoubtedly is one of the most highly decorated vehicles put on the road, has made a hit wherever it has gone.

BY dressing up a car in a novel way and displaying it in the towns of Southwest Florida, O. B. Jones, publicity manager of the Peninsular Motors Company, Studebaker distributors in Tampa, St. Petersburg, and other West Coast towns of Florida, has captured prominent news space in many of the newspapers and attracted an avalanche of attention to the line of cars that his company distributes.

"Struttin' Stude" makes a hit wherever she goes. The car is undoubtedly one of the most highly decorated affairs ever put on the road. It is equipped with 16 electric lights of various colors, two bumpers, six balloon tires, a windshield wiper, 1925 Duplex roller curtains, cigar lighter, rear vision mirror, sun visor, electric signs front and rear, snubbers, spring covers, a radio, a Victrola with even the Victor dog in evidence, side windshields, a literature compartment and a clock.

A radio "riggin'," which circumnavigates its upper works, is the most distinctive thing about the first-hand impression given out by the "Struttin' Stude". Mr. Jones alleges that the thing really works, and he takes pleasure in demonstrating. In order to make assurance doubly sure, however, he packs along a small Victrola, hidden in a compartment just below the loud speaker.

The car cost the company very little to equip. It is a 1923 model, rebuilt in the shop of the Peninsular Motors Company, the work being done so skillfully that the car looks new. The accessories and extra equipment were donated by a large wholesale automotive house of Tampa.

Mr. Jones uses the car as his personal vehicle, and it never fails to attract attention wherever driven, especially at night when its white, green and red lights are all a-glow. Literature carried in the car is distributed to spectators as they collect about the novel arrangement.

Refinishing With Pyroxylin Over Old Paint

(*Continued from page* 17)

Binder CPL 130 and the pigmented Binder Surfacer mixed together in equal parts, of which only two coats are necessary. The object here is to cut the cost of application and materials a little and obtain practically the same results.

Many may wonder why a Clear Binder is used at all. The company from years of experience and testing states that the adherence depends upon the amount of binders used (cotton and gum), and grade as follows:

1. Clears
2. Enamels
3. Surfacers
4. Fillers

Therefore, a clear has greater adherence than any other product. However, a pigmented product has the advantage of greater covering capacity, more durability, etc. Hence, a combination of the two makes the ideal surfacer.

Also, the greater amount of non-solvents present, such as benzol and other cheap substitutes, have a greater effect upon paint undercoaters. Hence, a good thinner having 100 per cent solvents, clears having about 80 per cent solvents and enamels having 60 to 70 per cent solvents have less effect on paint undercoaters than a surfacer having 50 to 60 per cent solvents and fillers 30 to 40 per cent.

In every case the company recommends the use of its No. 2 Binder Thinner for reducing purposes where applying Pyroxylin over the old surface. Naturally there is a very good reason for this. This particular Thinner is made up with a large percentage of expensive medium and high boiling point solvents without any non-solvents being present whatsoever.

Any shop can determine the grade of thinner they are using by watching its drying speed and noting its smell. The higher priced the thinner the more easily applied, the slower drying, better flowing and less rubbing necessary. The cheaper thinners with their cheap solvents and substitute non-solvents have a much more rank odor than a good thinner which is made up of the better low, medium and high boiling point solvents.

The Sherwin-Williams Co. believes the possibility of applying Opex over the old surface opens up another new field for the dealers not only because they can turn out more cars in less time and at less expense as far as the car owner is concerned, but also because they can afford to finish their used cars in lacquer and thus make them much more saleable.

Kissel Has Sliding Front Seats in Two Models

IN presenting a new Kissel feature, sliding front seats, the company has added to the comfort of front seat occupants by permitting them to adjust their seats to any position to meet their convenience.

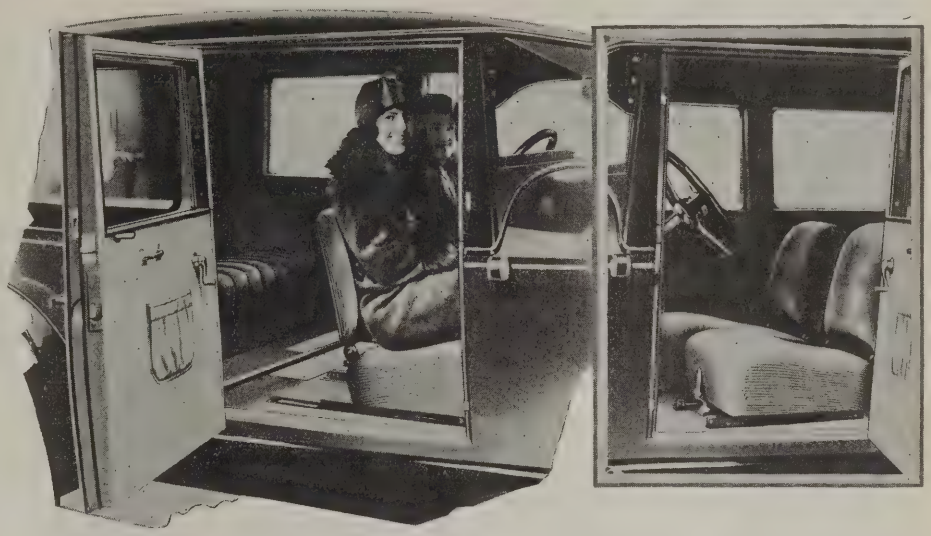
Instead of being mounted stationary to the floor with hinges as are commonly used, Kissel has mounted the seats upon a track and with the aid of rollers they easily and noiselessly slide forward or back to suit the driver's convenience. A neat nickeled lever is mounted on the front part of the seat which releases the rollers so sliding is possible and also serves as a lock to retain the desired position.

The advantages claimed in this innovation is that the seat on the driver's side being readily adjustable it can be set at any distance from the steering wheel and pedals to suit the individual proportions of the driver. Also when entrance or exit is desired to the rear, all that is necessary is that the person sitting on the right side slide forward without leaving the seat and ample passage is immediately made available without inconveniencing anyone.

The track is so constructed that it fits level with the floor and no interference is experienced by the party entering the rear or the person occupying the sliding seat.

The models equipped with sliding seats are the six cylinder brougham and the straight eight brougham.

The adoption of the sliding front seat in no way changes the angle of the cushion or back, and in a recent test of the seat by a representative of this publication the ease with which the seat can be shifted to the most desirable position was very apparent. The operating lever is so mounted that it can be easily reached by the occupant of the seat, and there is nothing intricate about the locking mechanism that would cause sticking of the seat in any but the desired position.



Left: Right side view showing front seat occupant slid forward allowing ample space for entering or leaving rear. The track is so constructed as not to interfere with the smooth floor surface of entry way; right: Left side view showing driver's seat and neat conveniently located adjustment lever. About 4 in. are available for adjustment to suit driver's most convenient position from wheel or pedals.

New Style Oakland Landau Sedan

A new style Landau-Sedan featuring a longer body, new colors and larger windows is now in production at the Oakland Motor Car Co's plant.

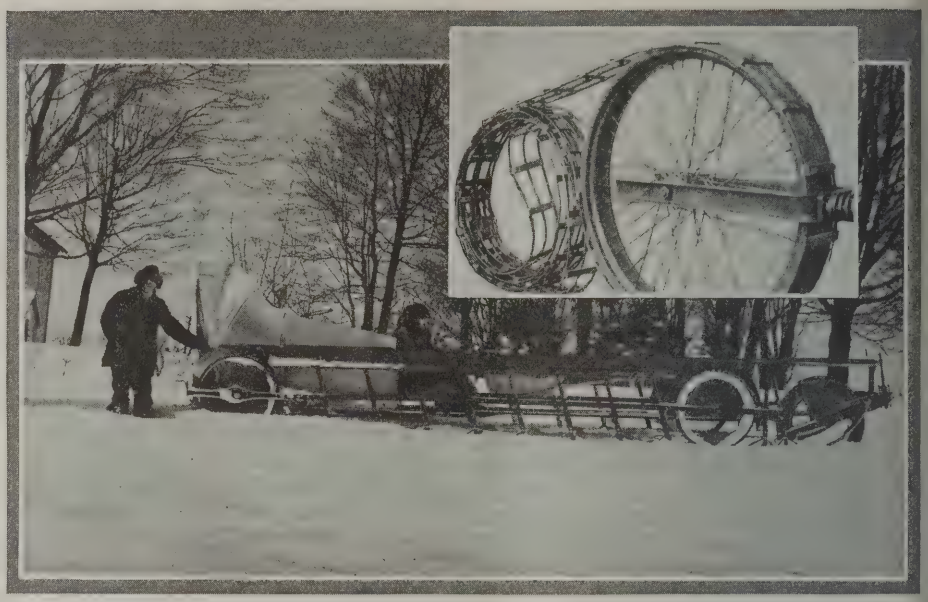
The most noticeable change in the exterior appearance of the new sedan is the adoption of square finish rear windows in place of the former type. Rear corners of these windows have been rounded to conform to the rear roof lines of the body. The bows on either side mounted on the leather rear quarters have been retained. In addition to lengthening the body to provide more room in the tonneau, the rear seat has been widened.

A pyramid gray finish has been adopted for the lower body with the upper structure black. Red striping is employed along the belt line on the hood louvres and on the artillery wheels. The price of the car remains unchanged at $1,295 including complete equipment in the form of snubbers all round, front bumper, rear fender guards, automatic windshield cleaner, dash gasoline gage motormeter and car heater.

Autosleigh Makes Snow Travel Easy

The Autosleigh, it is asserted, makes possible the exploration and development of Northern Canada and other Artic regions that will aggregate millions of miles of service that does not now exist.

At a race and Carnival at Timmins, Ontario, an Autosleigh made 12 miles an hour over snow 2½ feet deep and surmounted 10 feet of hillocks of snow as if they never existed while its regular speed on a foot depth of snow averaged 16 miles an hour.



View of Autosleigh which combines features of Alaskan dog sled, automobile and caterpiller track. Insert—Showing closeup of front wheel and driving cable

THROUGH the invention of a practical combination of the Alaskan basket dog sled, the gasoline motor of the automobile and the caterpillar track of the world war tank, an Alaskan inventor has evolved the Autosleigh which is now doing yeoman service in British Columbia and Alaska carrying mail, passengers and express.

The AUTOSLEIGH, which is 23 feet long and 36 inches from center to center of the runners and weighs 1400 pounds, is made of hickory thoroughly braced with rawhide, making a strong, light and flexible construction. The wheel carrying the caterpillar tracks are mounted in light steel channels and carry solid rubber tires. The caterpillars are of three armored steel cables 2½ inches apart, connected by a flat steel crossbar, every 6 inches. The runners which carry the weight of the machine and its load, extend from rear driving wheels to the front idler wheels. Each runner carries two steel shoes, the center cable of the caterpillar passing between them.

The steel shoes of the runners slide over the top of the crossbars connecting the cables to the caterpillar. When traveling in soft snow, the snow forms a thin layer on the tops of the crossbars, and, the steel shoes of the runners pass over it with the natural snow between the crossbars and prevent the runner from touching the crossbar, thus reducing friction! The caterpillar is therefore buried in the snow immediately under the runner, thus giving absolute traction in any kind of snow. The power plant is mounted on the rear axle and the driver rides on the rear, thereby tilting up the front end, making it easy to steer the machine with a sharp disc adjustable mounted in the extreme front and controlled by an ordinary steering wheel in the driver's compartment.

An air cooled motor 3½ in. bore by 4 stroke, 4 cylinders, flat opposed, two connecting rods being mounted on one throw of the crankshaft, making this the same length as a two cylinder motor of the same bore and stroke. Steel cylinders, aluminum alloy heads, and overhead valves are used. A multiple disc clutch, 3 speeds and reverse transmission, and a worm gear drive in the rear axle, constitute the unit power plant.

A drum carrying 150 feet of cable is mounted on the rear axle where the full power of the motor, through the transmission and worm gear, may be delivered to it giving a pull of 5,000 pounds, which is available for use in climbing steep hills and pulling loaded machines out of different places.

This drum is operated independent of the caterpillar and rear axle. The cargo space is 12 feet long and 33 inches wide. The load carried ranges from 400 to 1200 pounds depending on the condition of the snow. The speed ranges from 3-15 m.p.h, depending on obstructions under snow.



Stewart model 17x, 6-cylinder, 1½ to 2-ton truck which is built in two wheel-base lengths, 145 in. and 160 in. The engine has a 3¼ in. bore and 4½ in. stroke and develops 60 h.p. on the block. The rear axle is of the spiral bevel gear type fitted with a Brown-Lipe differential mounted on Timken roller bearings. Wheels are cast steel spoke type with Firestone demountable rims. Electric lights, starter, horn, tool kit, oil gun and jacks are regular equipment and the truck is finished in black enamel and red wheels

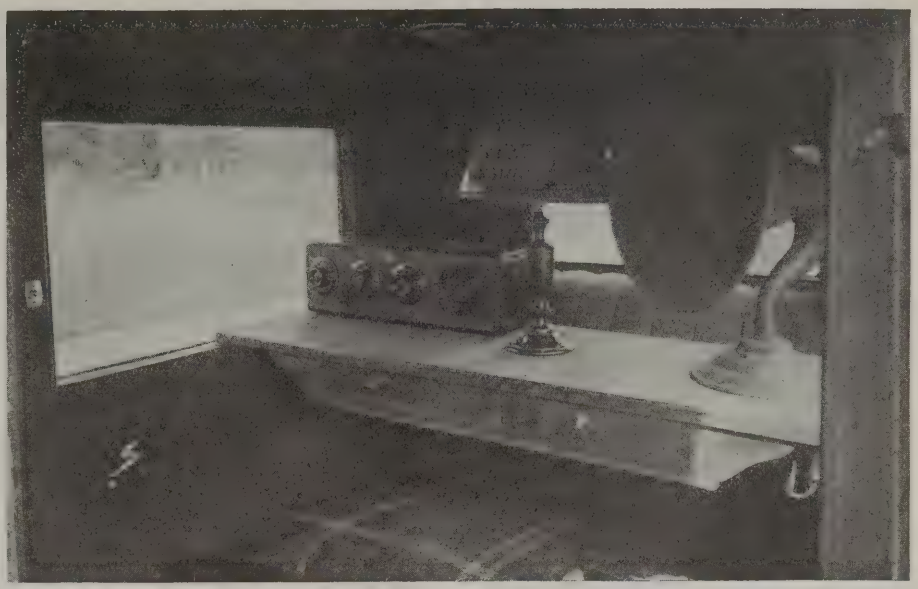
Automobiles Used to Sell Radio Sets

AUTOMOTIVE dealers who handle radio in order to swell their balance at the bank can smooth the road to increased profits by demonstrating their receiving sets in the automobiles they handle. This method has been found to be a successful means of getting the name on the dotted line in the case of Bennet & Elliott, Ltd., Atwater Kent distributors of Toronto, Canada.

Each Car is fitted with a Model 20 Compact, Model M Radio Speaker and an advertising lamp mounted on a neatly constructed shelf across the rear seat and carefully cushioned to avoid jarring. A fan-shaped antenna extends from the radiator cap over the top of the car, and ground connection is made on the frame of the car when running.

This idea has been found to be particularly adaptable when selling radio among scattered populations or to farmers. Such an arrangement makes possible a large number of demonstrations each day over a wide territory. Whenever the car is standing a more effective ground can be made by driving a rod into the earth, thus enabling the demonstrator to receive from great distances.

A valuable asset in a scheme of this kind is to be able to pull into the curb in front of your prospect's house with the radio set playing merrily away on the rear seat. It is a convincing demonstration and speaks for itself



No radio sales argument is more effective than an actual demonstration of a receiver's potentialities. Here is a way that automobile dealers can carry radio to their prospects.

Hercules Aerial Mast

S. W. HULL & CO., Cleveland, Ohio, have announced a new series of "Hercules" aerial mast. The masts are made in three standard lengths, 20 ft., 40 ft. and 60 ft. and are of all steel construction. A specially designed foundation eliminates the use of concrete and permits all sizes to be erected in the earth or on the roof. Each mast is tested to withstand a 500-lb. pull at the top. Each mast outfit is furnished complete with galvanized guy-wires, mast-head pulley, etc.

Big Show at Atlanta

ATLANTA, GA., Dec. 11.—The first annual Radio Exposition was held at the large Atlanta Auditorium the week of December 7th, with more than sixty companies exhibiting at the show representing the northern and eastern manufacturers of radio sets and equipment, and the dealers and jobbers handling radio goods in Atlanta. The show was sponsored by the Atlanta Radio and Electrical Association, and is claimed by officials of this organization to have been the largest radio show in the United States during 1925 outside of Chicago and New York. Thousands visited the show each day, and as a special effort to make the show a really worthwhile merchandising affair selling was the keynote of its purpose, and companies exhibiting reported that they did several thousand dollars worth of business during the week of the event.

Prominent among the exhibitors were the Atlanta automotive companies which also handle radio goods, and it was largely due to the efforts of this group that the show became a reality.

Among the automotive companies in Atlanta handling radio goods who exhibited at the show were the following: Hopkins Auto Equipment Co.; the Alexander-Seewald Co.; the Southern Bearings and Parts Co.; the Southern Auto and Equipment Co.; the Automotive Sales and Service Co.; the French Battery Co.; the Stewart-Warner Products Co.; the Philadelphia Storage Battery Co.; the Electric Storage Battery Co., and a co-operative exhibit of the various magneto service stations in Atlanta.

Carry Radio to Neighborhoods

FORT WAYNE, IND., Dec. 9.—Carrying out an aggressive distributing campaign here, the Wayne Auto Equipment company is naming as dealers for Neutrowound and Superton radio apparatus garages, filling stations and auto repair shops.

The campaign is bearing immediate results. Nightly residents of Northern Indiana, and of northeastern Ohio hear one or both of the sets distributed by the Wayne Auto Equipment company.

The use of filling stations as sales depots has been demonstrated as especially valuable, according to M. G. Boyce, vice president and general manager of the Wayne Auto Equipment company.

"Hundreds of motorists stop at filling stations each night," he points out. "In addition the filling station, especially the filling station that also handles accessories or does repair work is the neighborhood gathering place in many instances."

The advertising value of well-selected and well-placed sales agencies in garages and filling stations is immense, F. H. Cutshall, president of the company, declares. The garages and filling station dealers are being backed up by an intensive advertising campaign.

In but a few cases has the Wayne Auto Equipment company deviated from its policy of naming automobile repair shops, filling stations and garages as dealers. In several instances where no automobile shop was found in the neighborhood which the distributors desired to cover furniture stores were named.

"Our policy is to concentrate our sales in the automobile business as much as possible," Mr. Boyce declares. "These men are progressive, they know salesmanship and they have access to the audience which must be reached for the intensive sale of radio apparatus."

Home Demonstration Outfit

A HOME demonstration outfit, consisting of a specially constructed case providing space for wet A batteries, B batteries, loud speaker, tubes and a cable for connection to the receiver is manufactured by the Electrical Research Laboratories of Chicago, Ill., which points out the bad impression which may be created when the housewife to whom a set is being demonstrated views the array of batteries, wires and other accessories usually strewn about. The case also provides an easy way of carrying these various accessories.

MOTOR AGE'S PICTURE PAGES



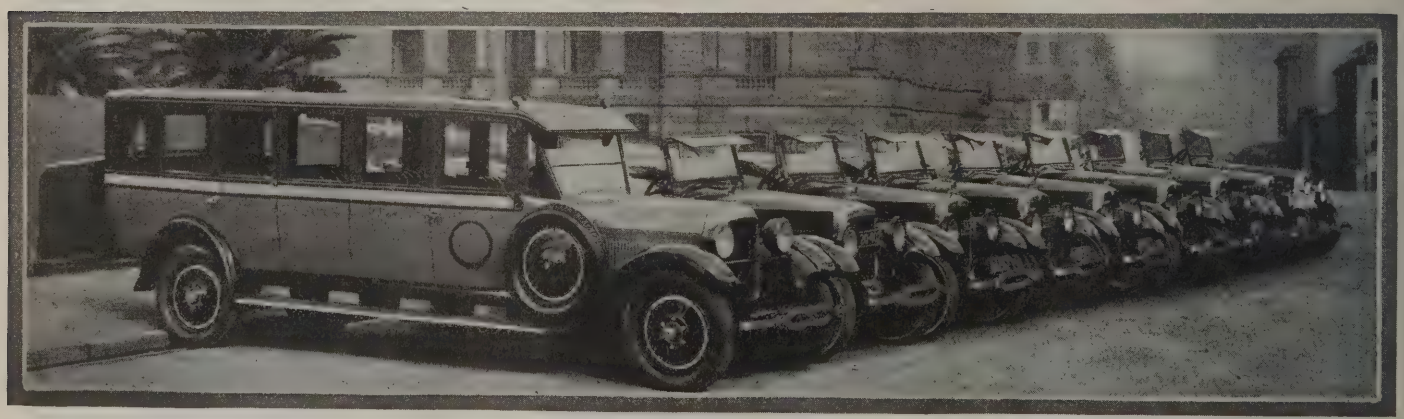
FLASHING THE MESSAGE. Above: Gigantic Rickenbacker sign displayed by Don Hogan, Denver dealer at 1227 Broadway. The ring revolves.



TRANSPORTATION MUST BE SERVED. Above are shown the Liberty Tunnels at Pittsburgh, Pa., the longest in the world for automobiles. They are built of concrete under a lofty hill and are 3,000 ft. in length. They cost approximately $500,000.

EQUINE ARISTOCRACY. Right: Prize-winning California horses travel in style in a Reo bus built especially for their accommodation. This surely represents the last word in personal transportation of equus caballus, commonly known as the horse.



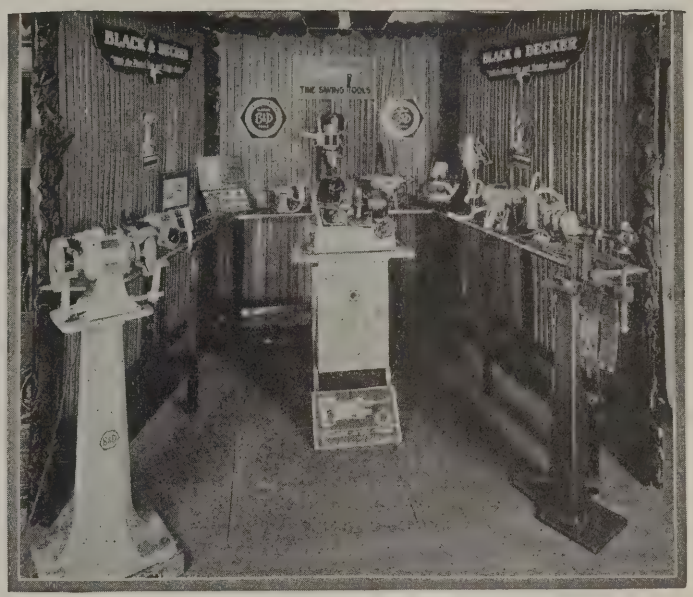


FAITHFUL PUBLIC SERVANTS. Fleet of Studebaker Big Sixes and one of the new buses sold to the New South Wales Travel Agency of Sydney, Australia. The bus is used for tourist transportation to Katoomba, 62 miles distant over the Blue Mountains.

OF AUTOMOTIVE INTEREST



TO KEEP THE OLD BUS RUNNING. Facilities of the Cassidy Tire Co., Portland, Oregon, and associates, where local and out-of-town motorists are made to feel at home and where they may supply their transportation needs.



WHERE EQUIPMENT SELLS ITSELF. Actual demonstration is the best way to sell shop equipment. This is one section of the shop equipment display in the store of Onandaga Auto Supply Co., automotive jobbers, at Syracuse, N. Y. This section shows tools used for carbon cleaning, valve grinding and reseating, and brake relining .



GETTING UP IN THE WORLD. Left: Oakland Six which crossed the six highest peaks in the Sierra Nevadas and climbed to an altitude of 30,900 ft., traveling 730 miles in 30 hours and 42 minutes, smashing the "Six Peaks" record.



TEDDY SHOULD HAVE KNOWN THEM. Peter Vander Plaate, his wife and 14 progeny, who travel in four automobiles instead of railroad trains because it is cheaper. The picture shows the rebuilt Buick Six which they bought in Spokane en route from Saskatchewan to California. It costs them from $50 to $60 a day to travel

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▪ ELECTRICAL ▪ FLAT RATES
SHOP ▪ LEGAL ▪ PAINT & TRIM ▪ ACCOUNTING

The Carbureter Manual Tells the Story

Q.—What is the best way to determine the size of carbureter for an engine?—M. C. Van Sandwyk, South Africa.

This is done by referring to the service manual put out by the carbureter concern in question. There does not seem to be any simple way of making this determination. In one carbureter service manual for example, a one inch carbureter of a certain model is intended to take care of engines having a piston displacement of from 195 to 265 inches, while another model carbureter of the same nominal size, that is, one inch, is supposed to take care of engines having a piston displacement of from 133 to 184 inches. In addition to these variations there are four or five different venturis which are used for different size engines, while in other carbureters there will be various jet sizes to use depending on the engine size and characteristics. For this reason it would be well to get in touch with the representative of some good carbureter or else negotiate with some representative carbureter concern and handle their products. If you do this you will be supplied with a manual which will give you all the information you need for selling and servicing the carbureter in question.

Q.—There seems to be a difference in engine power between the Superior model Chevrolet and the latest Chevrolet, Series K. Why should this be?

The bore and stroke is the same on both, that is, 3 11/16 in. by 4 in. so that unless the compression is slightly different on the two cars to which you refer there should be no appreciable difference in the power. The condition of an engine will have a lot to do with the power it develops and if one car you are observing has pistons and rings which fit well and valves which seat tightly, it may operate more powerfully than another car which is not in such good condition.

HERE'S HELP ON OIL PUMPING AND BEARING LEAKAGE

We have a letter from one of our subscribers in which he gives his experience and that of a number of other mechanics in overcoming oil pumping in a Dodge Bros. car. He approves of the points brought out in the Clearing House section of the November 12, 1925, issue of MOTOR AGE and mentions a few others. Among these is included piston and connecting rod alignment, for a poorly aligned rod which causes the ring lands to touch the cylinder wall will cause oil pumping similar to the action caused when a Ford piston ring is put in upside down. A number of other practical points are brought out and he also gives a method for stopping rear main bearing leakage on Oldsmobile cars. If any of our subscribers are interested in his methods we will be glad to make copies of the letter and mail to those interested. He claims that his work on Oldsmobile cuts down oil consumption from a quart every 50 or 60 miles to less than a pint in 500 miles.

CORRECTION ON SHORTENING CHEVROLET MANIFOLD

On page 26 of the November 12, 1925 issue of MOTOR AGE we had an article entitled "Shorter Manifold Works Better." This article referred to changes in a Chevrolet. We are now advised by Mr. Harold Scott of Marmarth, N. D., that the instructions given were not accurate, his letter being as follows:

"I call your attention to your reply to H. W. Wright, Allen, Kansas. The late short or "ramshorn" type manifold for the series K or 1925 Chevrolet positively cannot be applied to a 1923 Chevrolet, and I do not think it can be applied to the 1924 car, on account of the steering mast being too close to the engine, for the longer "horns," further the carbureter flangs would have to be changed as it is at right angles to the engine, fitting the new type carbureter.

The writer cut out 5 in. out of the original manifold on a 1923 coupe and installed the air distributers and tube in the head and made an average of 25 plus to the gallon of gas on a camping trip and got a smoother running machine at slow speeds, also a touring car (same year) so equipped made 31 miles to the gallon on a test run here, used the original carbureters on both cars.

Would advise Mr. Wright to install the air distributers and tube, or "air straighteners" with the original carbureter and shorten the original manifold but he will either have to counterbore the cylinder head intakes or he can cut special gaskets so as to get air tight joints, Chevrolet part No. 344161, intake manifold top-flange gasket will have to be installed, with the air straighteners. —Chevrolet Fan, Harold Scott, Marmarth, N. Dak."

The Readers' Clearing House

THIS department is conducted to assist dealers and maintenance station executives in the solution of their problems.

All questions are answered direct by letter, so the name and address should be given in full. This saves waiting for the answer to be published, which sometimes occurs several weeks late, depending upon the space available.

Readers' names will not be published with articles, if a request to this effect is received with the letter.

Inquiries not of general interest will be answered by personal letter only. Emergency questions will be replied to by letter or telegram.

Also state whether a permanent file of MOTOR AGE is kept, for many times inquiries of an identical nature have been made and these are answered by reference to previous issues.

Addresses of business firms will not be published in this department but will be supplied by letter.

Technical questions answered by B. M. Ikert and A. H. Packer; Legal, by Wellington Gustin; Paint, by G. King Franklin; Architectural, by Tom Wilder; Tires, by a Practical Tire Man; General Business questions, by MOTOR AGE organization in conference.

Ambitious Car Climbs Out Of the Ruts

Q.—We have a Chevrolet touring, 1924 model which guides hard. Although it does fairly well on level ground you cannot hold it in ruts. It will climb up on the sides every time. We have aligned the wheels or had them tested and they seem to be all right. One man told me the axle was bent. Should the axle set up straight or should it lean forward or backward? Will slippage of the axle in the spring holes cause this trouble? The trouble seems to be mainly on the right wheel as it pulls to the right more than to the left. We have tested for lost motion and can find none. The car has been run nearly 10,000 miles. We have oversize tires on the rear and old worn tires on the front. Would this affect the steering?—Weldon Teague, Texhoma, Okla.

The worn tires will have some effect. The writer has noticed that in driving in car tracks it is easier to stay in when new tires are used. The upper portion of the axle should be tilted backward slightly. If the axle is tilted too much it tends to cause front wheel wobble and if not tilted enough it tends to cause the car to steer off either to the right or to the left. From your description we are inclined to believe that the axle is not tilted back enough at the top.

It might be well to measure accurately from the center of the rear axle to the center of the front axle at both the right and left side of the car. This will tell you whether slippage of the axle on the springs has put the axle out of time. You might also refer to page 26 of the October 29th, 1925, issue of MOTOR AGE which shows a method of lining up the wheels on a Ford car. The procedure will be quite similar on a Chevrolet.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

This Is Like Plan Number 630 But Different

Q.—We are contemplating the erection of a new building and have observed with considerable interest the plan No. 630 submitted by you for the Clen E. Tope Motor Co., Prague, Okla., in the October 15th, issue of Motor Age. If you have any more complete drawings of this plan we would certainly like to see them.

We have an 80 by 140 ft. lot on the northeast corner, the 80 ft. fronting on the main highway and the 140 ft. on a side street. We would like to have your idea on a plan similar to this if you would think it practicable, using 75 ft. on highway and extending back 100 ft. or 120 ft. We are not particular about the used car market shown in the plans referred to. The building could be whatever depth was necessary to make easy and convenient drives to the filling station. We contemplate handling about the same lines of business as the Tope Motor Co.—Western Motor Co., Sweetwater, Texas.

We regret that we have no more complete drawings of the design made for the Tope Motor Company. It would, however, be quite impossible to use this plan on a smaller lot and consequently we have made a new layout for you following the style of the other as near as possible and at the same time making it conform to your lot.

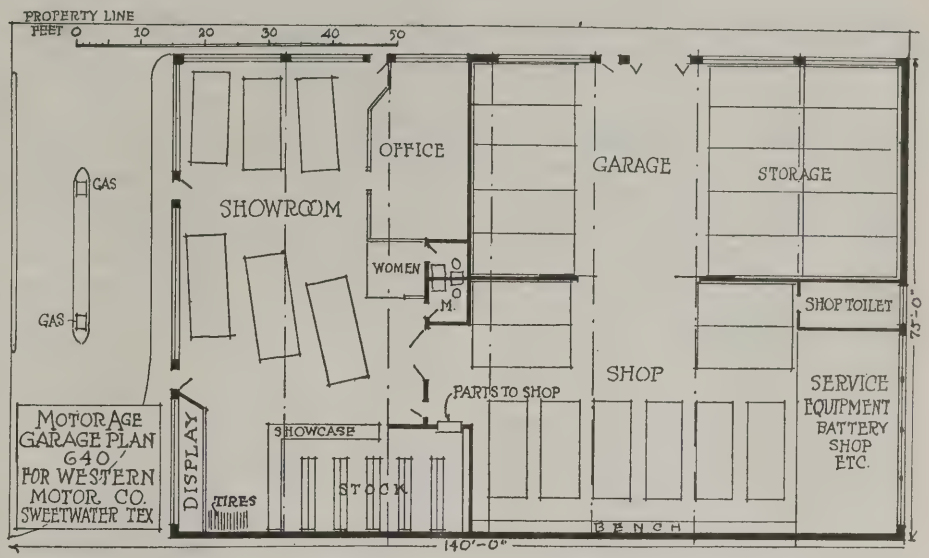
Skylights Are Best

We note that you wish your building to be 75 ft. wide and suspect that you intend to use the 5 ft. strip so that you can use the windows on the side away from the street without the danger of your neighbor cutting you off. In this respect we would favor building right up to the line and using skylights to get your light. Windows on a 5 ft. alley with a wall opposite are practically worthless for lighting purposes, while skylights will give you a flood of good bright light and enable the men to do their best work.

We have allowed a good liberal space in front for your filling station making the building 115 ft. long and if we were in your place we think we would build the whole width of the lot. If this is done there would be space for one more car in the width of the garage and it would be 40 feet wide instead of 33.

The cars shown stored in the shop would be night storage only as during the day, the space would be used for handling cars in and out at the bench.

The space shown as women's waiting room is not intended to be enclosed, but merely a corner furnished with some nice furniture. However, this is only a personal opinion and it may be enclosed if seemingly more desirable.



Automotive buildings are different from most others. Because of the definite sized spaces needed for handling cars a 140 foot building cannot be reduced proportionately to fit a 100 foot space

LEGAL QUESTIONS ANSWERED

By WELLINGTON GUSTIN

of the Chicago Bar

TRACING CAR OWNERSHIP

Q.—We have a car that has been here for over 60 days with charges exceeding the value of the car. What procedure is necessary so that we may sell same as a recourse. Also, is it necessary that we first find out if it is stolen property? If so, just how would we have to go about it when there are no license plates and the car is five or six years old.—Wabash Harrison Garage, Chicago, Ill.

You could not pass title to a stolen car for the true owner alone has title. It might be possible to trace the car by the engine number from the manufacturer and on down to the owner. To secure the benefit of the statutory lien in Illinois you must file your lien claim within 60 days from the completion of repairs or date charges are due. If charges are for storage it would appear that lien could be filed at any time. This lien can be enforced by foreclosure and sale according to details of the Illinois Statue, which see. If the car has been abandoned then you have a very effective remedy under the statute on Abandoned Property. This provides for advertising and sale of the property at public auction. Either remedy must be followed strictly according to the statue.

Again if you can obtain service of summons on the customer or car owner, you may bring suit for your charges and once obtaining judgment you may sell to satisfy the judgment. Of course, if the car is stolen and abandoned by the thief, you should search and advertise for the owner.

JOINTLY AND SEVERALLY LIABLE

Q.—Does a business organization consisting of two or more partners have to be incorporated under the laws of the State of North Dakota, provided no stock in their company is sold, in order for their contracts to be valid, their joint obligations binding; in other words, can two or more persons be held jointly responsible in a financial way if they are not incorporated as a company?—Chevrolet Fan, Marmarth, No. Dak.

Where two or more persons do business as partners they are both jointly and severally responsible for the obligations of the firm. Each partner is an agent of the partnership in transacting business of the firm. The "rub" in a partnership is that each is responsible and liable for all the acts of the others acting for the firm. Parties incorporate that they may evade this personal resposibility, etc., on the firm's contracts. In a partnership the members sue and are sued individually. Parties failing to secure incorporation papers are held as partners.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Auburn Carbureter, Timing and Clutch

Q.—Send me a cut of the Schebler carbureter used on Auburn-6-66 and 8-88 and give instructions for adjusting.—M. D. Leasure, 1380 E. Garfield Ave., New Castle, Pa.

We are showing an illustration of the carbureter used on the eight cylinder model, this being adjusted as follows:

Idle Adjustment: Turning the idle adjustment screw (A) to the right (clockwise) gives a lean mixture. Turning it to the left (counter-clockwise) gives a richened mixture. This adjustment is not sensitive and can be turned from three to ten notches without seriously affecting the idle.

The idle adjustment should be set so that by depressing the air valve slightly (about 1/32 to 1/16 of an inch) the engine will start to cut out showing that the idling mixture is about right. If the mixture is too lean the engine will stop when the air valve is depressed slightly. If the mixture is too rich the engine will speed up slightly on depressing the air valve, and the air valve will have to be depressed considerably before the engine cuts out.

Important: If the idle adjustment is turned to the right (clockwise) too far, the air valve will not seat, since the needle is shut off too far. Turn to the left (counter-clockwise) until air valve seats and adjust as explained above.

Range Adjustment: This adjustment is only effective in the driving range at speeds from 20 to 40 miles an hour and does not affect acceleration or hill climbing. This adjustment as shipped from the factory will usually be found to be the best unless it is necessary to give a lean or richened mixture at speeds from 20 to 40 miles an hour. Turning the range adjusting screw (B) to the left (counter-clockwise) gives the driving range a lean mixture. Turning it to the right (clockwise) so that more of the threads of the screw (B) are exposed gives the driving range a richened mixture.

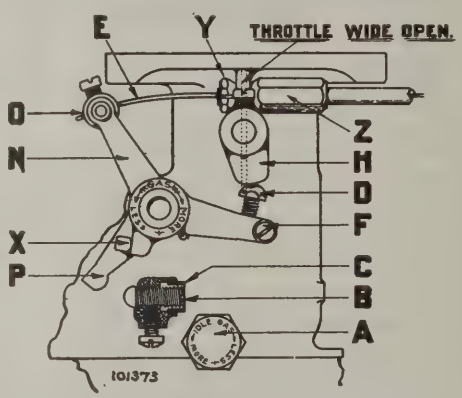
To obtain the original setting as shipped from the factory, set the end of the range adjustment screw (B) flush with the range adjustment bushing (C). If the range adjustment is changed it is necessary to readjust the idle mixture.

High Speed Adjustment: The adjustment as shipped from the factory ordinarily need not be changed. This adjustment is very sensitive to one turn in either direction for the wide open throttle position. In changing this adjustment try it on a hill, after each change, for best results. In extreme cases it may be necessary to furnish a leaner or richer mixture for wide open throttle position. The adjusting cam tappet screw (D) is turned to the left to give a richened mixture, and turned to the right to give a leaner mixture.

To obtain the original setting as shipped from the factory, the head of the range screw (B) should be flush with the range adjustment bushing (C). With throttle wide open adjust the cam tappet screw (D) until there is about 7/32 to 1/4 in. space between the dash control lever (P) and the end of the range screw (B).

Q.—Give the correct valve timing of the Auburn 8-88.

The intake valve opens on upper dead center and closes 35 deg. after lower dead center. The exhaust valve opens 42 deg. before lower dead center and closes 5 deg. after upper dead center.



Schebler carbureter on Auburn, showing adjustments

Tappet clearance should be .010 in. when checking the timing, but may be reset to .006 in. or .008 in. for quietness after timing has been checked.

In resetting the camshaft, the sprockets on the camshaft and on the crankshaft should be lined up so that the prick punch mark on the crankshaft sprocket is between the two prick punch marks on the camshaft sprocket when these marks are nearest together, and lined up between the camshaft and crankshaft centers. With the sprockets in this position the top dead center mark for No. 1 and No. 8 cylinders will be in line with dead center mark on the crankcase.

Q.—Show a sketch of the clutch and tell how to remove same.

We have no illustration of the clutch available at this time, but gladly give the following description taken from the Auburn-8-88 instruction book.

The clutch is of the single plate design and is composed of three major units, namely—the cover plate assembly, driven member assembly, and the release sleeve.

The cover plate assembly contains the cast iron pressure plate, the pressure springs, the release levers and release lever studs. These parts are carefully adjusted by the manufacturer and should require no future attention. The cover plate assembly being an independent unit is mounted on the flywheel by means of six cap screws.

The driven member unit consists of the spined hub, driven disc and two molded asbestos friction facings. The driven disc is made of spring steel and is spoked to relieve the outer rim tension. This member is slightly conical in form to provide for a smooth, even clutch engagement.

The release sleeve is of the anchor type and has a corded oil reservoir for supplying lubrication to the release sleeve and the release bearing. An oil cup is provided on the top of the floor board and this leads to the release sleeve reservoir. A felt wick insures an even capillary feed to the parts requiring lubrication.

No method of clutch adjustment is required as the pressure springs automatically compensate for all wear of the friction facings. The total spring pressure is approximately 1,400 lbs. and this is more than sufficient to prevent clutch slippage.

Clutch Pedal Clearance

When the clutch is fully engaged the clutch pedal should have about 3/4 in. clearance so it will not ride against the floor board. This is the only adjustment and should be checked every 1,000 miles.

When reassembling the clutch to the flywheel, it is necessary to use a splined dummy shaft. This will align the spline clutch hub with the pilot bearing and permit the transmission to be placed in position.

The driven disc is riveted to the shoulder of the splined hub and the members should be placed in this position when assembling the clutch to the flywheel. Be sure that the outer end of the driven disc stands away from the flywheel.

When the friction facings of the driven member becomes so worn that the rivet heads are flush with their surface, they should be replaced. Especial care must be exercised in assembling new facings to the disc. As this member is dished, hand clamps should be used to bring the new facings tightly together before being riveted. If the facings are not rigidly riveted to the driven disc, trouble will result because of the fact that their unevenness will cause the clutch to drag.

Clearing Up Electrical Trouble

EDITED BY A. H. PACKER

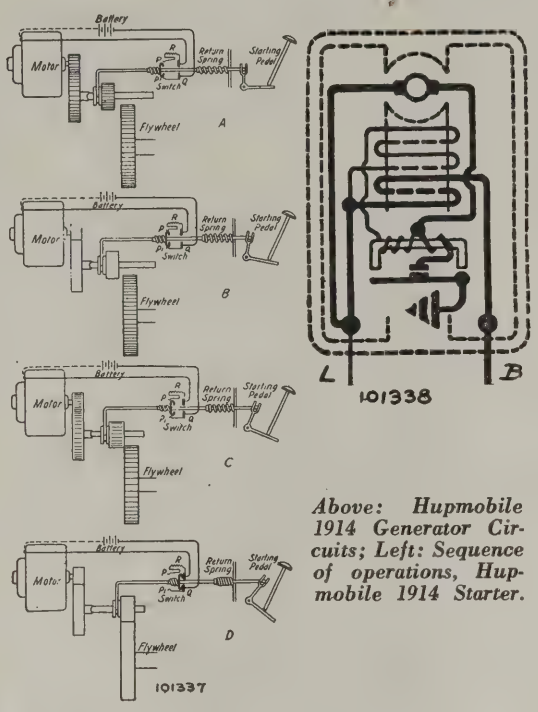
The READERS CLEARING HOUSE

Electrical Data on 1914 Hupmobile

Q.—What is the action of the starter mechanism on a 1914 Hupmobile. The starter turns but the pinion does not engage with the flywheel teeth. The generator also fails as it does not charge the battery.—Brain Craig, Peachgrove Road, Hamilton New Zealand.

We are showing illustrations of the starter mechanism and the generator circuits. At "A" in the starter illustration the pedal is about to be operated and the contact disc marked "P" has not yet touched the contact fingers. At "B" the pedal has been operated a slight amount and the contact disc is making a connection so that current from the battery flows through the resistance and through the starting motor. This causes the pinion which is being moved toward the flywheel to turn slowly, which facilitates meshing. At "C" the pinion is about to engage with the flywheel and the circuit has been broken by the disc "P." At "D" the pinion is fully meshed and the disc is completing the starter circuit without including the resistance. This gives full power to the starting motor and enables it to crank the engine. You will have to investigate the main linkage of the starting device to see why the pinion does not mesh. Perhaps the yoke which moves it is broken or disconnected.

The Westinghouse generator has two terminals but in testing only one need be used as the frame of the machine is used as the other terminal. From the diagram it will be seen that the L terminal, which is normally connected to lamps, is connected to the negative brush, while the B terminal is similarly connected through the reverse series field. A rough test may be made by connecting a battery and ammeter to the frame and to either the B or L terminals and then closing the cutout switch which is mounted at one end of the generator. A normal machine will run slowly as a motor drawing 3 or 4 amperes.



Above: Hupmobile 1914 Generator Circuits; Left: Sequence of operations, Hupmobile 1914 Starter.

MAGNETO POINTS BURN OFF IN HAWAII

Q.—We are having lots of trouble with DU4 Bosch magnetos on White trucks. Nearly every month we have to change contact points. We use Tungsten contact points instead of platinum to see how long they are going to last. What causes the burning of the DU4 Bosch magneto condenser and armature winding?—Manuel Texeira, Paia Maui, Hawaii.

You state that you wanted to see how long the Tungsten points would last on the magneto and you have evidently found the answer. We would recommend your getting the regular genuine parts from the Bosch company or from any authorized dealer handling these parts. If the spark plug points are set too far apart, that is, more than .025 in., you will increase the tendency for the winding and condenser to burn out and will also increase the tendency for the points to burn.

Q.—What is the correct magneto timing on these trucks?

We understand that these magnetos work best on the White truck when the interrupter points just begin to separate with the spark lever in the advance position when the flywheel is 3 in. before dead center. This gives the timing of the spark in the advance position. In the retard position it will also be slightly before top dead center.

A TEST AMMETER WILL CHECK THE INDICATOR

Q.—What causes the battery not to come up in charge when current goes through? On my 1919 Maxwell car on which I have had considerable trouble, I have remedied some trouble by installing a new battery. Panel was new in May. The generator was overhauled a week ago. The word charge comes up on the panel at 15 or 18 miles car speed. But it is clear that the battery will not stay charged.

I do not use a self starter at that. I am the only one driving the car. The lights are dim until at 35 miles per hour they are bright as the generator cuts in. Seems as if there is a weak current going through. What could cause this?—Sidney Topness, Taylor Falls, Minn.

If you will disconnect one of the battery cables and connect an ammeter in series you will know at what speed the generator cuts in and you will know how much current in amperes is going to the battery. The indicator to which you refer merely tells you whether the generator is charging or not, but does not tell you how much. After you have determined the charging current in amperes you should connect a voltmeter across the whole battery and see whether it shows 12 volts or 15 volts while the generator is charging.

The 12 volt indication shows a discharged battery and the 15 volt indication shows a charged battery. You can also test with a hydrometer. If you have a voltmeter with a low voltage scale you can check each cell separately and see whether each one shows 2 volts or 2.5 volts. The 2 volt reading indicates a discharge condition and the 2.5 volts reading indicate a charged condition.

Q.—I would also like to know if a 32 c.p. bulb consumes more current than a 21 c.p. bulb. If this is the case how much more drain on the battery would the 32 c.p. bulb be.

If you put in 32 c.p. bulbs in the headlamps they will draw 1 to 2 amps. additional current from the battery or approximately 50 per cent more current as compared to the 21 c.p. lamps.

Four Brushes Better Than Two

Q.—Since writing you about trouble experienced with a Chevrolet starter we have found that there is a replacement type of brush holder which carries four brushes which can be obtained at an authorized electrical service station and overcomes the trouble that we had where a flat spot would form on the commutator of the starting motor.—E. R. Sizer, 3719 Thompson Ave., Tacoma, Wash.

Since writing to you we have also had this information through authorized service stations. The formation of flat spots on the commutator was aparently due to too heavy a current to be handled by the two brushes, combined with a tendency for the armature to stop in certain position.

POINTS BURN—SPRINGS STIFF

Q.—We have a 1924 Ford car that will burn the coil unit points so badly that they will stick and cause missing. These points will run only about 100 miles without filing. We recharged the magneto with a recharger some time ago. The first points that came with the car lasted almost a year, and we replaced them with genuine Ford points which have been giving trouble ever since.—Granada Garage, Granada, Colo.

We believe that when the new points were installed that the Ford coils were not properly adjusted. If the spring tension is too stiff the points will not open until the current is quite heavy and this will result in burning the points.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Mechanics Must Know Equipment

OTHER things being equal a mechanic will do a certain job in less time with the right tools or equipment for that job, than without such equipment.

But he must understand the equipment and often must show his own ingenuity by getting results from a machine that might otherwise be stamped as imcapable of doing a certain job.

Makers of shop equipment have told us that often they get letters from owners of their equipment stating that the machines will not do the work, or that the mechanics at least cannot get the results the makers claim for their product.

This brings up a point which is pretty well clarified in the machine tool field and in the exclusive machine shop.

Take the lathe, for example. In lathe work the job depends upon the "set-up." Often a machinist has to spend many hours in setting up the work which actually may require only 20 minutes to do.

Now, if he does not know how to rig up the lathe to handle the job correctly, the lathe should not be condemned as unfit for the job. That's up to the mechanic's ingenuity and it is largely a matter of experinence on the part of mechanics to get the best results from any piece of equipment.

One manufacturer of a disk wheel truing apparatus stated that while he had been able to handle practically every conceivable job of straightening disk wheels, yet, it was quite a job to keep this apparatus "sold" to purchasers largely because the latter failed to use a little ingenuity in the "set-up." Every such job is a little different and the mechanic must, therefore, use discretion as to how the job is going to be handled. If this is done, equipment makers will get very few letters from shops and men stating "the machine won't work."

A full understanding of the potential uses of a piece of equipment will greatly add to the speed with which a flat rate operation can be performed. And that means good work and profit.

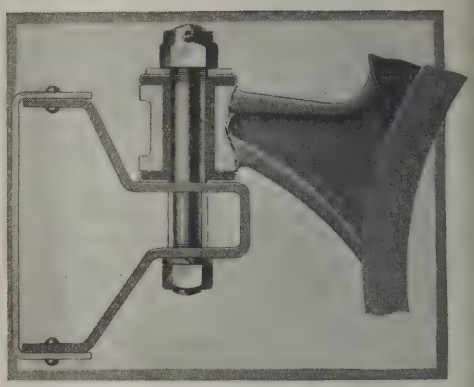
Carbureter Flat Rates

I have been a subscriber to MOTOR AGE for a number of years and like it very much. In the November 5 issue I noticed an electrical flat rate chart comprised mostly of 1925 cars. Will you please inform us if you have a flat rate chart including cars back as far as 1920 or further. I would like to use this in electrical work. Advise if you have one of these in stock and the price of same. Also same information in regard to carbureter flat rate chart.—Libby, Nicholson & LaRou Co., 686 Congress Street, Portland, Maine.

We would certainly be glad to print and furnish the charts mentioned if they were available. In making up the electrical flat rate chart we first got all information from manufacturers, then from local dealers and electrical service stations and finally went and inspected various cars to estimate the proper charge to make. As far as we know the large electrical concerns have not as yet gone very far in establishing flat rate, and to make them fair it is necessary to study the car construction. This is difficult to do except in the case of the current models. We accordingly have to leave it up to the repair-man in applying the flat rate charge to see whether a 1923 or 1924 car has construction similar to the 1925 car.

If the construction is radically different and it is more of a job to take the generator or starter off, then he might lose money by applying the flat rate table. When the time runs back four or five years there is another danger that rusted bolts and other parts which have suffered from time and wear will complicate the job. Our recommendation accordingly is that the flat rate be applied for not more than three years back and then only in case the construction of the car is similar to the one given in the table. For cars more than three years old it would be safer to use the time basis.

MOTOR AGE has not had the opportunity of developing a flat rate chart covering carbureter repairs and at the present time we do not know of any concern having undertaken this work.



THINGS THAT HELP FLAT RATE

Although the removal of a power plant is not as frequently performed now as in the former days it helps the mechanic if the engine is secured to the frame in a manner that makes quick removal possible. Here is shown a construction that facilitates removal. Incidentally this engine support is set in an insulation of live rubber.

MOTOR AGE'S FLAT RATE FORUM

No. 44

FLAT RATES FOR OAKLAND MISCELLANEOUS ENGINE OPERATIONS

Models 34 to 6-44 Incl.

Manufacturer's Official Designation		Time Hrs.	Time Min.
7-101	Cylinder head, remove, carbon cleaned and head replaced	1	50
7-102	*Cylinder head remove and carbon cleaned and head replaced	1	30
7-103	Cylinder head gasket removed and replaced	1	20
7-104	Cylinder head bolts tightened and tappets kerosened, oiled and adjusted		25
7-105	*Cylinder head gasket removed and replaced		45
7-106	*Cylinder head bolts tightened		10
7-110	Remove 6 pistons, fit new pistons to cylinder bores and assemble pistons with new rings and old or new rods to engine (oil pan off)	5	30
7-111	Remove one piston, fit new piston to cylinder bore and assemble piston with new rings and old or new connecting rods to engine (oil pan off)		45
7-113	Regroove one piston (deepen ring grooves)		12
7-114	Ream one piston and connecting rod to fit oversize pin		15
7-116	Remove 6 pistons and connecting rods, change piston rings, and replace pistons and connecting rods (oil pan off)	3	45
7-117	Remove one piston, change piston rings and replace piston (oil pan down)		35
7-118	Remove one piston, change piston pin or connecting rod, (one or both) and replace piston (oil pan off)		40
7-118	Extra time to be added for each additional piston pin changed		30
7-119	Remove old piston pin from piston and connecting rod and replace with oversize pin		30
7-119	Extra time to be added for each additional oversize pin fitted		20
7-125	Engine side pan, R or L removed and replaced		25
7-126	Engine side pans tightened		15
7-127	Engine oil pan or gasket removed and replaced (one or both), (oil pan cleaned)		45
7-135	Oil pressure regulated		12
7-136	*Oil pump and distributor drive gear and shaft assembly removed and replaced		35
7-138	Oil pump and oil lines removed, cleaned and replaced with necessary new part (oil pan off)		45
7-139	Oil line removed and replaced, engine to dash gage		20

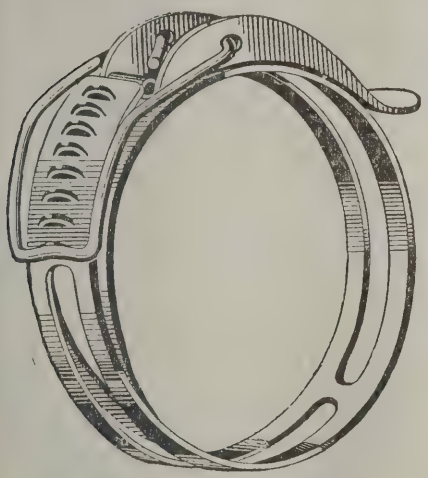
*Denoted operation on model 6-54.

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Noscrew Hose Clamp

SNAP-TITE Clamp Company 110 W. 14th Street, New York, is manufacturer of the Noscrew Hose Clamp, a clamp which it is said can be quickly and securely attached without tools. In attaching you place the clamp around the hose, slip the spring into its proper notch and clamp down on the lever. It is claimed the spring will last indefinitely under pressure. Any shrinkage due to the rubber is immediately taken up by constant tension of the spring, thus prevent the possibility of leaks which might otherwise be caused with age. List price 15 cents.



Noscrew Hose Camp

S. & M. Road-Lite Reflector Sizes

IN the description of S. & M. Road-Lites, made by the S. & M. Lamp Company, Inc., Los Angeles, in the November 26th issue of MOTOR AGE there was an error with respect to the reflector sizes. The diameter of the reflector of the No. 85 is 6⅜ in. while the diameter of the No. 95 is 7⅜ in. These two models supplement the No. 75, a smaller lamp, the reflector of which is 5¾ in. in diameter.

McConnell Electric Windshield Cleaner

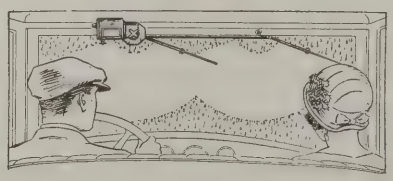
UNIFORM speed under all driving conditions is found in the McConnell Electric Windshield Cleaner, according to the manufacturers, the McConnell Mfg. Co., Newark, N. J. Consistency and dependability of service are claimed for this bad weather facility for motorists. It is said the wiper will not slow down under heavy loads or on hill while its consumption of current is slight. A knob permits hand operation when desired. The McConnell wiper can be operated while the car is parked and with the engine idle. An extra-long wiper cleans an arc 21 inches wide. List price in the United States for four different models is $8.75 while the list for the "Twin" model is $10.50. The "Twin" cleaner has a more powerful motor especially developed to operate two wiper blades.



Tung-Sol Bi-Focal Lamp

Klasp-Tite Kamp Lamp

SOMETHING to interest automobile tourists and campers is found in the Klasp-Tite Kamp Lamp, made by A. B. Stewart & Company, 225 W. Huron Street, Chicago. This is a portable electric lamp which grips to a table, chair, guy rope, tent pole, branch of a tree and other places. It works off the lighting system of the car, being hooked into any socket. A ball socket joint enables the owner to turn it in any direction. It has a six inch aluminum reflector. Ten feet of extension cord come with the lamp, making it valuable as a trouble lamp or doing work around the car. Made in both single and double contact to correspond with car. Dealers list price, $2.50.

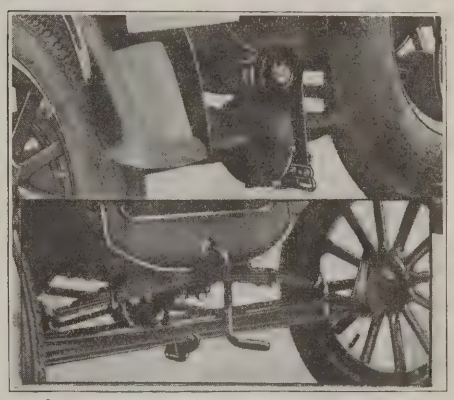


McConnell Windshield Cleaner

Additional Descriptions on Following Page

Tung-Sol Bi-Focal Lamp Bulb

THE Tung-Sol Bi-Focal Lamp Bulb, made by the Tung-Sol Lamp Works of Newark, N. J., is a bulb which is declared to solve the problem of eliminating glare and assuring safety when passing another car. This result is obtained without any change in either the position of the reflector or the bulb. The bulb contains two filaments rated at 21 C. P. each, one filament being placed slightly above the other. The lower filament provides a long-range driving beam which illuminates the road far ahead while the upper filament furnishes a depressed, or short-range beam of identical intensity. This beam is directed downward so as to bring the light pattern nearer to the car and out of range of the approaching driver's eyes. It is said to be a more comfortable light to meet in the road than a dimmed light, and makes dimming unnecessary.



Two-unit installation of Hassler Stabilizers for improved Ford, showing front and rear positions.

Hassler Two-Unit Installations

DEVELOPMENT of a simple two-unit stabilizer installation for the improved Ford car has been accomplished by Robert H. Hassler, Inc., Indianapolis, Ind. It is said that the new Hassler installation efficiently equips all of the improved Ford models with two-unit arrangements without in any way interfering with the tire carrier or other construction of the car. One of the special features of the Hassler Stabilizer relates to lubrication, the device being equipped with an Alemite Zerk fitting. It is the contention that lubrication increases efficiency and decreases the wear upon the equipment. Another feature is the detachable belt which may be removed without taking the stabilizer off the car. The belt never enters the case, a feature which is said to minimize strain on this member. The stabilizer, moreover, is controlled by "smooth friction" as opposed to "rough friction".

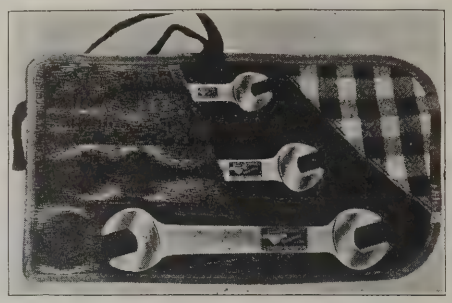
THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

(Continued from page 29)

New Bonney Wrench Kit

BONNEY Forge and Tool Works, Allentown, Pa., have announced a new wrench kit known as the No. 1 Sample Kit. The kit contains three of the most popular size double-end Chrome Vanadium Engineer's Wrenches. As these wrenches have a different opening on each end the kit provides wrenches to take care of the six most popular size nuts and bolts as follows: $\frac{5}{16}$ in., ¼ in., $\frac{11}{32}$ in., ⅜ in., ½ in., and $\frac{13}{32}$ in. The three wrenches are put up in an attractive leatherette roll and the outfit is priced at $2.50, approximately 65 cents less than the net list price of the outfit if the wrenches and kit were bought separately. Bonney points out that these three wrenches will take care of a very large portion of wrench work that the average mechanic or car owner has to do.



Bonney Wrench Kit

Center Mounting Shock Absorber

NECESSITY of mounting but one shock absorber on each extreme of the Ford car is an advantage claimed for the Center Mounting Shock Absorber, made by Stewart-Warner Speedometer Corp., Chicago. This device embodies all special features furnished in other shock absorbers made by the corporation. The chief difference is in the new unit's special mounting brackets which makes it possible to do away with two shock absorbers in the necessary set. At the same time the manufacturers declare the two center mounting Shock Asborbers will give the fullest riding comfort. Packed in complete sets ready to install the price is $13.50. West of the 100th meridian, $14.



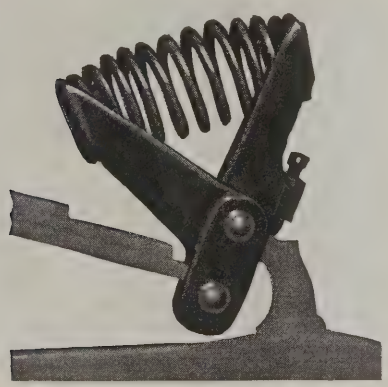
Stewart-Warner's new "Center Mounting Shock Absorber" for Ford. Two of these complete necessary set.

Wooden Transmission Lining

KELSEY Wooden Transmission Lining for Ford cars is made by the Kelsey Manufacturing Co., Escanaba, Mich. The lining is constructed of tough, pliable long-grained wood which is chemically treated to stand hard service and is recommended by the makers as possessing special durability. Constructed of wood it is pointed out that the lining will not unravel and clog the oil feed pipes, or catch on the magneto posts. It is said to stop chattering, grabbing and bucking. Three wooden linings and 18 rivets come with each carton, the list price per set being $2.50.



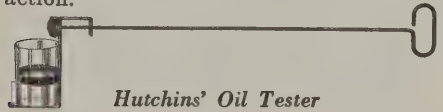
Kelsey Wooden Transmission Lining



Victory Cushion Snubs

Victory Cushion Snubs

VICTORY Products Corporation of Marion, Ind., is producing a shock absorber for Fords known as the Victory Cushion Snub. This shock absorber is so designed that one model fits all models of Fords. It has a special adjustment device. Installation is quickly and easily accomplished. The spring shackles are removed and the Victory Cushion Snub is put in place. Should a spring be broken use of this device still leaves the running gear connected. The manufacturers claim the device prevents sidesway and checks rebound positively and recommend it for Ford cars equipped with balloon tires to control the galloping and rolling action.



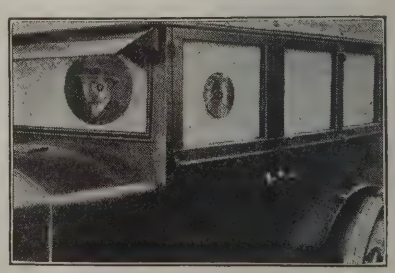
Hutchins' Oil Tester

Hutchins Oil Tester

HERE is a device designed to help the service station sell more oil to Ford owners. It is known as the Hutchins Oil Tester and the manufacturer, M. M. Hutchins, 1325 Burns Avenue, of St. Paul, Minn., says it will greatly increase the draining jobs. When this appliance is used the crankcase oil instead of spilling on the ground is drawn into a glass and the sample is shown the owner.

Hulett's Anti-Froster

HULETT'S Anti-Froster is said to prevent frosting and misting of the windshield in the coldest weather. The body of this device is constructed of Pyralin and it is held in place with vacuum cups. In addition to giving service in the manner just described the distributors also recommend the attachment for protection against glaring headlight. The Hedeen Company, Brainerd, Minn., is the distributing agency and the price is $3.95 per set.



Hulett's Anti-Froster

EDITORIAL

Shows and More Shows

THIS is the season of automotive shows. Larger towns and cities have figured themselves into the show calendar and likely the smaller places will check out at the end of the season with a list of shows fully as large or larger than in any season heretofore. It is hoped that the number of exhibits in small towns will break all previous records. Apparently a new high in this respect was established last year. It can not be over-emphasized that exhibition and concentrated demonstration of some sort is just as valuable to the small town, considering relative business volumes, as to the large city. One beauty about staging the small town show is that arrangements can be made in short order after an agreement to show has been reached. If all towns from 1000 or 2000 population up would stage automotive displays with special frills to attract public notice the accumulative effect would be tremendous.

Farmers are urged to feed cheap corn to good-priced livestock—not feed good-priced livestock to cheap corn. Dealers who feed new car profits to hopeless trade-ins please take note.

Bigger Business Ahead

AMERICA next year will be in a position to turn out a materially greater volume of automobiles than ever before. Our car production capacity will hit a new high mark. Preparations are under way in numbers of manufacturing organizations to take advantage of the enlarged business opportunity which it is believed the coming year will develop.

Not only is there prospect of a strong buying movement in the United States but the outlook abroad is very favorable. Overseas there is a growing interest in American motor vehicles and signs point to more prosperous conditions.

Unless present signs go by the boards we are likely to see the sale of motor vehicles to foreign users greatly stepped up. It is not impossible that we are on the threshold of a great upward swing in automotive buying in Europe especially which in due course will strike a pace comparable to that marked by buying in the United States. There is no reason why the motor vehicle should not be just as popularly desired abroad as here at home and there is reason to expect coming years will witness a narrowing of the present wide distance between the ownership ratios of this and several other countries.

In view of this condition American producers are warranted in making themselves ready to compete in foreign fields as well as making ready to supply any demand of the home market. Between the opportunity at home and that abroad, both being very bright at this distance, it is not unreasonable to expect good use will be found for much of the added capacity.

We trust, however, that despite this added capacity our makers will follow the safe and sane policy, marking operations from the first of last year, of letting output be measured by consumption's requirement. The only danger in increased production capacity is in the temptation to employ a greater portion of it than buying conditions justify. At the same time it is well and wise to be prepared to meet an increased demand for cars.

Car owners will buy only the products that they "think about." Keep reminders before them. That starts and continues "thinking."

A Lesson from "Red" Grange

THE noted "Red" Grange took advantage of an opportunity while it was thoroughly alive. "Red" quit the university while he occupied the center of a national stage with the determined plan of raking in the shekels promised him in professional settings. Had "Red" delayed this program for a year such a course would have been at the risk of again carrying ice next summer and probably the summer following. It was a case of acting at once while psychological conditions were in his favor or turning his back on a chance to accumulate a quick fortune.

Opportunities, on the tape of the dollar, vary in size and character, yet the rule applying to all is "action" and prompt action—and that is the rule all up and down the line in automotive merchandising. A prospect is worth no more in potential profits than the promptness and effectiveness of the dealer's or salesman's follow-up. That temptation to delay until tomorrow is one of the great snares in the way of success. Yielding to that temptation is a weakness of which all men who sell are more or less guilty. Opportunities abound in the field of automotive merchandising, but like all opportunities they are short-lived and their profits accrue only to those who are quick to see and get busy. Do like "Red."

Much possible maintenance business enters through the door of the sales room. Many possible new car and accessory sales enter through the door of the shop. Man both entrances.

South Boosts December Sales Level

Factories Continue to Slow Output and Take Inventory

Advance in Tire Prices Reaches Manufacturers and Is Causing Much Study

NEW YORK, Dec. 16.—Sales of automobiles are seasonally poor in most parts of the country. Good weather in the south has held the level to an unusually high point, and Florida is taking cars in unprecedented numbers, despite a freight embargo which has obliged the automobile companies to establish distribution points in Georgia and other nearby states.

The factories are marking time, with most gradually curtailing output, closed for inventory, or getting under way on new models. Meanwhile the principal subject of discussion is the price situation. The advance in tire prices has finally reached the motor car manufacturer, and the increase that will have to be met or absorbed somehow is from $30 to $50 on most models.

With the tendency in automobile prices definitely downward, a rather serious problem is presented. The limit of economy in production and purchasing has been reached by most of the large factories, so the tire increase should logically be added to the list price of the car. Whether this will be done depends largely on competitive conditions and how closely the manufacturer has pared down his profit per unit during the current year.

The tendency of raw materials used in the manufacturer of cars is upward, but the advance has not yet gone far enough to affect production costs. Most of the large companies are well covered for their requirements for the first half of 1926.

A bright spot is the prospective tax reduction, which will, so far as the consumer is concerned, nearly compensate for any advances in list price that may be made to meet the higher cost of tires.

Jordan Behind on Orders For New Light Eight Cars

CLEVELAND, Dec. 12.—Inability of Jordan Motor Car company, Cleveland, to supply the remarkable market for the new line eights, despite a daily factory production of 65 cars, was announced here by Edward S. Jordan, president.

At the same time, Jordan announced the company had declared its usual 1¾ per cent dividend on preferred stock and 75 cents per share on common stock, to be paid December 30 to stockholders of record, December 15.

"Despite our record factory production," Jordan said, "there is not a dealer or distributor in the country who has more than one car for demonstration or exhibition purposes, and many dealers have not an exhibition car on their floors.

"During November, we shipped more than 350 cars to Jacksonville, for distribution throughout Florida. These included two trainloads and another shipment of 15 cars. Despite these heavy shipments, there are only four cars in the hands of dealers today and deliverable in the state of Florida."

General Motors Begins to Pay $33,608,026 Dividend

NEW YORK, Dec. 12.—Between today and Jan. 7 General Motors Corp. will pay out $33,608,026 in dividends. This is said to be probably the largest dividend disbursement ever made by an industrial company in a similar period.

Today General Motors began to mail to 29,792 common shareholders checks aggregating $7,741,931 representing the regular quarterly dividend of $1.50 per share. On January 7 the same holders will receive checks totalling $25,866,095 representing the $5 extra cash dividend declared last month.

Previous common dividends this year amounted to $28,500,000, bringing the total common dividend disbursement for 1925 to upwards of $62,000,000, or about 60 per cent of net income for the current year. In addition approximately $7,200,000 will have been distributed to preferred stockholders this year.

McNaughton and Stephens Are Promoted by Cadillac

DETROIT, Dec. 14.—Lynn McNaughton, vice-president and general sales manager of the Cadillac Motor Car Company, has been appointed assistant to President Lawrence P. Fisher. He will assist President Fisher in administrative lines in addition to retaining general supervision of sales.

H. M. Stephens, now general manager of the Cadillac Chicago branch, comes to Detroit as general sales manager in direct charge of sales. He is succeeded at Chicago by R. G. Tiffany. Mr. Stephens was appointed manager of the Chicago branch a year ago.

These appointments announced today by President Fisher are in line with the new expansion program of the company and are effective at once. The above appointments followed immediately after figures released by the company showed that business during the past five months has been running double of what it was in 1924 and that the current orders insure a capacity output for the winter months.

G. F. Disher Is Re-Elected To Presidency of A. M. A.

Warfield and Pettingell Also Succeed Themselves as First and Second Vice Presidents

CHICAGO, Dec. 14.—G. F. Fisher of the Gemco Manufacturing Co., Milwaukee, was re-elected president of the Automotive Manufacturers' Association at its annual meeting here. E. E. Warfield of the Gill Manufacturing Co., Chicago, and C. D. Pettingell of the Apco Manufacturing Co., Providence, R. I., also were re-elected to the positions of first and second vice-president respectively.

Forty-two members of the association attended the annual meeting and banquet. Officers and chairmen of committees made their reports, and two addresses featured the session. These were by F. B. Hutchison, lecturer on advertising and retail merchandising, School of Commerce, University of Iowa, and E. E. Warfield, vice-president of the association.

Mr. Hutchison spoke on "Bridging the Gap Between National Advertising and Retail Sales." Mr. Warfield presented a review of the accomplishments in the industry in 1925 and the outlook for 1926.

Directors elected included President Disher, Robert Dunlap of C. A. Shaler Co., Waupun, Wis., A. R. Johnson of Jefferson Electric Co., Chicago, B. N. MacGregor, Packard Electric Co., Warren, O., N. A. Petry of N. A. Petry Co., Philadelphia, Harry G. Sparks of Sparks-Withington Co., Jackson, Mich., J. P. Whitaker, Whitaker Battery Supply Co., Kansas City.

The six holdover directors are J. A. Anderson, Stone Manufacturing Co., Chicago; Smalley Daniels, New Era Spring & Specialty Co., Grand Rapids; A. C. Johnson, Apex Electric Manufacturing Co., Chicago; John F. Shuford, Wedler-Shuford Co., St. Louis; B. J. Koral, E. Edelmann & Co., Chicago; and Noah Van Cleef of Van Cleef Brothers, Chicago.

Rolls-Royce to Keep Firm Of Brewster & Co. Intact

NEW YORK, Dec. 12.—Henry J. Fuller, president of Rolls-Royce, which recently acquired Brewster & Co., says that the tradition and prestige of the century-old name of Brewster will be preserved. The Brewster business will be conducted in its premises as heretofore at Long Island City and William Brewster will continue as president and become vice-president of the Rolls-Royce concern.

Rolls-Royce probably will take over the Fifth avenue showrooms of Brewster, at the corner of Fifth and 56th street.

N. Y. Rubber Exchange Is To Open About Jan. 15

At Least 100 Members Are Expected to Begin Trading on Separate Floor

NEW YORK, Dec. 12.—The Rubber Exchange of New York, plans for which were announced recently by F. R. Henderson, president of the Crude Rubber and Foreign Produce Corporation, 250 West 57th street, is expected to open for trading about January 15, with at least 100 members.

Despite the fact that the Rubber Trade Association opposed inauguration of the exchange at this time, and that the New York Cocoa Exchange has appointed a committee to confer with trade interests regarding arrangements for trading in rubber and rubber products on the floor of the Cocoa Exchange, Mr. Henderson and his associates are proceeding with the plan for an independent exchange in the conviction that rubber's increasingly important place justifies such action.

They believe that crude rubber, which was fourth among imports last year, will be higher than sugar this year and will obtain first place in value of imports in 1926.

They do not believe that the recently announced increase under the Stevenson act of the exportable allowance from British Malaya and Ceylon to 100 per cent, effective Feb. 1, will bring about any material change in the price of crude rubber.

The increase to 100 per cent will release about 15,000 additional tons for the quarter beginning Feb. 1, but this is not regarded as sufficient to lower the price and already crude rubber on the London market has reached a new high after reacting under the first influence of the increase by the Stevenson committee.

Studebaker Announces New Financing Plan for Dealers

NEW YORK, Dec. 12.—Through the Industrial Acceptance Corp. and one of the largest insurance companies in the country Studebaker Corp. of America has just made effective a new financing plan whose rates are described as just as low and in some cases lower than those available from any other manufacturer.

T. M. Hall, vice-president of the Industrial Acceptance Corp., said these rates were on a par with General Motors rates and reduced the delivered price to a minimum. Fire and theft insurance is included in the plan and applies to every car sold. This means that the purchaser of a Studebaker will not be able to insure the car through his own broker or agent and Mr. Hall says the advantages of the rates are such that he will not wish to.

Insurance is placed through the 35,000 local agents of the insurance company so that the purchaser obtains real insurance service through the personal interest of the local agent.

The new plan is with recourse in every instance and conforms to the resolutions adopted by the National Association of Finance Companies. Down payments of at least 33 1/3 per cent and time payments over a period of twelve months are the rule though in extraorinary instances longer terms may be granted.

Any More Queries, Your Honor?

MILWAUKEE, Dec. 12.—A bit of irony prompted by the great number and variety of facts demanded by the secretary of state of Wisconsin this year in connection with the licensing of automobiles has arrived at the state capitol. The issuance of automobile licenses and certificates of title made it necessary for the secretary of state to include a longer than usual list of questions in the application blanks.

After answering the requireu questions a banker of Hudson, Wis., wrote:

"Here is the dope with all the trimmings, even the source of ownership. I might also add that I have several teeth filled and love my wife."

WALKER BUYS KELLAND

CHICAGO, Dec. 12.—Due to the increase in Walker Electric Trucks in Newark, N. J., Walker Vehicle Company of Chicago has acquired the business of the Kelland Motor Car Company, Newark, and has established a service station for Walker Electric Trucks as well as Kelland Electric Trucks at the former Kelland plant. B. A. Kelly and J. E. Anderson, formerly of the Kelland Motor Car Company, will be in charge of Walker sales and service. The Kelland plant at 58 Elm Street, Newark, has been converted into a service station not only to accommodate Walker and Kelland Trucks, but also to service all makes of electric trucks in Newark. The Kelland truck will be discontinued.

FORD SALESMEN DINE

LOUISVILLE, Dec. 12.—The winners of a Ford salesmen's contest were guests of the Ford Motor Company, Louisville branch, at a banquet at the Brown Hotel here. The dinner preceded a trip to Detroit where the salesmen were guests of the Ford Motor Company. Winners are, A. J. Patterson, Eline Motor Company; George Shuster, Strube Motor Company; George A. Spencer, Monarch Auto Company; Jesse G. Miles, Schwarz, Clifford & Scott; Joe Gardner, Summers-Herrmann and G. J. Richardson, Universal Car Company.

Three Bills That Affect Industry Reach Congress

One Would Reduce Taxes, One Would Repeal Them and Third Would Aid Highways

WASHINGTON, Dec. 12.—The introduction of three bills into Congress this week directly affecting the automobile industry marked the opening session of the Sixty-ninth congress. They are:

The tax bill (H R 1) repealing the 3 per cent tax on automobile trucks and automobile wagons; repealing the 2½ per cent on tires, inner tubes, parts, or accessories, and reducing the tax on automobiles and motor cycles from 5 to 3 per cent.

A second tax bill, introduced by Congressman Grant M. Hudson, of Michigan, for the repeal of all automotive taxes, and

The Dowell bill, introduced by C. C. Dowell, of Iowa, providing for $196,000,000 federal aid for highway construction for fiscal years ending June 30, 1928 and 1929, one-half to be expended in each year.

In addition to these three measures assurance was given representatives of truck manufacturers that amendment would be introduced on the floor, amending the tax bill so that dealers and agents who have trucks on hand when the bill is passed, making the repeal retroactive, along the same lines as was agreed upon last week which would permit a rebate to passenger car dealers on cars in stock. The rebate to the truck dealers will turn back to them approximately $500,000.

Open criticism of the first bill is voiced by Congressman Henry T. Rainey of Illinois, who has declared that he will wage a fight for the complete repeal of all automobile taxes.

"We are not rendering much of a favor to men of small incomes when we relieve them of the income tax they now pay of about $7.50 and impose a tax of from $15 to $30 on the automobiles they buy," Mr. Rainey declares. "We could restore the exemptions to where they are in the existing law and release $47,000,000 and this could be applied to reductions in the automobile taxes still retained in the bill and would remove approximately one-third of the taxes on automobiles and on motorcycles."

Action by the House on the measure is expected to begin next Monday or Tuesday and the automobile section will probably be reached on Wednesday or Thursday.

TRUCK MAKERS TO MEET

NEW YORK, Dec. 12.—A convention open to all motor truck manufacturers will be held by the N. A. C. C. at its New York headquarters Jan. 11, during Automobile Show week. The morning meeting will be merged with the opening session of the Second World Motor Transport Congress at Hotel Roosevelt.

Western Dealers Gather in Denver for Sales Congress

Colorado, New Mexico, Wyoming, Utah and Nebraska Represented at N. A. D. A. Meeting

DENVER, Dec. 12.—The first Denver Automobile Sales Congress met this week at the Brown Palace Hotel, under the auspices of the National Automobile Dealers' Association, the National Automobile Chamber of Commerce and the Denver Automobile Dealers' Association. Dealers from Colorado, New Mexico, Wyoming, and parts of Utah and Nebraska were in attendance to the number of about 500 as the guests of their Denver distributors.

The session was called to order by President Myron T. Smith of the Denver association, who called upon Tom Botterill, widely know Hudson-Essex distributor of this city, to preside. C. A. Vane of the National Automobile Dealers' Association spoke on the budget and cost accounting system and highly commended the work of Harry A. Fancher of this city for his assistance to the national organization in developing and perfecting this system.

A. R. Kroh, sales specialist of Chicago, then spoke on the necessity for systematic and efficient business methods in order to make all four departments of the business, i. e. new sales, used cars, accessories and shop or labor departments, show a profit. He urged an accurate cost accounting system as an aid to showing the dealer which department needs adjusting, and claiming that most dealers do not have accurate information on the profit and loss from each branch of their business, stated that a survey made of last years' business showed that the average profit made was 3.4 per cent and that this figure does not include the 21 per cent of the dealers who were forced to close.

He also urged greater care in picking prospects on whom to work, stating that much time and money are lost in indiscriminate canvassing, where a little care in sorting out prospects, and concentrating upon the more likely leads would result in more sales.

C. H. Howe, manager of the automobile show to be held in the municipal auditorium beginning Feb. 2 spoke in the interest of the show, and Ralph Fishel of the Norton Buick Motor Company, a member of the legislative committee of the Denver association, talked on legislation already effected, and on that to be urged at the coming session of the legislature.

The congress closed with a banquet at the Brown Palace Hotel at which C. A. Vane made the principal address. He declared that "if during the coming year automobile dealers will make their business a real business, not a side line or a plaything they will enjoy the most prosperouse year in automobile history."

SECOND PEERLESS MODEL

CLEVELAND, Dec. 12.—A second model on the new Light Six medium priced chassis has been announced by the Peerless Motor Car Company. The new model, a five-passenger two-door sedan, is a variation of a Standard Sedan announced Nov. 19, and will list at $1,495., or $100 less than the four door sedan. Equipment furnished is identical with the formerly announced model and includes snubbers, automatic windshield wiper, sun visor, rear vision mirror, rear traffic signal, dash gasoline gage, cowl lights and door and gear set locks.

GOESELE JOINS G. M.

NEW YORK, Dec 12.—Gustav A. Goesele has resigned as automotive and mechanical engineer in charge of transmission and axle gear design for the International Motor Co., New Bruswick, N. J., to accept a position as foreign field service representative with the General Motors Export Corp. Previous to his New Brunswick connection Mr. Goesele was with the Western Electric Co., New York, Niles-Bement-Pond Co., New York and Plainfield, N. J., and the Arbenz Motor Truck Corp., Zurich, Switzerland.

NEW NASH COUPE

KENOSHA, Wis., Dec. 12.—Announcement of a new Two-Passenger Business Coupe listing at $1,165, mounted on the special six chassis, has just been made by the Nash Motors Company. The new model, which is the lowest priced closed model manufactured by the company, is finished in a two-tone green gray duco with leather upholstery. Equipment furnished at list price includes a set of five disk wheels, automatic wind shield wiper, sun visor, cowl ventilator, rear vision mirror, cowl lights and door and gear set locks.

Ajax Dealers from Canada Visit Three Nash Plants

RACINE, Wis., Dec. 12.—Among the visitors to Racine this week were delegations of Ajax dealers from Philadelphia and the Canadian cities of Toronto, Windsor, Ottawa and Winnipeg. For many it was their first close-up of the Ajax factory and the men who are behind the Nash-built Ajax.

Guides conducted the delegation to every department of the factory where the dealers had an opportunity to see at first hand the quality of materials used, the kind of craftsmanship employed and the rigid Nash-established standards that are adhered to in the manufacture of the Ajax Six.

While at the Ajax factory, the dealers were addressed by C. W. Nash who pointed out the reason why the Ajax Six was conceived and manufactured—to answer a definite need for a high-grade quality car in the $1,000 field. Before returning home the dealers visted the Nash plant at Kenosha and the Nash-Seaman body plant at Milwaukee.

North Carolina Boosting Winter Business Campaign

Dealers and Distributors Make Great Efforts to Keep Sales Line Level Throughout Year

CHARLOTTE, N. C., Dec. 12.—Motor car dealers and distributors in North Carolina are making efforts of tremendous vigor to maintain a steady volume of sales. The tire and accessories dealers and the branch plants of tire manufacturing companies likewise are driving hard for retail sales. The outward evidence of this effort of the automotive trade is given by newspaper advertisements, and large copy is being used in all the more important cities of the state by both car and tire dealers. Some of these advertisements emphasize the Christmas gift idea, while others stress price and terms of payment.

Outstanding examples of this agrressive newspaper advertising campaign are the full-page advertisements of the Greensboro Motor Car Co., Buick dealer, of Greensboro, and of Blackwood Tire Sales Co., also of Greensboro, large advertisements by B. D. Heath Motor Co., Hudson-Essex distributor of Charlotte, and a special proposition on Firestone tires advertised in full-page copy by the Gate City Motor Company, of Greensboro.

Sales in this territory in all lines are generally good for this season of the year. The intensive sales efforts are being made in this territory because of the desire of the manufacturers to overcome as far as may be possible the slump in Northern and Eastern states, where the weather and other seasonal conditions are exerting an unfavorable influence on the automotive trade, it was explained. Not only are these efforts represented in advertising, but every other available means of developing a larger demand is being utilized, according to sales managers.

HERRON IS PROMOTED

TORONTO, Dec. 12.—Milo J. Herron has just been appointed sales director in Canada for Dodge Brothers (Canada). Mr. Herron has been in Canada since the opening of Dodge Brothers Toronto factory, having charge of the Graham Brothers division.

JOINS CANADA G. M.

OSHAWA, Ont., Dec. 12.—H. L. Broomfield, general secretary of the Oshawa, Ont., Y. M. C. A., has relinquished his position to become supervisor of industrial relations at the plant of the General Motors of Canada at Oshawa. He will work under the direction of the factory manager and will come into personal contact with the employes. He will be in charge of the work of discussing and explaining the co-operative effort required from each individual to insure safe measures being carried out in the factory.

Dealers Will Have Two Days at National Shows

Free Admission of Trade Representatives, With General Public Excluded, on Monday and Tuesday Increases Value of New York and Chicago Exhibitions

IN promoting the National Automobile Shows to be held in New York, Jan. 9-16 and in Chicago Jan. 30-Feb. 6 Sam A. Miles, manager, and his assistants in the show department of the National Automobile Chamber of Commerce, are emphasizing four points as vital to the continuance of the national and trade qualities of these exhibitions.

These points, worked out as a result of the luncheon at which Mr. Miles asked the advice of the trade press on the problems involved, are as follows:

1—The necessity of making the trade days—Monday and Tuesday mornings—as widely representative of the trade itself as possible.

2—The necessity of discontinuing the practice of holding exhibits of parts and accessories in hotel rooms apart from the show itself.

3—The necessity of attendance at the show exhibits, especially on the trade days, by chief executives, sales or technical executives qualified to answer any and all questions about the product.

4—The necessity on the part of exhibitors of providing to the trade press advance information about their exhibits.

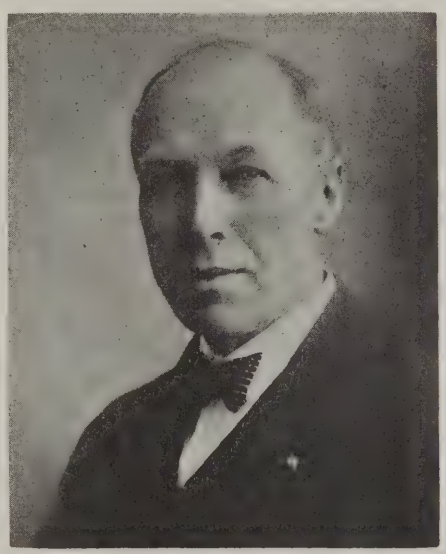
To make the trade days as widely representative of the trade as possible Mr. Miles will send to at least 35,000 dealers about ten days before the New York show a letter urging their attendance on these days and enclosing special tickets.

In promoting the trade days Mr. Miles has obtained the cooperation of such organizations as the Motor and Accessory Manufacturers Association, the National Automobile Dealers Association, the Automotive Equipment Association and the Society of Automotive Engineers.

Each of these organizations is urging its members to take advantage of the trade days. Commissioner William M. Webster of the A. E. A. will spread word by mail and through the Association bulletin. C. A. Vane, general manager of the N. A. D. A., will send letters to 5,000 dealers urging attendance on the New York trade days, and later he will do the same with reference to the Chicago show. Coker F. Clarkson, secretary and general manager of the S. A. E., will send a similar letter to the engineers.

Neal G. Adair, manager of the show department of the M. and A. M. A., reports that exhibiting members have been urged to emphasize the trade days in their trade paper advertising and to write letters to their customers and prospects telling them about these days and the free credentials available for men in the industry. The M. and A. M. A. will also emphasize to all its members, exhibiting or non-exhibiting, the opportunity for business contacts on the trade days. A large attendance of executives will be urged. The association also plans to send similar material to the manufacturing and wholesaling trade units.

In seeking the second objective—discontinuance of hotel exhibits—Mr. Miles will give wide publicity to the action of the N. A. C. C. directors in denouncing the practice as antagonistic and a menace to the shows. These attempts to transact at other places business for which, in part, the shows are promoted, distract the attention of factory representatives from the shows, where his business requires his attendance.



Sam A. Miles, manager of National Automobile Shows.

The N. A. C. C. directors are convinced that if hotel exhibitions are continued they will have a serious effect on the display of parts and accessories at the shows, and that these outside exhibits are disloyal to the car manufacturer who expects his efforts in connection with the shows to be supported by display of the component parts of his car. Hence the directors urge that outside displays be stopped, and that all members of the association refrain from visiting those which continue and use all proper means to discourage them.

Point three covers the tendency marked in previous shows to deprive the product exhibited of the personal attendance of someone who is thoroughly versed in its technicalities. The necessity of filling this need is obvious. Mr. Miles will write personal appeals to all car exhibitors to have their best informed men on hand, especially on the trade days, and the M. and A. M. A. has already done so among the parts and accessories exhibitors.

To cover point four Mr. Miles has sent to the publicity representative of exhibitors a letter urging them to send to the trade press in advance of the shows all information about their exhibits, even if some of this has to be confidential and for release only at the time of the shows. Pointing out that such confidence will not be violated, Mr. Miles notes that advance information suggests ideas of value to the trade press, the exhibitor and the show management. The exhibitors are also asked to send to the trade press without delay a list of its representatives at the shows and the dates of any meetings or dinners planned.

Mr. Miles has also sent a letter to all exhibitors urging them to mention in the New York and Chicago newspaper advertising the fact that they will exhibit at the shows.

NEW ELECTRICAL BOOK

A new book covering all the phases of electrical trouble shooting and repair on motor vehicles has been published by A. H. Packer, associate editor of MOTOR AGE, and author of the "Bill Fixit" articles on automotive electrical subjects appearing regularly in current issues of MOTOR AGE.

The new volume, bearing the title "Electrical Trouble Shooting on the Motor Car," contains over 450 pages, 41 chapters, 300 illustrations and four charts. It also contains 600 questions, answers to which are given in the back of the book. A complete index is provided.

The contents includes: Tests for lighting trouble, the cause of a short and how to find it, right way to use voltmeter or ammeter, how a condenser works and how to test it, all sorts of information on magnetos, how to make an ignition coil testing outfit, how to charge batteries, and a wealth of other material of value to the automotive service station.

There is a chapter on focusing headlamps, one on armature and field testing, one on voltage and current regulators, one on business management, flat rates and electrical testing equipment, and many other chapters.

The book is published by A. H. Packer, 8115 Harper Avenue, Chicago, Ill., and the price is $4.

Road Builders Planning Big Chicago Meeting and Show

Ways and Means to Make Highways Safer Will Be One of Features Jan. 11-15

CHICAGO, Dec. 12.—Ways and means of making American highways safer for motorists through the widening of pavements, elimination of grade crossings, reduction of the crown in roads, elevation of curves, removal of highway signs, elimination of blow-ups, cracks and corrugations in road pavements and provisions for clearer views in all directions at road intersections will be among the many subjects to be discussed at the Good Roads Convention and Exposition to be held in Chicago January 11 to 15 inclusive. The meeting will be under the auspices of the American Road Builders' Association.

The matter of constructing safer highways is now engrossing the road building industry, lately become the third largest industry of the nation, and the discussion at Chicago is expected to develop more practical methods by which, in so far as the road itself is at fault, accidents on the highways of the country can be reduced.

The program for the great convention is being formulated under the direction of W. H. Connell, chief engineer executive of the Pennsylvania state highway department and president of the American Road Builders' Association, assisted by committees headed by Frank Sheets of the Illinois state highway department, representing the highway officials, and Samuel Williams, representing the road contractors.

Among the other subjects that will receive serious consideration, also, are those of continuing Federal aid funds for road building, salvaging old roads, the gasoline tax, tests for road building materials, detours, traffic regulation, highway finance and accounting, research, design, beautification, patroling and policing, repair and maintenance, snow removal and the latest methods entering into the construction of unsurfaced concrete, brick, granite block, wood block, sheet asphalt, sand asphalt, asphaltic concrete, asphalt penetration, tar macadam, waterbound macadam, gravel, earth and sand clay roads.

From 25,000 to 30,000 delegates from the United States, Canada, Alaska, Porto Rico, Cuba, Hawaii, Phillippine Islands, Mexico, Panama, Columbia, Haiti, San Domingo, Uraguay, Paraguay, Bolivia, Argentina, Chile, Brazil, Peru, Japan, Great Britain and other countries will be in attendance. The governor of each American state and the mayor of each American city as well as the county board of every county in the country, will appoint official delegates to attend. Several governors of states and practically all U. S. Government road officials, as well as senators and congressmen will attend in person.

OHIO SALES INCREASE

COLUMBUS, O., Dec. 12.—During the month of November 1,370 new cars were sold in Franklin County as compared with 609 in November of last year, according to the report of County Clerk Harold Gockenbach. During the same month a total of 3,342 used cars were transferred as compared with 2,413 in November of last year. These figures show the general prosperity of the automobile business in central Ohio.

FACTORY MEN ON COAST

SAN FRANCISCO, Dec. 12.—San Francisco automobile distributors have been hosts to a number of factory officials and representatives from eastern car manufacturers recently. R. H. Grant, vice-president and general sales manager, and J. E. Grimm, Jr., advertising manager, of the Chevrolet Motor Company, were guests at a dinner and meeting in the St. Francis Hotel, attended by executives of the Chevrolet Motor Company of California, and dealers from all sections of the central and northern parts of the state. L. G. Peed, general sales manager of the Willys-Overland Company, with headquarters in Toledo, is on his annual tour of Pacific coast distributors and factory branches.

NEW DURANT DEALERS

NEW YORK, Dec. 12.—The following automobile merchants have recently taken over the sale of Star and Durant products:

Sulphur Springs Motor Co., Sulphur Springs, Ark., Dauben & Haywood, Rogers, Ark., Community Garage, Crockett, Cal., Star Motor Co. of California, Santa Barbara, Cal., J. R. Andrews & Company, San Joaquin, Cal., Foothill Garage, Oakland, Cal., R. A. Snedden, Packenham, Ont., A. L. Phillips, Niagara Falls, Ont., C. H. Pletsch, Mildmay, Ont., Audet & Gariepy, Baie, St. Paul, Que., Mackle Motors, Brampton, Ont., Card & Fenwick, Kleinburg, Ont., Lachine Motorists, League, Reg'd., Lachine, Que., Cossette & Lanouette, Amos, Que., W. H. Beamish, Shoal Lake, Man., L. Lawler, Kenton, Man.

Hugh Kimmel & Eaton Bros. Grand Junction, Colo., Clapes Brothers, Stamford, Conn., Manor Star Sales, Chicago, J. A. Hood Garage, Rushville, Ill., Carpenter & Goodell, Elkhart, Ind., Miller & Thurston, Alexandria, Ind., Ostenberg Brothers, Salina, Kas., J. S. Trembley Motor Company, Hutchinson, Kas., Great Eastern Motor Company, Baltimore, H. A. Larson Garage, Aitkin, Minn., Security Service Company, Hibbing, Minn., J. C. Bollis Motor Company, Mathiston, Miss.

I. L. McCoy, Rockport, Mo., Schneider-Trapp Corp., Buffalo, N. Y., Charles M. French, Utica, N. Y., Patterson Motor Company, Burlington, N. C., Wilson Motor Company, Wilson, N. C., D. S. McCormick & Son, Libson, O., Clarence Collins, Lebanon, Ore., W. L. Wetenkamp Motor Company, Palestine, Tex., Harold S. Davies, Tacoma, Wash., Leevale Coal Company, Leevale, W. Va., Haan Motor Company, Huntington, W. Va.

CORRECTION

In the November 26 issue of MOTOR AGE the address of the Biflex Corporation was incorrectly given as Brooklyn, N. Y., through a typographical error. The address should have been Waukegan, Ill.

November California Sales Greatest in Last 5 Years

Used Car Situation Declared Better Than in Three Seasons Past—Trucks Go Quickly

SAN FRANCISCO, Dec. 12.—October was the highest month of the year in automobile and truck sales in California, and was 36 per cent higher than October, 1924, according to figures just made public. It is the general opinion of dealers that November will exceed October of this year, and probably run 40 per cent better than November, 1924.

In all respects, automotive merchandising in California for October and November, and, in fact, for all of 1925, is very materially better than it has been for more than five years. Owing to some five factors—a steady and consistent immigration of about 120,000 permanent settlers a year, a late dry season permitting the gathering of all the fruit crops with little loss, high prices for all crops with labor more plentiful than usual, reductions in prices of all makes of cars, and a marked improvement in methods of financing the buyer of a new car—California has had this record year in sales.

The used-car situation is better than it has been in three years, due to the general factors outlined above for the new-car business, and also due to the widespread policy of dealers to rebuild trade-ins before offering them for sale, and then selling them on an accurate basis of their mileage capabilities. Used trucks are snapped up as quickly as they are offered, and new trucks are selling better than they have sold for three years.

AJAX REACHES 10,000

RACINE, Wis., Dec. 12.—The ten thousandth Ajax Six has been produced. It came off the "line" at the factory in Racine just one week less than six months from the day the first Ajax was built. There was keen interest among the workers throughout the Ajax plant in the 10,000th car. The motor, as it proceeded down the final assembly line, was decorated with a bouquet of American beauty roses and a hearty cheer greeted the finished car as it was run off the assembly line and out onto the company's test track for final inspection before shipment.

BUFFALO PLANT AT CAPACITY

BUFFALO, N. Y., Dec. 12.—The branch of the Ford Motor Co., is now turning out 300 cars per day which is the plant capacity. While there will probably be a seasonal falling off in demand during December, at the present time that production barely keeps pace with the demand of the district. Retail sales of Fords at the present time are just twice as great as they were a year ago.

Cleveland Plants Making Plans for Big Production

Estimates of Labor Needs Show Every Company Is Arranging for Huge 1926 Output

CLEVELAND, Dec., 12.—Automobile, body and accessory manufacturing plants in the Cleveland metropolitan district, instead of facing a winter slump, will start 1926 with plenty of work for every company in operation in this district.

This optimistic forecast of the automotive industrial situation in the second largest auto producing section in the country was prepared today by B. C. Seiple, Cleveland employment commissioner.

Actual estimates of labor needs during the closing weeks of December and for early 1926, given to Seiple by employment officers of the largest automobile plants in the city, indicate that the industry in Cleveland is on the verge of a general program of increased production.

Officials of the White Motor company have sent in a call for increased force of draughtsmen. The plant is now running behind orders.

A week ago officials of the Peerless Motor Car company gave Seiple to understand that they were ready within a few weeks to throw their plant into high gear and on increased production, and called for additional skilled men.

The Fisher Body company plant here, which laid off a few men more than a month ago, is calling these men back and has sent in requests for additional skilled men, Seiple said.

The same is true of the Murray-Ohio Body company which recently laid off a number of men following the close of seasonal production in their automotive toy division. These men are being recalled for body work and additional men are being employed.

The plants of the Chandler Motor Car company and the Cleveland Motor Car company are now running at full blast, the latter being somewhat handicapped by slow deliveries of closed bodies. The Jordan Motor Car company's November production was nearly 190 per cent in excess of the November, 1924, production.

WILL SELL EARL PLANTS

JACKSON, Mich., Dec. 12.—Sale of the real estate of the Earl Motors, Inc., has been authorized in an order signed by Circuit Judge James A. Parkinson. The sale is scheduled to take place January 25 at the plant, corner of Horton and Leroy Streets. The petition to sell was filed by Frank H. Shaw, receiver for the concern and sets forth the buildings to be offered on the auction block on that date. These buildings comprise a total of 300,000 square feet and include one building with a total of 115,000 square feet.

Marathon Pianist Boosts Sales

WASHINGTON, Dec. 12.—To draw public attention to the endurance claims made for the Star automobile, the Clark Motor Company, Star distributors here, engaged B. G. Burt, champion marathon piano player to attempt to establish a new world record for non-stop piano playing in its show window on Fourteenth street.

Through co-operation by local automobile editors who acted as judges, the company obtained a good deal of publicity on account of this stunt which might be adapted in other cities. An award of $100 was offered to anyone who found Mr. Burt take both hands off the keys during the contest.

GRAHAM TO EXPAND

SAN FRANCISCO., Dec. 12.—Following the annoucement of the purchase of Graham Brothers by Dodge Bros., Inc., the official statement was made here that $200,000 is to be expanded immediately in the enlargement of the Graham Brothers' factory at Stockton, California. Four new buildings are to be erected to house an assembling plant for both Dodge Brothers passenger cars and Graham trucks. Joseph Graham, one of the three brothers, is to come here from the Detroit plant to approve the plans for and supervise the construction of the new plant at Stockton.

Accessory Houses Report Big Northwest Business

SPOKANE, Wash., Dec. 12.—As a result of better crop conditions in the northwest wholesale automobile accessory houses report greatly increased business in comparison with the fall and early winter of a year ago. Conditions in the territory served by Child, Day & Churchill, 1217 W. First avenue, are greatly improved, H. N. Child, manager, states. Heaters, anti-freeze solutions and alcohol, and windshield wipers are in especial demand in eastern Washington, western Montana, eastern Oregon and northern Idaho, he says.

Lee Olney, manager of Stewart-Warner, reports that business is ahead of any previous years since his firm served the northwest and that the total business of the local branch was fifth nationally during October.

Agricultural prosperity in the northwest is especially reflected in this report as California branches were behind the local branch's business, Fresno being 26th, San Diego 28th, Los Angeles 9th and San Francisco 22nd. Stewart-Warner serves all of Montana, eastern Washington, and parts of Idaho and Oregon from the local office.

Revenue Collections Decrease In First 10 Months of 1925

Receipts Total $115,628,121 As Compared to $122,039,462 in Same Period, 1924

WASHINGTON, Dec. 12. — Internal revenue receipts from the automotive industry for the first 10 months of 1925 totaled $115,628,121.68 or $6,411,341.10 less than for the first 10 months of 1924 when the collections were $122,039.462.76, it is announced here by the Internal Revenue Bureau.

Segregation of the collections shows that automobile trucks and wagons for the current 10 months netted but $6,734,-795.73 as compared with $9,452,175.75 for the first 10 months of 1924; other automobiles and motorcycles ran up a slight gain with $89,986,071.80 in collections for the first 10 months of 1925 as compared with $88,056,044.28 for the first 10 months of 1924 and tires, parts or accessories bringing $18,907,254.15 for the first 10 months of 1925 as compared with $24,-531,242.75 for the first 10 months of 1924.

Perusal of the collections from the 12 principal automotive producing states shows that Michigan slumped during the first 10 months of 1925 when her collection from "automobile trucks and wagons" were but $1,011,468.57 as compared with $4,269,007.79 for the first ten months of 1924 when she was the outstanding revenue paying state in this item. For the first 10 months of the calendar year Ohio led in the collections from "automobile trucks and wagons" with $2,149,-553.16.

The three outstanding states in paying revenue on "other automobiles and motorcycles" during the first 10 months of 1925, maintaining the same rank they held for the same period in 1924, follow: Michigan first, with $65,988,525.06; Ohio second, with $7,011,932.15 and Indiana third, with $6.981,391.98.

NEW CADILLAC DEALERS

DETROIT, Dec. 12.—The following new dealers have been added by the Cadillac Motor Co.:

The Athens Nash Company, Athens, O., Carter Motor Company, Colorado, Tex., Oskaloosa Nash Company, Oskaloosa, Ia., Hattiesburg Auto Sales Company, Hattiesburg, Miss., Mebane Buick Company, Eustis, Fla., Everett Cadillac Company, Melbourne, Fla., Eagle Garage Company, Platteville, Wis., Wright-Sperco Motor Company, Inc., Summit, N. Y., Holdrege Buick Company, Inc., Holdrege, Neb., Bessie Brothers, Kearney, Neb., Breier Motor Company, Winner, S. D.

NEW CLEVELAND DEALERS

CLEVELAND, O., Dec. 12.—New dealers recently added to the organization of the Cleveland Automobile Co., follows:

Highland Motor Co., Denver, Colo., Fitz Motor Car Co., Cambridge, Mass., Vigilant Garage, W. Philadelphia., Monmouth Auto & Tire Co., New Port, Ky., C. C. Brown, Marion, O., Lawn Manor Motor Sales, Chicago, Weamer Motor Co., Altoona, Pa., Warren Auto Sales, Detroit, Howard E. Kelly, Hamilton, O.

Belgian Show Is Only Truly International One in Europe

Competition Develops Between French and American Makers—Germany Bars Foreigners

BRUSSELS, Belgium, Dec. 12.—The Nineteenth Annual Belgian Automobile Show opened Saturday with 750 exhibitors of all classes, a record number, comprising 92 passenger car manufacturers, of which 40 were French, 28 American, 13 Belgian, 9 Italian and 2 Austrian. This show is the only international exhibit on the Continent this year, admitting all but German exhibitors.

The Berlin show, which closed four days after the Brussels show opened, barred all foreign make of cars and was marked by a strong anti-foreign publicity campaign. The feature of the Brussels shows is the strong commercial competition between American and French makers, both striving hard for the Belgian market.

Citroen announced reduced prices on the opening day, but, as French prices recently increased, it is believed that this is only a temporary move and that prices will rise again at the close of the exhibition. One Citroen model, offered for the first time, with four wheel brakes at extra cost, was listed at 16,000 francs. However, there were few new models and not many mechanical changes.

Delaunay-Belleville produced a new 2-litre overhead valve chassis, with Perrot front and transmission brakes. French B. N. C. has a sport model. Nagant has a new 8-cylinder 3-litre overhead valve chassis on the same lines as the previous four. Vagova small six has positive valve-losing mechanism, but all others have confined themselves to detail changes. Every European car in the show had front brakes, the Perrot type dominating. Dewandre vacuum serve-mechanism is extensively adopted among those using it being Minerva, Nagant, Excelsior, Isotta-Fraschini and Voisin.

Some smaller Belgian firms are feeling foreign competition strongly and are abandoning passenger car manufacture in favor of trucks, in which field there is comparatively little competition, except from the Ford Co.

The closed car situation is immensely strengthened, the indications being that the open type will eventually become confined to sports models here. Metallurgique offers an open car at 42,000 francs and a sedan for only 3,000 francs more.

Pyroxalin finishes are being used by Nopab. Under American influence, balloon tires are enormously developed, even Michelin, the European opponent of balloons, building them for the Belgian cars. Marelli has produced a new magneto, which gives four sparks per revolution.

"WINTER WEEK" HELD

CLEVELAND, Dec. 12.—The Reeke-Nash Motor Company and Nash distributors throughout the Cleveland metropolitan district for which it is distributor this week are celebrating "Winter Week". The special sales drive is intended to check any tendency experienced in other years toward a downward trend in sales volume at the coming of winter. Closed models, which, it is pointed out, have virtually eliminated seasonal use of automobiles, are being featured.

BUCKWALTER SELLS INTEREST

CHICAGO, Dec. 12.—C. J. Buckwalter has sold his interests in the American Bureau of Engineering and a new corporation has been formed, to be known as the American Bureau of Engineering Company. C. J. Buckwalter is confining his efforts entirely to the business of the Buckwalter Radio Corporation, manufacturers of the Supertone Super-Heterodyne 8-tube set, and the Supertone 5.

ROADS POSTPONE INCREASE

NEW YORK, Dec. 12.—Executives of western railroads have deferred consideration of classification increase on carload shipments of automobiles which had been slated for action at their January meeting. Deferment followed representations by the traffic committee of the N. A. C. C., which did not object to participating with other commodities in general rate adjustments, but opposed any classification increase.

San Francisco to Combine Dealer Talks With Show

SAN FRANCISCO, Dec. 12.—An effort will be made to combine an exhibition of automobiles for the general public and a series of meetings for automobile dealers, with a merchandising campaign in the next automobile show at San Francisco. This is the tenth annual Pacific Automobile Show, which opens January 30 in the Exposition Auditorium, and closes February 6, 1926.

Practically all the space at the show has been taken, and for the benefit of the public, new models and new methods of presenting them will be on exhibition. For the dealers there will be daily talks by engineers from the construction departments of the various factories on the mechanics and operation and upkeep of their cars; meetings of trade groups each evening, and probably some forenoons, and demonstrations by factory representatives of sales-methods.

The tenth annual show is being conducted, as usual, by the Motor Car Dealers' Association of San Francisco, with George A. Whalgreen, perennially at the helm, as manager. The main floor of the auditorium will be devoted to new models of cars and the basement and galleries for trucks and other commercial vehicles. For the first time there will be a comprehensive exhibit of motor buses and stages.

Huge Automobile Arcade to Be Constructed in Miami

Nearly Every Dealer in City Making Plans to Center Activity in One Spot

CORAL GABLES, Fla., Dec. 12.—The largest and finest automobile mart ever projected in Florida, to be housed in a single great arcade 620 feet long in the Biltmore section of Coral Gables, is announced by Telfair Knight, vice-president and general manager of the Coral Gables Corporation.

Virtually every automobile dealer in the Greater Miami district will have his headquarters in the Coral Gables showrooms. William P. Frost, director of the homes department of Coral Gables, and in active charge of the automobile project, reports that 12 dealers have already definitely pledged their co-operation.

The object of the new "Automobile Row," and the reason for the interest and enthusiasm already being displayed by Miami automobile dealers is to provide a year-round salon in one of the most unusual and attractive buldings in the entire country, and in a situation of unequalled advantage as regards being in close touch with the wealthiest and most active interests in Florida.

The arcade will be freed from the handicap of traffic congestion so prevalent in other parts of Miami, and will be provided with adequate parking-space. It will be in the heart of the future residential and retail center of Greater Miami, and will be close to the junctions of nine county highways. Furthermore, the new arcade will be on the direct route of travel to the Miami-Biltmore Hotel and Country Club, to the great Biltmore Casino, and adjacent to the exclusive section of rapid-transit apartment sites.

"The trouble here today is not in selling automobiles, but in getting them," Mr. Knight said. He stressed the fact that automobile dealers in every part of the world are realizing the advantages of congregating in a "row," and pointed out that the underlying idea was the same as that which brought about the old Maiden Lane jewelry center in New York City, the enormous success and development of which was past history. The location that was being considered for the "Automobile Row" was the center of a vast and wealthy community, in close contact with the people who bought automobiles and to the homes of many of those who were engaged in their selling.

CONTROL MASTER MOTOR

CHICAGO, Dec. 12.—C. C. Smith, president, and T. G. Jackson, vice-president and sales manager of the Master Motor Truck Co., Chicago, have bought out the interests of Henry Moses and M. Levinsohn in that company. Messrs. Smith and Jackson are now sole owners of the Master Motor Truck Co. and of the organization which formerly sold parts for these trucks.

All Car and Truck Booths Taken at Kansas City Show

Many Spaces for Buses and Accessories Also Contracted for Feb. 13-20 Exhibit

KANSAS CITY, Dec. 12.—Arrangements for the next Automobile Show at Kansas City are so far along that all the booths for cars and trucks have been rented, and a number of those for buses and accessories.

The date of the show is Feb. 13-20, and the place is the newly rebuilt pavilion of the American Royal Stock Show. This structure has been made absolutely fire proof throughout, and every precaution will be taken so no repetition of the conflagration which closed the last Auto Show can be possible.

Wednesday, Feb. 17 has been set for dealers' day, and according to estimates of Secretary George Bond, there will be more than 6,000 dealers present as guests of the association on that date.

Radio will have a large place in the exhibits at the show. This is in accord with the statement of Secretary Bond that 75 per cent of the radio sold in this territory is marketed through automotive agencies.

The possibilities of the market for new cars in this territory will make this the greatest show that has been held here. Mr. Bond states that there will be sold in Missouri and Kansas during 1926 at least 100,000 new cars for each state. The sale will be largely among the farmers, whose condition is greatly improved, and who are to buy more largely because they have not been buying for several years.

Paige Dealers in Ohio And Pennsylvania Meet

CLEVELAND, Dec. 12.—More than 100 retail dealers and salesmen from 58 dealer organizations in northern Ohio and western Pennsylvania representing the Paige-Ohio company, Paige and Jewett distributors, held sessions at the showrooms of the Cleveland organization to perfect plans for 1926.

W. A. Hall, general manager of the Paige-Ohio organization who had charge of the meeting, called attention to the large number of dealers who attended, all but three being present, and predicted 1926 would be one of the most prosperous years in automotive history.

In connection with the dealers' meeting, a luncheon was held at noon at the Winton Hotel. Among the speakers were General Manager Hall, J. W. Ferguson, assistant general manager, A. B. Garrett, of the advertising department of the Paige Detroit Motor Car company; F. B. Denzel, district manager of the mechanical department; G. B. Tannet of the financial department, and C. A. Wells, auditor of the Paige Ohio company.

Dobbin Thrown for Another Loss

MILWAUKEE, Dec. 12.—Traffic cops will cruise about Milwaukee streets in cars as a result of an experiment which the city has decided to make. The first batch of disciplinary Fords will consist of a unit of four such cars, for use in the outlying districts of the city. If successful, the plan will be enlarged upon and extended to other sections.

Poor old Dobbin was again thrown for a loss when the council decided to get Fords instead of horses. Well-formed plans for mounting traffic officers on horses fell through because of opposition from Mayor D. W. Hoan.

To cap the climax it was announced almost simultaeously that complete motorization of the Milwaukee fire department will take place in 1926 when the last of the 40 horses now attached to the department pass into memory.

Pierce-Arrow Small Car Aids Sale of Big Model

BUFFALO, N. Y., Dec. 12.—L. E. Corcoran, general sales manager for the Pierce Arrow Motor Car Co., referring to much speculation in the automobile industry on the effect the introduction of the series 80 a year and a half ago would have on the dual-valve series 30, states that the "success of our moderately priced car has strengthened the position of our larger car.

"The fact is that there always has been and always will be a demand for a car of large proportions. A long wheelbase gives engineers an opportunity which is denied them in cars of short wheel base. They possess superlative comforts of road comfort and luxury.

"The introduction of our series 80 enabled us to quadruple our sales and service points throughout the country. This brought our larger car within geographical reach of thousands of people who formerly were too far from a service headquarters to warrant owning a car. For that reason the sales of our larger dual valve six models continue strong."

FT. WAYNE PLANS SHOW

FORT WAYNE, Ind., Dec. 12.—Fort Wayne automobile distributors and dealers voted through a mail referendum this week to hold a 1926 automobile show in January in the new $1,000,000 Shrine Temple which was opened officially November 21. No automobile show was held in 1925 due to lack of a suitable auditorium to accommodate the many cars. As a result a week was set aside as "Automobile Show Week" and each dealer had individual exhibits, providing individual entertainment.

Utah Expects Good Holiday Business From Rural Trade

Entire Territory in Excellent Financial Condition As Result of Bumper Crops

SALT LAKE CITY, Dec. 12.—Utah and its immediate trade territory at this time are in wonderful financial shape. There is more money in this section and prospects are better than ever before. A good business is anticipated in the country sections on account of the bumper crops and the big prices they are making.

The sale of open cars, except in the lightest classes of machines, is becoming less and less, and for this reason used-cars, unless they are good closed models, are being moved with greater difficulty than ever before. Prices on these machines are being forced down, but they are still higher than they should be. The tendency for the prices of new cars to drop is making it still harder to handle used stuff without cutting the prices severely.

A few dealers in Salt Lake City and Ogden are very heavily stocked with used-cars at this time, but the majority seem to be carrying less than normal. On the whole the situation in this respect is not much different from what it was last year at this time. One dealer said today that because of the tendency for dealers to accept very small down-payments and extend the time for payment of the balance people who would ordinarily buy a used car are in the market for a new one.

Accessory Men in Atlanta See Big Holiday Business

ATLANTA, Dec. 12.—That accessory dealers in the Atlanta trade district are apparently looking forward to the best holiday business this year they have ever enjoyed, and therefore are carrying much larger stocks than usual at this time of the year, is the opinion expressed by the larger accessory jobbers in Atlanta, who state their sales volume the last two weeks of November was the largest it had ever been before for that period. There is every reason why dealers should feel confident over the outlook for the holidays. Industrially, commercially, financially and agriculturally the Southeast has never been in better shape than it is right now, and naturally this is certain to have a favorable effect on accessory sales by dealers, not only for the holidays, but through the coming winter months.

OVERLAND TRAINLOAD BOUGHT

DECATUR, ILL., Dec. 12.—L. C. Starr, distributor of the Overland car, who recently purchased a train load, reports that the territory absorbed every one contained in the 41 car loads. This is the largest consignment to a single dealer ever forwarded in the Illinois territory outside of Chicago.

Along Automobile Row

CHICAGO.—James J. Lake, Auburn dealer at 3238 West Jackson Boulevard, has been awarded the direct factory distribution in Rockford and four surrounding counties, for the Auburn, and has opened a new show and salesroom on Rockford's Automobile Row.

MEMPHIS.—Stewart-Warner Products Service Station, N. J. Magna, manager, has formally opened a new home in a new building at 319 Union Avenue. R. M. Becker is manager.

DETROIT.—Joseph E. Garbarino of Detroit is the latest dealer to be added to the Oakland forces in this area. Mr. Garbarino is the nineteenth dealer retailing Oaklands in this territory.

CAPE GIRARDEAU, Mo.—The Southern Motor Company, handling Oakland automobiles is moving from 420 Broadway, to 418 Broadway and will occupy the building vacated by the Rueseles Motor Company.

COLUMBIA, Tenn.—H. G. Foster & Co., of Pulaski, Tenn., Dodge Brothers dealer, announces the opening of a branch in Columbia with Ewell Gregg of Lynnville, Tenn., in charge of the branch as manager.

ST. PAUL, Minn.—W. A. Rosendahl, as the Summit-Chevrolet Company, has discontinued the Chevrolet line and will retail in St. Paul and immediate territory the Marmon line, changing the firm name to Summit-Marmon Company.

EVANSVILLE, Ind.—Branch personnels at Vincennes, Indiana, and Owensboro and Henderson, Kentucky, were represented at the annual market planning meeting at the Kixmiller Tire Company, Main and Water Streets, Firestone distributor and dealer.

SALT LAKE CITY.—McMillan & Naylor, Inc., of Richfield, Utah, will handle Studebaker cars. Cyrus McMillan is president of the company and has been in the automobile business five years.

ST. JOSEPH, Mo.—The Chrysler motor car agency in St. Joseph has been taken over by the M. L. Breon Motor Company, with salesrooms in the Fairleigh building, Ninth and Felix Streets, formerly occupied by the street railway company.

BURLINGTON, Ia.—The King-Sanburg Company, Inc., is the new name of the Burlington Cadillac-Nash Company, which has disposed of its Cadillac franchise to the Burlington Cadillac Company and will devote its sales force to the Nash and Ajax cars.

CHEHALIS, Wash.—Harry B. Quick, for the last eleven years local dealer for Buick automobiles, is completing his new building adjoining the present location. This gives the Buick a new and up-to-date hope with complete service.

CLEVELAND.—The Sirl Brothers Motor Sales Company, Cleveland, was incorporated here with capital of $10,000. The backers are Joe E. and John Sirl, brothers, who for several years have been dealers in Paige and Jewett. The present step merely represents an incorporation of the business.

FORT WORTH, Tex.—The Smith-Swinnet Motor Company of Forth Worth has been chartered with a $20,000 capitalization. The concern will handle Hudson-Essex automobiles and will be located at 1105 Commerce Street.

EVANSVILLE, Ind.—The Phillips-Osborne Motor Company, Studebaker dealer, has opened a branch Studebaker retail agency at Henderson, Ky. The new branch will be managed by R. M. Lowden, formerly with the Kixmiller Tire Company of this city.

SALT LAKE CITY.—The Erwin Chevrolet Co., 763 South State Street, expects to move into a new building at South Eighth and South State Streets during the first week in January.

ABERDEEN, Wash.—Anson C. Hart, son of former governor Louis Hart of Washington, has taken over the Hupmobile sales agency in Grays Harbor county, and has opened a salesroom and service department here. Mr. Hart has been identified for years with the automobile rows of Tacoma and Seattle with Hupmobile and Studebaker cars.

SALEM, Ark.—A. F. Toliver and Austin Barker have formed a partnership in the garage business. They have the agency for the Star car.

CLEVELAND.—The Heights Chevrolet Company, of Bratenahl, a suburb, has been incorporated.

CAPE GIRARDEAU, Mo.—Hundreds attended the formal opening of the Cape Nash Company's new garage and salesroom at Independence. The building was open to visitors throughout the day and a crowd that packed the large salesroom was in attendance until 11 o'clock.

GALESBURG, Ill.—Frank Hitchcock, salesman of motor cars for many years at Elmwood, has decided to embark in business for himself and has purchased a garage in this city and will sell the Overland and Willys-Knight cars in the Knox county territory.

COLUMBUS, O.—Stanton Motors, Inc., headed by A. T. Stanton, formerly a Chrysler sales director and now Columbus distributor, has signed a 99-year lease on a corner at High Street and Second Ave.

SYRACUSE, N. Y.—The Budd Wheel Company has appointed a new dealer in Syracuse, Louis Vaeth's Sons, of 31832 S. West Street. The new distributor now has exclusive charge of the Budd Wheel interests in Syracuse.

GREENFIELD, Mass.—A Gideon Germain has been appointed sales representative of the Kissell Motor Car Co. for Franklin County.

BEARDSTOWN, ILL.—William Fry, former Springfield automobile dealer, has purchased the Ford and Lincoln agency of R. C. Schell in this city and will handle the lines here.

SPOKANE, Wash.—Roy E. Hotchkiss has taken over the Auto Sales Company, and changed the name to the Hotchkiss Motor Company. He is handling Hudson-Essex cars and giving day and night garage service.

MINNEAPOLIS.—Matt E. Barry has been made manager of the retail division in the city of the Northwest Nash Motors Co., distributor of Nash cars. For three years he has been manager for the Studebaker Sales Co., St. Paul. He will have charge of used cars as well as sales and service at retail.

PORTLAND, Ore.—J. C. Lawson has opened the J. C. Lawson Automobile Company on the east side where he will handle the Oldsmobile car. Lawson was recently connected with the Willys-Overland Pacific Company, where he was office manager of the Portland branch.

CINCINNATI.—Andrew J. Lodder and Clarence D. Barr have formed a partnership under the firm name, Lodder-Barr Motor Company. The new film will represent Chrysler exclusively.

LOUISVILLE.—The Alemite Lubricator Company of Kentucky with headquarters in Louisville, has announced a change in management. Joe A. Busath, G. C. Bottom and T. M. Bibb are now directing the business. E. R. Hurst, former head of the concern is now connected with the Coral Gables development in Florida.

DES MOINES, Ia.—The Overland-Huntzinger Co., retail Overland distributor, has moved from 1110 Locust Street to 1312 Locust Street.

STOUGHTON, Wis.—The Capital Garage of Madison, Wis., has opened a branch Chevrolet garage and office in the quarters of the Peterson Automobile Company in this city. E. W. Riley, formerly of Beloit is in charge of the local branch.

SALT LAKE CITY.—T. B. Meldrum, advertising man of Ogden, this state, who entered the automobile business in that city two or three years ago, has moved to this city where he has just organized the Jordan-Salt Lake Company, with headquarters at 131 Motor Avenue.

LANSING, Mich.—Lawrence McCracken, former Lansing, Mich., newspaper man has joined the Peerless Motor Car Company of Cleveland, Ohio, as assistant advertising manager.

CLEVELAND.—The Ideal Auto Paint Company was chartered here to do a retal business in automobile paints and varnishes.

DENVER.—A new automobile sales firm has been formed in Denver, Colorado, to sell Chrysler cars under the name of Colorado Motor Sales, Inc. Officers of the new firm are Miles R. Kennedy, president and general manager; O. C. Peterson, vice president; and Robert S. Grant, secretary and treasurer.

BEAUMONT, Tex.—The Andrus Motors, Inc., Chrysler dealer, has moved from temporary quarters at Tevis and Pine Streets to a new sales and service building at 226-228 College Street.

PHILADELPHIA.—A new service station soon will be operated by the Philadelphia branch of the Buick Motor Company, in the vicinity of its new branch factory building at Sixteenth Street and Indiana Avenue. The four city retail dealers maintain service stations of their own.

KANKAKEE, Ill.—Louis Heil has organized the Heil Motor Sales Company here and opened a garage and sales agency at 531 South Washington Avenue. He will sell the Hupmobile in Kankakee County.

KENTON, O.—W. H. Berkshire has been made a Chrysler dealer in Kenton, Ohio, with sales rights for all of Hardin County.

MINNEAPOLIS.—The Perlin Battery Company has been authorized to incorporated to manufacture and distribute Perlin automobile and radio batteries.

BIRMINGHAM.—The Western Auto Supply Company, of Kansas City, announces the opening of a new branch store in the south, the latest addition to the chain being located in Birmingham, at 2021 North Third Avenue. This is the twentieth store of the chain, nine of which are in the southern territory.

MINNEAPOLIS.—O. H. Gray, of the Gray Motor Company, Studebaker dealer in Minneapolis and St. Paul, has sold his business to the Studebaker Corporation of America. He intends to retire from business, spending the immedate future in California. Studebaker will take over the entire Gray plant and organize and operate it as a factory branch. B. C. Helm comes from South Bend as retail manager. Mr. Helm has been with Studebaker for two years as adviser on retail problems to Studebaker dealers. He was formerly sales manager for Packard in New York.

With the Associations

California Tradesmen Meet

LOS ANGELES, Dec. 12.—More than 200 automotive merchandisers, including retailers, distributors and jobbers, attended the annual convention of the Southern California Automotive Trades Association recently held at Elsinore. A series of discussions of hard-headed merchandising problems were mixed freely with a variety of recreational and entertainment features that kept the delegates fully occupied during the two days of the convention.

The principal speakers before the convention were J. W. French, of the Richfield Oil Company, a petroleum engineer; Ferris R. Miller, of the Better Business Bureau, of Los Angeles; Lou Blodgett and C. C. Bates of the San Diego Automotive Trades Association, J. Harold Wilson, of the Mission Auto Electric Company, Riverside; Harold Strong, of the Riverside Auto Trade Association, H. J. Banta, president of Banta & Co.. Los Angeles jobbing house, and James E. Granger, secretary of the Los Angeles Automotive Trades Association.

Banta delivered an interesting address in which he stressed the value of co-operation in the handling of automotive merchandising problems. He cited as an example of what can be done through co-operative effort the benefits obtained from the Research Club, of which his firm is a member.

Bates described a co-operative advertising plan which has been successfully used by automotive merchants, other than motor car dealers, in San Diego. The members of the organization buy their newspaper or other advertising space through the secretary of the trade association. The association secretary, after being advised by the members how much space they desire to contract during the ensuing six month's or year, makes a contract with the various publishers for the total amount to be used by the membership, thus obtaining a better rate than if each member should deal individually with the publishers. The publishers are paid, of course, for the advertising by the organization, which collects the money from the various advertising members.

J. Harold Wilson, president of the Mission Auto Electric Company, Williard distributors in Riverside county, was again chosen to head the organization during the ensuing year. George Bellis, Lee tire distributor, Los Angeles, is vice-president, and James E. Granger continues as secretary.

Baltimore Re-Elects Officers

BALTIMORE, Md., Dec. 12.—The Baltimore Automobile Trade Association, Inc., has re-elected all its officers for another year. A. H. Bishop, of the Autocar Sales & Service Co., was elected to serve his fifth year as president. The other officers re-elected are E. T. Backus, of the Backus Motor Co., vice-president, and Walter F. Kneip, of the Franklin Motor Car Co., treasurer. Thomas W. Wilson, Jr., of the Wilson-Nash Motor Co., was re-elected a member of the board of directors. John E. Raine is secretary of the association.

Washington, D. C., Elects

WASHINGTON, Dec. 12.—Stanley H. Horner, president of Stanley H. Horner, Buick distributors for Maryland, Virginia and the District of Columbia, was chosen this week president of the Washington Automotive Trade Association at the annual election.

Other officers chosen were: Fred Haller, first vice president; J. M. Dugan, second vice president; L. S. Julloen, treasurer; E. M. Wallace, secretary; Paul B. Lum and Whitney Leary, directors for three years and Rudolph Jose, retiring president, director for two years.

January 30 to February 6 was chosen as the date for the 1926 automobile show, to be held in the Washington auditorium.

St. Louis Service Men Elect

ST. LOUIS, Dec. 12.—A. L. Jagemann of the Atlas Auto Repair Co. was elected president of the maintenance division of the Associated Automobile Service Companies of St. Louis at its annual meeting. Other officers chosen were; Paul Gebhardt, first vice president, Walter Hawn, second vice president, H. K. Hotze, treasurer, John L. Travers, secretary and J. Rose, sergeant-at-arms.

Robert Stranahan, president Champion Spark Plug Co., addressed the meeting on the benefits of organization. He said the underlying reason for organization of such bodies is to render good service.

B. M. Ikert, technical editor of MOTOR AGE, addressed the service men on mechanical subjects.

Greensboro Dealers Organize

GREENSBORO, N. C., Dec. 12.—The newly organized Greensboro Automobile Dealers' Association elected Harry Clendenin, president of the North Carolina Automotive Trade Association, as president; H. M. Chamblee, vice-president; J. Max Rawlings, secretary-treasurer. These officers and J. L. Rossell, T. C. Hunt and C. L. Howard constitute the board of directors.

New Members Admitted

NEW YORK, Dec. 12.—New members of the Automotive Service Association of New York, Inc., included Otto Bieber, general sales manager, The Oil Jack Co., Inc.; R. G. Howner, District Tool Co.; B. O. Tobin, manager, New York branch, Eaton Bumper & Spring Service, Long Island City, N. Y. Ten membership applications are pending.

Atlanta Elects LeRoux

ATLANTA, Dec. 12.—Charles M. LeRoux, general manager for the Atlanta branch of the Willys-Overland Co., was elected president of the Atlanta Automobile Association for the coming year at the annual meeting of the organization held at the Atlanta-Biltmore Hotel. He succeeds T. K. Johnson.

Other officers named for the coming year were E. G. Beaudry, president of the Beaudry Motor Co., Ford dealers, first vice president; Ed Yancey, of the Atlanta branch of the Stewart Warner Products Co., second vice president; J. R. Cheshire, of the Coddington Cheshire Co., McLaren tire distributors, third vice president; J. B. Moore, of the Ansley Garage and Battery Service, fourth vice president; Waldo Keller, assistant manager of the Atlanta branch of the Buick Motor Co., secretary, and J. M. Harrison, president of the J. M. Harrison Co., used car dealers, treasurer. C. V. Hohenstein, who has been executive secretary of the association for several years was re-elected to this position.

Members named for the board of directors in addition to the above officers included George Woodruff, of the White Co.; R. E. Cullinance, of the Rippey Motor Co., and E. H. Baughman, of the E. H. Baughman Motor Co.

The annual report of Secretary Hohenstein showed the association to be in excellent shape financially with ample funds in hand for carrying on its work during the coming year. The report also showed that the association the past year has enjoyed the most successful season in its history.

The vice president elected serve as the heads of the different divisions of the association each of which functions separately but is a part of the main body.

Bobb Joins Service Men

GREENSBORO, N. C., Dec. 12.—C. J. Bobb, of this city, assumed the duties of assistant manager of the Certified Service Men's Association, launched here several months ago by C. W. Roberts, secretary of the North Carolina Automotive Trade Association. The association aims to more completely win public confidence and distinguished recognized mechanical ability of individual employes of the automotive industry.

Toronto Boosters Elect

TORONTO, Dec. 12.—The annual meeting of the Automotive Boosters' Club to No. 12 took place at the Prince George Club, Toronto, recently when the election of officers and directors for 1926 took place as follows: President, A. H. Fraser, Vice-president, S. E. Ryder, Secretary, C. F. Walch, Treasurer, E. J. Banfield; Directors, H. C. Lea, J. L. Stewart, Arthur Kinzinger, C. A. Massee and E. D. Weed.

Coming Motor Events

Automobile Shows

New York.....Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.....Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Buffalo, N. Y.....Jan. 16-23
Buffalo automobile show by Buffalo Automobile Dealers' Association in 174th Regimental Armory, Carlton, C. Proctor, manager, headquarters, Hotel Statler.

Milwaukee.....Jan. 16-23
18th Annual Automobile Show, Auditorium.

Cincinnati.....Jan. 16-23
Cincinnati Music Hall, Cincinnati Automobile Dealers Association.

Philadelphia.....Jan. 16-23
25th Annual Automobile Show at Commercial Museum Under Auspices Phila. Automobile Trade Assn.

Columbus, O.....Jan. 18-23
Show in Motor Hall by Columbus Automobile Dealers Co.

Elmira, N. Y.....Jan. 18-23
16th Annual Show, Elmira Automobile Merchants Assn., Inc., N. Y. State Armory.

Kalamazoo, Mich.....Jan. 19-23
Automobile Show in Armory by Kalamazoo Automobile Trade Association

Baltimore.....Jan. 23-30
20th Annual Automobile Show and Second Annual Motor Boat Exhibit, 5th Regiment Armory, Baltimore Automobile Trade Assn., Inc.

Brooklyn.....Jan. 23-30
Fifteenth Annual Automobile Show in 23rd Regiment Armory, under auspices of Brooklyn Motor Vehicle Dealers Association.

Detroit.....Jan. 23-30
Detroit Auto Show in Convention Hall by Detroit Automobile Dealers Assn.

Cleveland, O.....Jan. 23-30
1926 Automobile Show under auspices of Cleveland Automobile Manufacturers' and Dealers' Association, Herbert Buckman manager, in Public Auditorium.

Rochester, N. Y.....Jan. 25-30
18th Annual Automobile Show, Edgerton Park, Rochester Automobile Dealers Assn.

Williamsport, Pa.....Jan. 25-30
Automobile Show by Williamsport Automobile Dealers Assn.

Lowell, Mass.....Jan. 25-Feb. 1
Twelfth Automobile Show in Memorial Auditorium, Automobile Merchants Assn. of Lowell, Inc.

Washington.....Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

Washington.....Jan. 30-Feb. 6
Washington Trade Association Show in Auditorium Building.

Chicago.....Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

San Francisco.....Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bldg., manager.

Cumberland, Md.....Feb. 1-6
Automobile Show in New Armory, Automobile Dealers Assn. of Cumberland.

Scranton, Pa.....Feb. 1-6
Passenger Car Show in Armory, Scranton Motor Trades Assn.

Denver.....Feb. 2-6
Anual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Atlantic City, N. J.....Feb. 2-9
Auto Show on Million Dollar Pier by Atlantic City Auto Dealers Assn.

Springfield, Ill.....Feb. 3-6
Seventh Annual Show in State Arsenal by Springfield Auto Dealers Assn.

Providence, R. I.....Feb. 6-13
Providence automobile show under auspices R. I. Automobile Dealers' Association, Chester I. Campbell, manager, 617 Industrial Trust Bldg.

Toledo, O.....Feb. 8-13
Annual show of Toledo Automotive Trades Association in Civic Center Garage, T. J. Cooper, manager, 925 Jefferson Avenue.

Schenectady, N. Y.....Feb. 8-13
Fifth Annual Automobile Show in State Armory by Schenectady Automotive Dealers Assn.

Syracuse, N. Y.....Feb. 8-13
18th Annual Auto Show, State Armory, Syracuse Automobile Dealers Association, Inc.

Kansas City, Mo.....Feb. 12-19
American Royal Bldg.—20th Annual Show, direction of K. C. Motor Car Dealers Association.

Des Moines.....Feb. 14-20
17th Annual Automobile Show in Coliseum by Des Moines Automobile Dealers Association.

Indianapolis.....Feb. 15-20
Auto Show Bldg.—15th Annual Motor Show, direction Indianapolis Auto Trade Association.

Louisville, Ky.....Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Great Falls, Mont.....Feb. 16-20
Eleventh Annual Show by Montana Auto Distributors Association.

Hartford, Conn.....Feb. 20-27
Automobile show by Hartford Automobile Dealers' Association in State Armory, Arthur Fifoot, manager, Hotel Bond.

St. Louis.....Feb. 20-27
19th Annual Automobile Show, City Market Bldg., St. Louis Automobile Dealers Assn.

Grand Rapids, Mich.....Feb. 22-27
Seventeenth Annual Show by Passenger Car Dealers Association.

Peoria, Ill.....Feb. 22-27
Fifteenth Automobile & Accessories Show, Peoria Automobile Dealers' & Accessories Assn.

Omaha.....Feb. 22-27
Twenty-first Annual Automobile Show under auspices Omaha Automobile Trade Association, Inc., in Municipal Auditorium, A. B. Waugh, manager.

Wilmington, Del.....Mar. 1-6
11th Annual Show, Hotel duPont, Wilmington Automobile Trade Assn.

Boston.....Mar. 6-13
Boston Automobile Show under auspices of Boston Automobile Dealers' Association, Inc., and Boston Commercial Motor Vehicle Association, Inc., in Mechanics' Building, Chester I. Campbell, manager, 329 Park Square Bldg.

Ft. Worth, Tex.....Mar. 6-14
Show in Auto Building at Southwestern Fat Stock Show and Rodeo by Ft. Worth Automotive Trades Assn.

Conventions

New York.....Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago.....Feb. 1-3
Ninth Annual Convention of National Automobile Dealers Association in La Salle Hotel.

Chicago.....Feb. 2, 3
Convention of Automotive Electric Service Association in Congress Hotel.

Springfield, Ill.....Feb. 8, 9
Sixth Annual Meeting of Illinois Automotive Trade Association in the Abraham Lincoln Hotel.

Chicago.....Feb. 9-16
American Drivurself Association Annual Convention.

Winston-Salem, N. C.....Mar. 17, 18
Annual Convention of North Carolina Automotive Trade Association.

Galveston, Tex.....May 12-13
Tenth annual convention of Texas Automotive Dealers' Association in Galvez Hotel.

Foreign Shows

Montreal.....Jan. 23-30
1926 Motor Show under the auspices of Montreal Automobile Trade Association, Theo Dorian, manager.

London and Birmingham.....Feb. 16-26
British Industries Fair of 1926.

Coming Feature Issues of Chilton Class Journal Publications

January 1—National Shows Number—Automobile Trade Journal.
January 7—Motor Age—National Shows Number.
January 14.—Motor World Wholesale—New York Show Report.
February 4—Motor Age—Chicago Show Number.
February 4—Motor World Wholesale—Chicago Show Report.
February 18—Automotive Industries—Statistical Issue.

NEW MARMON DIVISION

INDIANAPOLIS, Dec. 12.—Percy E. Chamberlin, sales manager of Nordyke & Marmon Company announced today that the company has established a used car division of the sales department with H. M. Horton of Albany, New York, as manager. Mr. Horton has been a retail salesman and salesmanager and has a wide experience. His first work in the new division will consist of an extensive survey and study of used car conditions of Marmon dealers in all parts of the country.

PEERLESS ADDS DEALERS

CLEVELAND, O., Dec. 12.—Fourteen additional dealers in New York City and vicinity were added this week by the Peerless Motor Car Company, it was announced today at the factory offices here. Contracts were handed the New York men at the factory, after they had made a tour of inspection of the company's manufacturing plant. The addition of the fourteen dealers raises the number of Peerless representatives and service stations in the New York metropolitan district to 50, it was announced.

Buffalo Reports November Sales Above Last Season

Business in Used Cars Is Normal and Stocks Are Lower Than Last Year

BUFFALO, N. Y., Dec. 12.—Comparatively speaking November proved to be a good month for the Buffalo automotive field. Reports from a majority of the car dealers including those handling the leading makes, indicate that sales range from a narrow margin above those of November, 1924, to a margin double those of 1924 at that time, as in the case of the sale of Fords. New car sales are almost exclusively closed cars.

Used car sales are normal and in some instances stocks are less than in November, 1924. Several dealers report the used car situation better than in any recent year for the month of November.

Buffalo automobile manufacturers without exception report business better than last year. This also holds true for the manufacturers of accessories and bodies.

Tire sales show a depression from October which is purely seasonal. Tire sales are much in excess of those of November, 1924. Dealers' stocks of tires are low. Those of manufacturers are also low and are likely to remain so until after January 1.

Wholesale accessory dealers report a phenomenal fall season. A large amount of the fall business is attributed to the general and almost complete acceptance by the public of the closed car and the consequent activity in the new car market. Part of the activity, however, is due to the campaign for re-conditioning cars during the winter. Sales of radiator covers have fallen off somewhat but the increase in the sale of shutters has more than made up for this.

NASH-AJAX NEWS APPEARS

LOS ANGELES, Dec. 12.—Among the new comers in the house organ field is the Nash-Ajax News, published monthly for Nash-Ajax owners and friends in the Southwest by the Troy Motor Sales Co., 1060 South Figueora street, Los Angeles. The first number of its house organ, published in November, is an eight-page magazine, edited by Rupert L. Larson.

ATHLETE OPENS TIRE STORE

ATLANTA, Dec. 12.—Everett Strupper, former football star at Georgia Tech, selected three times on the All-Southern team some years ago, and by many writers given a place on the All-American team, recently organized a new tire dealer concern in Atlanta under the name of Everett Strupper, Inc., 428 Spring Street, handling the Dunlop tire line. Associated with Mr. Strupper in the enterprise is William M. Todd, formerly identified with the Dunlop southern branch in Atlanta.

Rollin Motors Co. Files Petition in Bankruptcy

CLEVELAND, O., Dec. 12.—A voluntary schedule in brankruptcy, listing assets of $741,380.93 against liabilities of $958.035 was filed here in federal court by the Rollin Motors Co. The schedule, filed by Grover Higgins, assistant secretary, pointed out that the company's financial affairs were laid before the company's directors at a meeting December 7, at which time it was decided to wind them up. Officials of the company said the Rollin car, out of production for several weeks, had not sold with the rapidity anticipated, and with a view of insolvency proceedings, the company's assets had been liquidated quitely over a period of several months, until they now are practically all in cash.

November Sees Decline in Iowa Sales of New Cars

License Law and Delay in Harvesting Are Believed Responsible For Showing

DES MOINES, Dec. 12.—New car sales in Iowa suffered a slump during November. Estimates put the total of new car registrations for the month about 25 per cent below that of a year ago. November usually shows a considerable falling off in registration, partly due to the fact that 1926 licenses are available on December 1 and that cars licensed during November are subject to one-quarter the yearly tax.

Dealers located in the smaller trade centers were hardest hit by the November slump. This is accounted for in part by the fact that corn harvesting has been greatly delayed. Farmer customers are very busy.

The movement of used cars is sluggish. Colder weather and some unemployment has cut down the demand. Dealer stocks are comparatively low. Dealers seem determined to enter the winter months with low used car inventories.

Radiator shutters, car heaters, winter enclosures and all kinds of cold weather equipment and supplies are moving fast. Accessory business is good. Radio sales are excellent. Collections are only fair.

NEW LOCOMOBILE DEALERS

BRIDGEPORT, Conn., Dec. 12.—The Locomobile Company of America, Inc., announces the appointment of the following as direct dealer to handle the Junior Eight car:

J. A. Wren, Scarbro, W. Va., J. J. Corcoran Motor Sales Co., Chicago, H. F. Krueger, Milwaukee, Wis., Harry A. Nelson, Erie, Pa., Austin Auto Sales Company, Lakewood, O., Locomboile Company of Monmouth County, Long Branch, N. J., Rialto Motor Sales, Joliet, Ill.

GENERAL TIRE DEALERS FROM AKRON DISTRICT MEET



Photo shows a group of General Tire & Rubber Co. dealers who recently held a convention in Akron. All are from the Akron district and either attended, or represent dealers who attended the first convention of Akron district dealers in 1918. Top row, left to right, C. R. Mess, Grand Rapids, Mich.; L. E. Lewis, Rochester, N. Y.; R. E. Bauman, Cleveland; W. W. Hazlett, Youngstown, O.; J. C. Kullman, Columbus; H. W. Kanouse, Dayton; C. R. Crippen, Columbus; W. J. Mehling, Fremont, O.; W. D. Bauer, Detroit, and G. M. Garrity and H. E. Taylor, Akron. Bottom row, Carl Grabosky, Syracuse, N. Y.; C. Whalen Tucker, Erie, Pa.; Newton Hand, Utica, N. Y.; Cyril O' Neil, Cleveland; Ray Purviance, Akron; J. R. Lotze, Canton, O.; B. J. Carney, Terre Haute, Ind.; J. L. Casey, Canton, O.; H. A. Bischoff and S. W. Sohngen, Cincinnati, and W. O'Neil, president, General Tire & Rubber Co.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
3520	5-p	Brougham	2,050
		"ST8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3770	5-p	Brougham	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
2850	4-p	Sport-Roadster	1,495
2860	6-p	Touring	1,395
3020	5-p	Brougham	1,595
3070	5-p	Sedan	1,795
3070	.....	Wanderer	1,845
		"8-88"	
3180	3-p	Sport Roadster	1,975
3200	6-p	Touring	1,995
3380	5-p	Brougham	2,250
3450	5-p	Sedan	2,350
3450	.....	Wanderer	2,400
3750	7-p	Sedan	2,550
BUICK		**"Standard"**	
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
3350	2-p	Roadster	1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Broug. Sedan	1,925
3940	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line	
		(132 in. W. B.)	
4040	2-p	Coupe	$3,045
4155	5-p	Sedan	3,195
4240	7-p	Sedan	3,295
4075	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
4115	4-p	Victoria	3,095
		Custom Built (132 in.)	
3920	.....	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	.....	Phaeton	3,250
4190	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE		**J. I. C.**	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"Y"	
3950	7-p	Touring	2,225
4820	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th C'y Sedan	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	3,725
CLEVELAND "31"			
2415	5-p	Touring	$895
2565	5-p	Touring DeLuxe	1,025
2520	3-p	Coupe	975
2695	5-p	Sedan	995
		"43"	
2775	5-p	Touring	1,095
2950	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2890	3-p	Coupe	1,175
3120	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp. Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS		**"90"**	
2650	4-p	M. o'War Road.	$1,495
2915	4-p	Legionaire Tour.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
3100	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
.....	7-p	Sedan (135 in. W. B.)	.....
DODGE BROTHERS			
2473	2-p	Roadster	$855
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spec. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spec. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spec. "B" Sedan	1,145
3020	5-p	Sedan A	1,195
3107	5-p	Spec. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spec. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	5-p	Phaeton	$6,650
3980	4-p	Sp. Phaeton	†
5115	5-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT		**A-22**	
.....	2-p	Sp. Roadster	$900
2225	5-p	Touring	810
.....	5-p	Spec. Touring	930
2395	4-p	Coupe	1,090
.....	4-p	Spec. Coupe	1,160
2505	5-p	Sedan	1,150
.....	5-p	Spec. Sedan	1,280
ELCAR		**"4-55"**	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Roadster	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$765
2295	5-p	Coach	795
FLINT		**"55"**	
3325	4-p	Sport Roadster	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4 d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
		With Starter and Dem. Rims	
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN		**"11-A"**	
2800	3-p	Sport Roadster	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER		**6A**	
3290	5-p	Brougham	$1,595
3070	5-p	Touring	1,895
3030	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	.....	DeLuxe Sedan	1,895
		8A	
3620	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3350	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3620	5-p	Sport Sedan	2,295
3600	5-p	DeLuxe Sedan	2,495
GRAY		**"O"**	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ		**D-1**	
3360	5-p	Sedan	$1,795
HUDSON		**"Super Six"**	
3400	7-p	Phaeton	$1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4 d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE		**"A"**	
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT		**"23-25"**	
3060	4-p	DeLuxe Road.	$1,500
3000	5-p	DeLuxe Touring	1,320
2990	5-p	Coach 2d.	1,245
3160	5-p	DeL. Coach 2d.	1,400
3325	5-p	DeLuxe Sedan	1,680
JEWETT (Continued).		**"New Day"**	
.....	5-p	Sedan	$ 995
.....	5-p	Sedan de Luxe	1,095
JORDAN		**"J"**	
.....	4-p	Playboy Road.	$1,695
.....	5-p	Sedan	1,845
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL		**"55"**	
3130	2-p	Speedster	$1,795
.....	2-p	Sp'dster DeLuxe	2,085
.....	4-p	Speedster	1,895
.....	4-p	Sp'dster DeLuxe	2,185
3530	2-p	Enc. Speedster	2,085
.....	4-p	Enc. Speedster	2,185
.....	4-p	Enc. Spdstr. DeL.	2,685
.....	2-p	Enc. Spdstr. DeL.	2,585
3190	4-p	Tourster	1,795
.....	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
.....	7-p	Touring	1,685
.....	7-p	Touring De L.	1,885
3430	4-p	Coupe	2,085
.....	4-p	Coupe De Luxe	2,485
3540	5-p	Brougham Sedan	1,995
.....	5-p	Broug. Sed. DeL.	2,485
.....	5-p	Brougham 2 d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Berline Sed. DeL.	3,185
3530	5-p	Victoria	2,185
.....	5-p	Victoria DeLuxe	2,485
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster De L.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster DeL.	2,585
.....	2-p	Enc. Speedster	2,485
.....	2-p	Enc. Sp'd'r DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Enc. Speedster	2,585
.....	4-p	Enc. Sp'd'r DeL.	3,085
.....	4-p	Tourster DeL.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton De Luxe	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring De Luxe	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Duxe	2,885
.....	5-p	Brougham Sedan	2,395
.....	5-p	Broug. Sed. DeL.	2,985
.....	5-p	Brougham 2 d.	2,095
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. De L.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria De Luxe	2,885
LEXINGTON		**"Concord"**	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4460	2-p	Roadster	$4,000
4580	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	.....	Sport Touring	4,500
4750	4-p	Coupe	4,600
4885	4-p	Sedan	4,800
4760	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,800
LOCOMOBILE "48"			
5280	4-p	Sportif Tour	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Drive Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,785
.....	4-p	Coupe	2,265
3400	5-p	Sedan	2,285
3350	5-p	Brougham	2,285
		"90"	
.....	4-p	Sportif Tour	5,500
.....	4-p	Roadster	5,900
.....	3-p	Coupe	6,950
.....	5-p	Victoria Sedan	7,300
.....	5-p	Sedan (divided)	7,450
.....	7-p	Limousine	7,500
.....	6-p	Brougham	7,500
.....	7-p	Cabriolet	7,500

MOTOR AGE

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Vol. XLVIII No. 26

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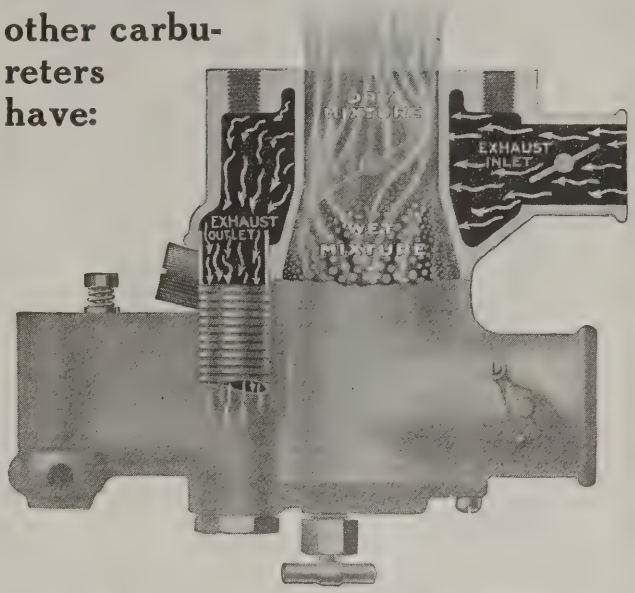
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MARVEL CARBURETERS

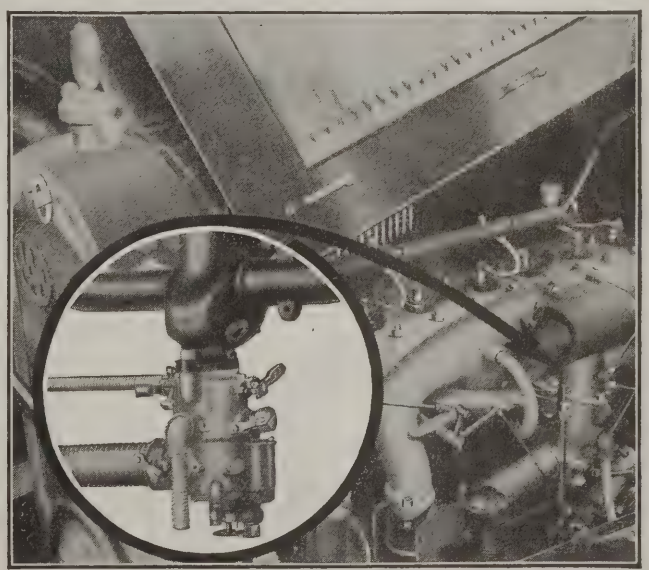
Have what no other carbureters have:



The exclusive patented feature of exhaust heat jacketed around the throttle automatically controlled.

Exhaust heat around the throttle changes the fuel "Rain Drops" in the mixture to the proper combustible gas as shown, and this heat is available from the first explosion. Think what this means to

STUDEBAKER OWNERS



A complete Carburetion System. Showing Marvel-Studebaker Installation.

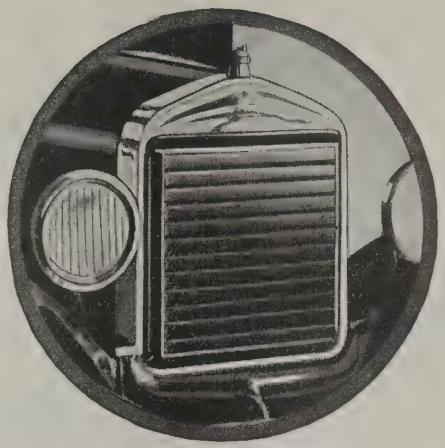
QUICK WARM UP FROM COLD ENGINE
LESS CHOKER MANIPULATION
LESS CRANK CASE DILUTION
LESS CARBON DEPOSIT
POSITIVELY BETTER WINTER PERFORMANCE
POSITIVELY INCREASED MILES PER GALLON

The heat must be at the throttle and under automatic control to get the change in mixture conditions shown above. This has been established as a scientific fact.

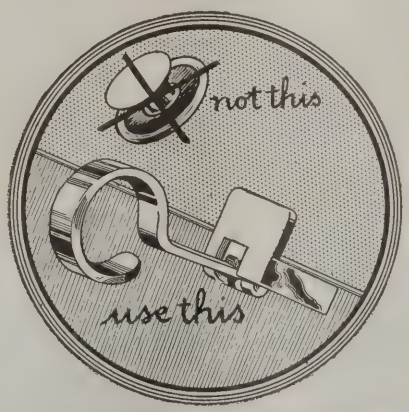
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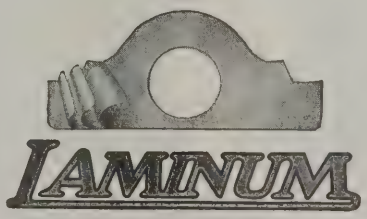
VERNAY ALL YEAR ROUND SHUTTER



Beautifully enamelled. Bearings and operating mechanism all brass. Vanes cannot stick, rust or work loose. Patented bearing prevents rattle.



Another outstanding feature is this hand control from the dash. Nothing to get out of order. No holes to drill. Clamps on dash.



LAMINATED Shims save time, money labor. Just PEEL 'em down to fit.

An All-Year 'Round Shutter That Every Ford Owner Can Buy

$5.50

Here at last is a **real** shutter for Fords at a remarkably low price—an all year 'round shutter that is put on and stays on. There are high-priced Ford shutters of good quality and low-priced makeshifts. But now, for the first time, the Ford owner can get a shutter as good or better than any on the market, regardless of price—for $5.50. Not automatic. Controlled from the dash. Handsomely black enamelled, sturdy in construction, made of pressed steel, with brass bearings and bearing mechanism. Cannot rust, rattle, stick or go wrong. Briefly that's the VERNAY—unbelievable value for $5.50.

Grasp the magnitude of your possible sales with this Shutter. A price which makes volume possible. An article you can guarantee to customers who buy on sight. Immediate shipments can be made.

See This New Shutter at Space C-111, New York Show

Manufactured by

LAMINATED SHIM CO., Inc.

14th Street and Governor Place, Long Island City, N. Y.

Vol. XLVIII Chicago, December 24, 1925 No. 26

MOTOR AGE



FACTORIES concentrate on 1926 program with production steadily slowing. No general price cutting expected during shows. Page 32.

More economical and efficient methods of distribution expected to result from action of National Conference. Page 32.

Stutz dealers and officials gather to see 1926 product at factory. Page 33.

Kansas City salesmen and dealers meet with N. A. D. A. Page 33.

Firestone Co. declares extra dividend at annual meeting and election. Page 34.

Truck manufacturers refuse to approve tax rebate plan. Page 34.

Durant announces improved Star four models at new prices. Page 18.

Texas business will enter the new year with new records in nearly every line of the industry. Page 39.

Buffalo, N. Y., dealer employs novel system for disposing of used cars. Page 39.

New York dealers boost winter automobile sales with window displays. Page 39.

General Motors sales in November total 60,371 cars. Volume delivered is almost double that of same month last year. Page 35.

Robert C. Graham is made general sales manager of Dodge Brothers. Page 35.

Profits, sales and used cars are subjects of discussion at sales meeting and banquet of N. A. D. A. in Chicago. Page 43.

Hoover declares rubber situation is wholly artificial and suggests means of relief from monopoly. Page 43.

Milwaukee expects greater automobile show this year as dates come between those of New York and Chicago exhibitions. Page 36.

Oakland, Cal., car and accessory men hold big show in bank lobby. Page 36.

New car sales in Columbus are up to the November average of other years. Page 36.

Six foreign sleeve-valve racing cars will appear at Indianapolis classic May 31, present plans indicate. Page 37.

White Co. forms new service branches in two more cities. Page 37.

Many personnel changes and increases in sales staffs result from heavily increased activity in California. Page 38.

November is declared the greatest month in the history of the Hupp Motor Car Corp. Page 38.

Overland shipments up to December 9 show a gain of 560,000 cars over the same period last year. Page 38.

In Next Week's Issue—Some New Cars Described

Stunts Are This Dealer's Specialty



There is always something in these show windows to attract attention. Persons on the right are watching bees in a glass hive. Those on the left are patiently waiting for four turtles with letters painted on their backs to spell the word Ford

And Having Attracted the Attention of People He Skillfully Turns Their Interest Toward the Cars He Has to Sell— Makes Profitable Use of Windows

By DIRK P. DeYOUNG

I ALWAYS stop at the Morgan Motor Company, Inc., when I go in to the New Jersey metropolis, Newark. There is generally something new there, a hive of bees in the window, a small zoo, an aquarium with trick performing turtles, or a Ford "looping the loops," or something of the circus which interests even grown-up boys, like myself.

This automobile sales and service concern is among the largest Ford dealers in the state and undoubtedly the most advertised. William J. Morgan, the head of it, was formerly automobile editor of the New York Globe, before it went down and out through Munsey newspaper consolidations. A hardy Welshman by birth, he has a lot of the Barnum instincts—the knack of originating stunts which draw the crowds and keep the name of his firm before the public. Besides, he is a very interesting character, one of those gentlemen of the old school who still finds time to cross his legs and chat with a fellow about the good old days. It was this same Morgan who originated the idea of an automobile outing day for children of the city, when he was on the Globe, heading the procession down Broadway in one of the ancient chariots of that day. At different times I have talked to "Senator" Morgan, as he is familiarly known in Newark. I have discussed almost every subject under the sun with him—evolution, politics, business, and bees—he is a real bug on bees and keeps a colony in his back yard in the suburbs of Newark. The last time I saw him he said that he was up before daylight that morning watching his bees get back with honey. They go out at dusk and nestle in the flowers all night, bringing in the first load at dawn and return immediately for more. The "Senator" goes out in the dewey grass in his bare feet, on the theory that it is a healthful practice. And when he gets back to the shop, he likens these bees of his to a Ford, both being so industrious. But while one might write a short book about Morgan, for the sake of brevity, I am going to confine this story to what he told me about his window displays. And since he is such a good talker himself, I shall let him tell it in his own words.

"Window display and window dressing is now a fine art and has been adapted to all kinds of businesses with success. But in the automobile field the idea has not been used as extensively as it might," began the "Senator." "The Bible has something to say about hiding one's light under a bushel, or our talents in a napkin. I think that the up-to-date merchant should both use his genius for originating advertising ideas and let his light shine through his windows.

"Our first automobile salesroom was two doors away from our present place. It had but one window, not a very large one as compared to the two large ones we now have in our building at 999 Broad Street, Newark—the Broadway of the town. Yet that small one served our purpose for several displays of various kinds.

"To start with, in the old place, we borrowed one of the Goodrich Rubber Company window displays and we also got up several of our own, introducing among other things a colony of bees in a glass hive set right in the window conspicuously. These bees got in and out of their hive by means of a pipe through an opening in the window. They would therefore go in and out, gathering their honey from Newark parks and gardens, which performance attracted hundreds of people to our windows. Frequently, underneath the bee-hive, I noted unusual data about bees, such as, for instance, that although a bee has



This old Ford was run around the streets to advertise the latest models offered by Morgan Motor Car Co.

no father, it has a grandfather, the number of trips a bee has to make to gather a pound of honey, and so on. The more inquisitive ones will come in and want to know more, which I tell them; and, of course, we build up prospects for buyers in that way. And we make people talk about the Morgan Motor Company, and the more we are talked about in that way the better we like it. The newspapers also take such things up, where they would not notice the more prosaic efforts of a dealer.

Prize for Slogan

"A year or more ago we staged a contest, offering a prize to the person who would make up the best slogan connecting up the bees with a Ford car. This created a lot of interest, and the winning person—a Newark schoolma'am—won the ribbon with this phrase, 'You May Get Stung by a Bee But Not by a Ford.'

"I consider the bee-hive, which I still use, one of the most economical of advertising efforts because it serves the display purpose of attracting attention, while at the same time being remunerative—we got 30 pounds of honey from this hive last year. Gradually we improved on the position of the hive to make the work of the bees more visible. At first we only had the side facing the window made of glass, but now we have all sides of the hive made of glass. We remind those who look at the bees—and there is always a crowd stopping there—that the bees are as dependable and productive as a Ford car.

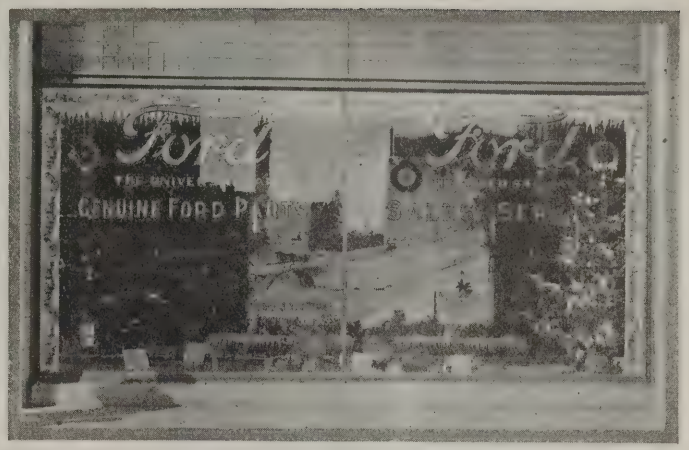
"Experiencing such success with our window display of bees, we recently staged one called the 'Society of Prevention of Cruelty to Animals.' This exhibit consisted of pictures of starved animals and implements of torture that were used as weapons on the poor creatures. Of course, we did not fail to remind the onlooker that the automobile had done more to do away with the beast of burden than all other mechanical inventions.

"In our present building, which has two large windows, we have the bee-hive on one side, and a wooden tank with six turtles in it in the other. Four of the turtles have letters, painted in white, one letter on the back of each, which when all up make the word 'Ford.' We offer a special cash prize of $25 to the person who first sees the turtles in complete alignment, spelling 'Ford,' or we will allow them $50 on the purchase of a new car or truck.

"Just before last Christmas a tramp scenic painter, sent hither by others who knew we were strong on window display stunts, came along asking for work," continued Mr. Morgan who has about as many window display stories to tell as Sinbad the Sailor with his yarns of the sea.



An annual time and endurance test around the state of New Jersey is staged by the Morgan company



Last Christmas this window helped sell Fords and accessories. A painting in the background depicts Santa Claus taking orders for new cars

"I asked him if he could paint a Santa Claus picture. He surely could, and his price was $10 a day or $50 a week. This was something new at Christmas time for us, although we had two girl artists two different summers, painting portraits of notable men, including Henry Ford, his son Edsel, Thomas A. Edison, and others, which we also found a good drawing feature. The young girls were rather nice looking, full of pep, and sketching rapidly, faces which the public recognized.

"So, on the strength of the summer artists, which helped to keep up interest in the dull months of summer, I took on the scenic painter to push along the holiday business. He did a fine job, producing some wonderful Christmas scenery, with a Santa Claus, booking Ford cars as Christmas presents. This work was completed in 24 hours, the size of the picture being 8 by 12 feet. I employed him for the whole week, however, in which time he completed three other pictures, used for other purposes.

Accessories Displayed

"We also display special Ford accessories in the windows and have a cut-away Ford chassis, electrically operated, going all the time—motion-motion-motion, is my idea of it all—which has attracted thousands. It was loaned to us three years ago by another concern, and it has been running ever since.

"Of course, we have offers of things for our windows which are not appropriate. The sensational should be avoided. Instructive and human-interest displays should be the aim of the automobile merchant. I would not mind, however, to have an exhibition of classic statuary representing men, or girls, or both; or even a beach scene with a diving tank in which some living mermaids disported themselves. Some might class this as sensational, but I don't think so. What is seen every day at the seashore should be permissible on main street."

The Morgan Motor Company, Inc., as "Senator" Morgan tells us, has two windows, each 60 feet in length, high up, thus lending themselves to such displays as mentioned. The building is right in the downtown part of Newark, a city of some 500,000 people, a block or two from the city hall. Thousands of people pass it every day. They always keep a Ford flag flying on the flag-pole extending from the roof. On patriotic days, they hoist "Old Glory" above the Ford. Although established only about four years ago, this concern has forged to the front among Newark Ford dealers, of which there are eight or ten in the city. This phenomenal growth is generally credited to the Morgan sense of good publicity methods, such as his clever window displays.

Six New Racing Records in 1925



Pete DePaolo, winner of 1925 A. A. A. racing championship

Earl Cooper and Frank Elliott Smash Speed Marks in Contests Sanctioned by A. A. A. —Pete DePaolo Wins Championship

THE 1925 campaign for the "knights of the roaring boards," including 13 sanctioned A. A. A. automobile races, was brought to a close with the contest on Nov. 29 at Culver City, California, the 13 events of the year being participated in by a total of 26 nationally prominent drivers.

The greatest speed of all times was established by the daring drivers and every track in the country saw the former records of speed broken.

Six new world's records were established during 1925, with several 1924 marks broken on one or two occasions during the present season.

New records announced are:

Lap trials—By Earl Cooper at Culver City, Nov. 29, averaging 141.6 miles an hour. Former mark made by DePaolo 136.4 miles an hour made at Salem, N. H., Oct. 31.

75 miles—New mark by Earl Cooper, 132.6 miles an hour, made at Culver City, Nov. 29. Old record by Leon Duray of 128.6 miles.

100 miles—Cooper, 131.8 miles an hour. Old mark held by Duray, 128.55 miles an hour.

150 miles—Cooper, 130.7 miles an hour, old mark of 127.30, held by Hill and made in 1924.

200 miles—Cooper 129.5 miles. Old mark of 126.9 held by Hill made at Culver City 1924.

250 miles—Frank Elliott, time 1 hour 57 minutes 18.20 seconds, average 127.87 miles an hour. Old mark held by Milton, 1 hour 58 minutes 13.60 seconds and established March 1, 1925.

Leading drivers finished with points as follows: Pete DePaolo 3260, Milton 1735, Harry Hartz 1640, Bob McDonogh 1510, Earl Cooper 935, Frank Elliott 880.

The record of the official races follows:

Culver City, Calif.
250 Miles
March 1, 1925

Winner—Tommy Milton, second Pete DePaolo, third Harry Hartz, fourth Bob McDonogh.

Time: 1 hour 58 minutes 13 seconds, average 126.885 miles an hour. A new world's record. Old record held by Bennie Hill made in 1924 at Culver City, 1 hour 58 minutes 18 seconds, average of 126.6 miles an hour.

Nineteen started.

Fresno, Calif.
150 Miles
April 30, 1925

Winner—Pete DePaolo, second Tommy Milton, third Leon Duray. Time: 1 hour 25 minutes 49 seconds, average 102 miles an hour.

Charlotte, N. C.
250 Miles
May 11

Winner—Earl Cooper, second Harry Hartz, third Tommy Milton, fourth Fred Comer, fifth Pete DePaolo, sixth Bob McDonogh. Time: 2 hours 2 minutes 50 seconds, average 121.6 miles an hour.

Indianapolis, Ind.
500 Miles
May 30 (Memorial Day)

Winner—Pete DePaolo, second Bennett Hill, relief for Dave Lewis, third Phil Shafer, fourth Harry Hartz, fifth Tommy Milton.

Time: 4 hours 56 minutes 39 seconds, average 101.13 miles an hour. (A new record.)

Altoona, Pa.
250 Miles
June 13, 1925

Winner—Pete DePaolo, second Frank Elliott, third Tommy Milton, fourth Harry Hartz, fifth Fred Comer. Time: 2 hours 9 minutes 45.10 seconds, average 115.9 miles an hour.

Laurel, Md.
Baltimore-Washington Speedway
July 11. 250 Miles

Winner—Pete DePaolo, second Bob McDonogh, third Harry Hartz, fourth Fred Comer, fifth Frank Elliott, sixth Tommy Milton, seventh, Jimmie Hill. Time: 2 hours 1 minute 39.28 seconds, average 122.84 miles an hour.

Altoona Sept .7
250 Miles

Winner—Bob McDonogh, second Harry Hartz, third Earl Cooper, fourth Fred Comer, fifth Leon Duray, sixth Norman Batten, seventh Phil Shafer. Time: 2 hours 6 minutes 54.5 seconds, average 118.4 miles (a new Altoona record).



Frank Elliott who established new world's record in 1925 by driving 250 miles at an average speed of 127.87 m.p.h.



Earl Cooper, internationally known race driver who set five new world's speed records in 1925

Syracuse, N. Y.
Dirt Track, 100 Miles, Sept. 19

Winner—Ralph DePalma, second Leon Duray, third Ralph Hepburn. Time: 1 hour 15 minutes 18.98 seconds. Twelve entries.

Fresno, Calif.
150 Miles
Oct. 5, 1925

Winner—Fred Comer, second Bennett Hill, third Raymond L. Cairens, fourth Dr. William E. Shattuc. Fifteen cars started. Time: 1 hour 28 minutes 5 seconds, average 102.2 miles an hour.

Laurel, Md.
250 Miles
Oct. 26

Winner—Bob McDonogh, second Pete DePaolo, third Tommy Milton, fourth Ralph Hepburn, fifth Earl Cooper, sixth Phil Shaffer. Sixteen started. Time: 1 hour 59 minutes 2.71 seconds, average 126.30 miles an hour (new track record).

Salem, N. H.
250 Miles
Oct. 31, 1925

Winner—Pete DePaolo, second Ralph Hepburn, third Earl Cooper, fourth Tommy Milton, fifth Harry Hartz, sith Earl DeVore, seventh Norman Batten, eighth Jerry Wonderlich. Time: 1 hour 59 minutes 25 seconds, average 126.85 miles an hour. (New track record.)

Charlotte, N. C.
250 Miles
Nov. 11 (Armistice Day)

Winner—Tommy Milton, second Harry Hartz, third Jerry Wonderlich, fourth Norman Batten, fifth Fred Comer, sixth Frank Elliott, seventh Ralph Hepburn, eighth Leon Duray, ninth Dave Evans, tenth Dr. W. E. Shattuc. Time: 2 hours 1.67 seconds, average 125.31 miles an hour.

Culver City, Calif.
250 Miles
Nov. 29, 1925

Winner—Frank Elliott, second Harry Hartz, third Fred Comer, fourth Bob McDonogh, fifth Earl Cooper. Time: 1 hour 57 minutes 18.2 seconds, average 127.87 miles an hour (new world's record).

The only fatal accident of the year was the death of Raymond L. (Red) Cairens, 27 years old, of Los Angeles, who died Dec. 2 of injuries received Nov. 29 in the Culver City race.

25 Years Ago In the Automobile Industry
As Recorded In MOTOR AGE

(From MOTOR AGE of Dec. 26, 1900)

Secures Illinois License

The Hub Motor Transit Co., having secured the right to operate in Illinois, will proceed to place 50 omnibuses on the streets. The motor has already been described in MOTOR AGE. Each bus is to carry 40 persons and the fare is to be five cents. The company was incorporated last fall and its capital is $1,000,000.

Motor Company Expanding

GRAND RAPIDS, Mich., Dec. 21.—The Wolverine Motor Works has secured a three-story building on Front Street, and is fitting up the building in most convenient shape for its large business. Twenty-five new machines have been purchased. The machinery is being placed and will be ready to operate in about three weeks. Fifty or sixty men will be employed here and about the same number at the branch boat building plant in Holland.

Minneapolis Wants a Show

There is a movement on foot to give an automobile show in Minneapolis next spring. Local dealers are interested, and the owners of automobiles take kindly to the idea. There are at present 30 owners of automobiles. They were all purchased during the present year, but the indications are that this number will be greatly increased during 1901.

New Transfer Co.

Frank E. Scott, well known among railroad men, is manager of a new concern known as the Chicago Transfer Co., whose business it will be to handle baggage between depots, hotels and residences. The first of this company's trucks was on exhibition last week at the Union Depot.

A Petition to Congress

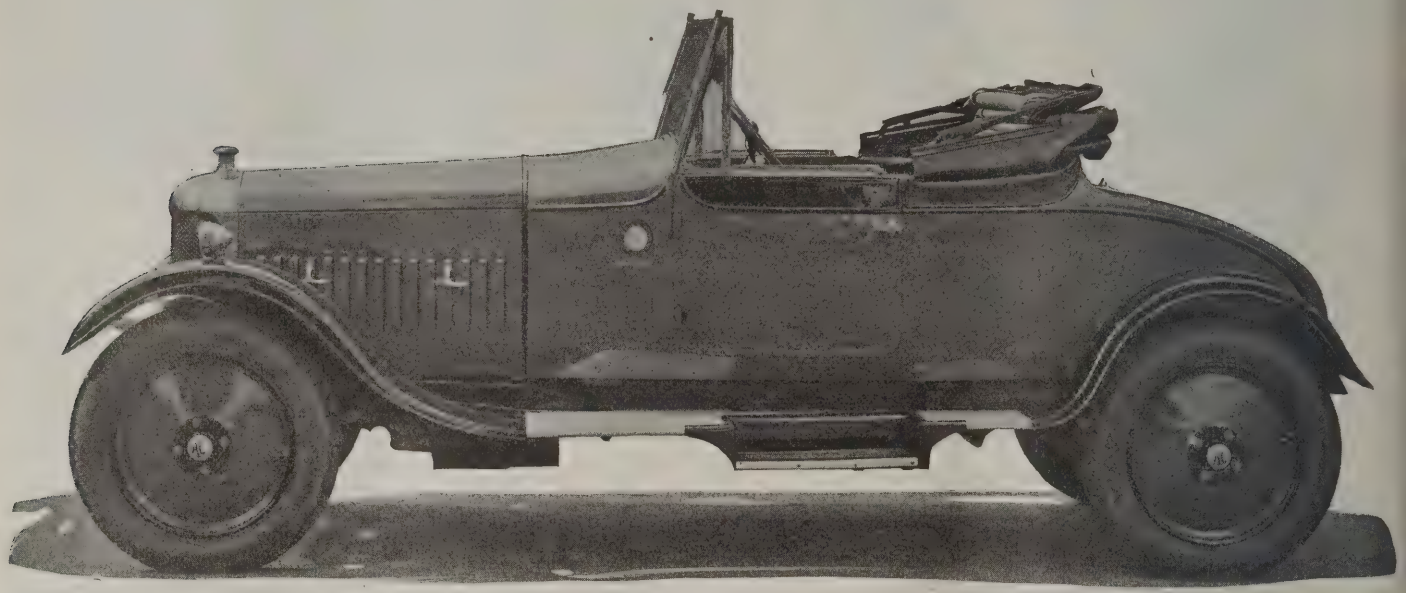
NEW YORK, Dec. 21.—Ex-President George F. Chamberlain and James C. Church of the Automobile Club of America, have in charge the drafting and presentation to congress of an amendment to the U. S. Revised Statutes, permitting the transportaion of gasoline motor vehicles on ferries.

Automobiles Affect Realty Values

PHILADELPHIA, Dec. 22.—Property on North Broad Street, is experiencing a boom in values along Automobile Row. Values have increased 50 per cent in some instances and single offices which formerly could be secured for as low as $25 and $30 a month now command $45 and $50.

Now It's Open—*Now It's Closed*

A British Car of Novel Construction Giving the Advantages of Both the Open and the Closed Car



This photograph shows the 6-cylinder A C Aceca model, open-closed car with top and windows down. The glass windows slide into the door panels

ONE of England's largest automobile manufacturers has solved the problem of complete protection from severe weather for himself and a large number of his customers by making an open-closed car that is quickly convertible from a smart roadster with top down to a perfectly sheltered vehicle with glass windows.

Being averse to driving an ordinary sedan or coupe type of car and yet desiring complete protection from inclement weather, the head of one of the large British companies designed this car for himself and put it into production. This man is S. F. Edge, governing director of A C Cars, Limited, manufacturers of the AC car. The car is an A C with Aceca "open-closed" body.

In a letter to the editor of MOTOR AGE, Mr. Edge says: "This is the car I use myself and it is just my idea of what a car should be. It is possible to put the hood up with one hand while driving and then there are no side curtains to be worried about. There are Triplex glass side windows which can be pulled up, this making the whole thing a perfectly weatherproof closed car. It has the important advantage of being extremely light, the complete car weighing only 16½ cwt."

The car is made in both four and six-cylinder models, but the specifications are the same except for the engines. The overall length is 147 inches and the overall width is 59 inches. A dickey seat which is practically invisible when closed is 35 inches wide. The car sells in England at prices equivalent to about $2450 for the four and $2750 for the six.



This view shows the Aceca with top up ready for windows to be pulled up out of the door panels. When the windows are closed the enclosure is weather proof. The operation of raising top and windows can be done with one hand without stopping the car

Window Pictures That Make 'Em *Stop and Look*

Proper Tie-Up Makes Them a Valuable Sales Asset and Interests Passers-by In Automotive Merchandise on Display

By LESLIE H. ALLEN

MAKE 'em stop—make 'em look—make 'em step inside to listen to what the salesman on the floor has to say about what they stopped to look at.

This is the formula behind every window display. But how to make 'em stop and the rest of it when the window display looks like just another lot of automobiles or accessories?

One way to answer this question is to take a leaf from the large success of the pictorial newspaper—the tabloid. Why are these tabloids crowding many a newspaper of the old type to the wall? Because of their pictures.

People like to look at pictures. Reproductions of photographs are much easier to "get" than typed statements about events. It's interesting to read about a big football game. It's even more interesting to study a picture of one of the great plays in that game. And pictures in the tabloid newspaper may be so posed and captioned that the significance of the event they illustrate may be grasped in a single moment by even the lowest common denominator among the readers—or lookers.

News photographs in a show window have a strong appeal to the passing public, but unless they are directly tied up with the merchandise displayed in the same window they have little or no sales influence. Here are some suggestions on getting the right kind of pictures.

News pictures added to window displays for the purpose of attracting attention of the passerby are nothing new. You see them on almost every business street. Next time you see them, stand around five minutes and count the number of persons who, after looking at the pictures awhile, step into the showroom. Probably you could count them on either hand if both were fingerless. Why? Because the value of just any news picture in a window display is almost wholly a fictitious value. The theory is that any old news picture will persuade the wandering eye to take in also the goods displayed around and behind it. This theory is not sound. Why should a news picture of some brown girl swimming the English channel—or part of it—persuade him who pauses to gaze at it to wonder whether he doesn't want to buy automobile accessories? There is no relation between the two. The theory that the one will produce the other is built merely upon chance. It is a gambler's chance.

But these pictures might be transformed into a real asset if they were directly related to the goods whose sale they are supposed to assist. For example, a tire window display might attract attention by means of a picture of that tire in use on a car on a slippery street, or of the millionth or so tire of that make, with its manufacturer standing by. There is news waiting to be photographed about every accessory sold. The passerby will stop to look at such pictures just as readily as he will stop to look at pictures of an unrelated sporting event, because what he is primarily interested in is pictures of some sort. He must be, or the tabloids would not sell as they do. And if the window picture tells him a graphic story about the products behind and around it, he will inevitably pause longer to look at those products as well as the picture. Then, if he really needs the product, he will either step inside or make a mental note of the place where he saw the picture, to call again some other time.

The man who trims the window may say, "Very good. But where am I to get such pictures? I can get plenty of straight news pictures, but where are the photographs which tell a story about my products?"

In catalogues, for one place. Catalogue pictures can be enlarged to proper size for window display. In addition, manufacturers have photographs which are available for this use. If the proper sort of pictures—those that really tell a story about the sales points of the product—are not available otherwise, then the man selling the products can take his own. If he finds it difficult to see just how he can work the news value of his product into a photograph, he can call up some newspaper friend, or talk it over with other friends whose ideas would square with those of the man in the street to whom he wishes to appeal. The proper kind of news pictures about a product are either available now or can be made so by the seller with ideas.

As an example of all this argument, the Sales Equipment Co. of Detroit have a Ford-O-Graph service which supplies Ford dealers with two or six pictures each week, every picture telling a news story about some Ford product in action. These photographs appear on posters 16 by 22 in size. Above the picture is the title "Ford-O-Graphs," and below it appear the caption telling the story that the picture tells, and the selling line, "Ford—A Smart Looking Car." The company holds that every pedestrian who stops to look at a Ford-O-Graph becomes thereby a potential prospect.

The value of such a service, of course, is the fact that the pictures are tied up directly to the product. Pictures thus related to the product work day and night for the boss of the man who trims the window. They make the prospect stop himself and eventually sell himself on the product he has seen pictured in use and action. An actual test in 10,000 towns has proved that an average of 200 people daily stop and read and look at every news-photo in window displays. If the photo has no relation to the product the percentage of prospects among the lookers will be small, if any. If the tie-up to the product is there that percentage will be much larger. And gradually the pedestrian will assimilate, unconsciously, a liberal education in the practical uses and advantages of the product.

Women Enter Storage Garage Business

Two Active in Operation of New Day and Night Parking Institution in Fort Wayne, Which Handles 1200 Cars a Day

WOMEN have invaded the garage and automobile storage business in Fort Wayne, Ind., in the opening of the New Washington Garage, Inc., recently, by Mrs. Nettie Preble, Mrs. Cloe C. Bryant and J. C. Law. The business is incorporated with a capital stock of $15,000, and the three stockholders, all of whom are active in the management, have been elected to the following offices: President, J. C. Law; vice president, Mrs. Nettie Preble; secretary treasurer, Mrs. Cloe C. Bryant.

The new venture is unique in Fort Wayne in that it is the first garage to open in the immediate downtown shopping district and catering especially to motorists wishing a safe parking position adjacent to department stores, hotels, theaters and office buildings.

The three owners conceived their idea of a popular priced storage garage shortly after a fire gutted a building known as the Washington market and overtures were made to the landlord of the property which resulted in a long time lease on the three story and basement building with a floor space of 70 by 150 feet on each floor.

In Good Location

Not one of the three owners has had previous garage experience, but applying business ability gained in other affairs picked the location only after studying all angles. Three of the principal highways in Indiana merge in passing through Fort Wayne and on these highways is located the New Washington Garage, 128 West Washington boulevard. The three highways whose routes pass the doors of the new garage are the Lincoln Highway, Yellowstone Trail and Indiana State road Two. The landlord values the ground at $200,000 and in rebuilding the interior expended the sum of $70,000.

"Better and Bigger" has been adopted by the owners as their advertising motto and the motto is advertised as pertaining to service, courtesy and physical property. Every effort is being made to impress customers with the willingness of the management to render every possible service.

Eight uniformed attendants comprise the employed staff of the garage in addition to the three owners. Service of the garage begins at the door as motorists relinquish the wheels of their cars at the entrance to one of the attendants, who drives it to its proper parking space. The owner is given a claim check at the cashier's office by either Mrs. Preble or Mrs. Bryant. Upon his return to the garage the claim check is presented and his car is returned to the entrance by the attendant.



Day and night parking garage in center of Fort Wayne business district. Above, Mrs. Cloe C. Bryant, secretary-treasurer (left), and Mrs. Nettie Preble, vice-president, in the garage office on opening day

Ramps about 100 feet long and sloping at a 14 per cent grade connect the various floors and basement. The ramp leading to the second floor heads directly into the entrance on Washington boulevard and the ramp leading from second to third floor is located on the opposite side of the building and slopes upward towards the front of the building.

In returning cars to lower floors attendants are instructed to keep the engine connected in low gear in order to prevent the slipping of tires. Customers are told of this and other measures of special care taken to safeguard their cars.

No general repair service is given by the garage in an endeavor to avoid all possible conflict with customers who might be dissatisfied and refrain from using the parking space. Space has been provided on the main floor, second and third floors and in the basement for the parking of 300 cars at one time and it is estimated that the garage can easily handle 1,200 cars daily.

Tire repairs will be made at nominal charges for patrons wishing that service while their cars are parked. Washing racks have also been placed at the rear of the main floor, upon which a battery of searchlights are trained, making service rendered at night fully as efficient as the daylight service. Each time a car is washed the interior is completely cleaned with a vacuum cleaner.

In addition to the tire repair and washing service the New Washington offers its patrons the Alemite service, gasoline and oil supplies and greasing.

Extreme care has been taken to conserve all floor space for the storage of cars from which most of the revenue is to be derived. The office is located on the main floor under the ramp leading to the second floor. A small cashier's cage is located near the entrance making quick and careful service possible.

As a convenience for patrons, both men and women, toilets have been installed on the first floor in an inconspicuous position. A small rest room for women is adjacent. A door leads from the entrance to the garage into a cafeteria and restaurant.

Mechanical Equipment Complete

Mechanical equipment of the garage, while complete, occupies but little space. Two gasoline pumps occupy a place alongside the ramp on the first floor. Six oil tanks and pumps also sit along the ramp. The gasoline tanks are buried beneath the floor at the rear of the garage. Proper spaces for the parking of cars have been marked on the three floors in paint.

The city government has placed stringent regulations upon the practice of park-

(Continued on page 17)

Special Finish Sells New Cars in Detroit

DID you ever stare into the blackness of a bedroom at midnight trying to figure out a business problem instead of sleeping? That is what Charlie Brady, manager of the Detroit branch of Olds Motor Works, did late this summer just prior to the announcement of the latest Oldsmobile. The fact that Charlie lost some sleep is neither here nor there, but the fact that he did discover a new twist to the psychology of selling is, perhaps, worth a story.

Here was Charlie's problem:

He had been manager at the Detroit branch but a short time and was following a "go-getter" who had made records. Furthermore the factory was about to introduce new models and he wanted to make a "splash" that would be heard in the most blase automotive community on earth—Detroit.

Had it been possible he would have liked to have sold every new Oldsmobile with the understanding that the purchaser was to placard the car with banners and drive it every day with horn tooting. That was the result he was aiming at—to call attention of every Detroiter to each new Oldsmobile as it rolled down Woodward avenue. What had first looked like a white elephant gave Charlie his first clue, and to understand his final solution a short history leading up to the white elephant is necessary.

Some weeks previous Oldsmobile officials had several dozen cars finished in various color combinations and then selected the colors that were to be standard. A beautiful, but conservative, shade of Buckingham gray was selected for the coach. The cars with the discarded color combinations were distributed around to the various branches as showroom attractions. Charlie had drawn a coach with the lower part of the body finished in opal-pearl gray and the upper part in a slightly darker storm-cloud gray, the striping being a light green.



CHARLES P. BRADY

Manager Detroit branch of Olds Motor Works who turned "White Elephant" into big sales asset

This coach with its light and almost bride-like finish had first appealed to Charlie as a white elephant. As his problem grew, however, it loomed larger and in a different light in his mind. Here was a car that certainly was distinctive. It was one that would be recognized instanter. It would proclaim itself the latest Oldsmobile. But would it sell?

Charlie believed that Detroiters find no distinction in owning an automobile, it's too common in the motor city. Therefore they must have something different from the usual to satisfy their individuality. To accomplish this requirement a custom-built job or a special finish—both expensive propositions.

Charlie felt he had decided the problem, but to make sure he awakened his wife and outlined his plan to her, asking her if she would care to drive the white elephant in Detroit.

"Certainly," was her reply, "it is a beautiful car and it's—different."

The next day Charlie was at the Olds factory in Lansing, selling them his idea. He obtained a promise of 20 of the "white elephant" coaches. Since then he has ordered and reordered, and his only difficulty has been in getting enough to satisfy the demands of blase Detroiters for this distinctively finished coach that had first been listed among the undesirables.

Other branch managers and distributors in large cities have followed Charlie's hunch with the result that Oldsmobile coaches are now being turned out regularly both in the conservative and light, distinctive gray finishes.

Women Enter Storage Garage Business

(*Continued from page 16*)

ing automobiles in the downtown district, owing to the narrow streets and the ever increasing burden of vehicular traffic.

The New Washington management has arranged contracts with leading department stores and other downtown business houses whereby patrons would be provided with parking space at the New Washington.

The patron is informed by printed notices on the checks and by newspaper advertising that at the time of making a purchase at any of the leading stores of the downtown district he should present his garage claim check, which will be given on O. K. by the clerk. The claim check with an O. K. is accepted by the New Washington as cash for three hour's parking.

A similar arrangement has also been made with leading nearby theaters whereby between the hours of 7 and 12 p. m. a claim check returned with the O. K. of a theater on the preferred list receives his parking free of charge, or rather at the expense of the theater management. The location of the garage makes arrangements of this kind exceedingly worth while, as the New Washington is only about 1,000 feet from the highest rental district in Fort Wayne. A number of leading department stores men's and women's clothiers and theaters are within a distance of two and three blocks.

Twenty-four hour service is maintained by the garage and cars are delivered and accepted at all hours by the attendants, all of whom are licensed chauffers.

Regular rate for transient patrons is 25 cents for the first hour, 10 cents for the second hour, 5 cents for each hour thereafter. Attractive offers are made to regular patrons for hourly, daily, weekly or monthly parking. Business men wishing storage during office hours only are given special reductions in space rentals. Washing and interior vacuum cleaning ranges in cost from $1.50 to $2.50, according to the size and condition of the automobile.

Mr. Law, as president of the corporation and general manager of the garage, will oversee the operation of the property. He will be assisted by the women of the corporation, who will act as cashiers and in the absence of Mr. Law assume direction of the garage.

Both of the women are widows and are accustomed to business activities. Mrs. Bryant resigned a position as clerk in the county treasurer's office. Mrs. Preble is the widow of a real estate dealer and took an active interest in her husband's business preceding his recent death. Mr. Law was formerly in a lumber business.

Several Important Body and Chassis Changes in Star Four

By DONALD BLANCHARD

As a result of numerous changes, the Star Four chassis from the rear engine supports back, is practically a duplicate of the new Star Six chassis which was described in Motor Age of October 22. The wheelbase has been increased to 103 in., and the frame has been completely redesigned. The side rails are of heavier material, 4½ in. deep, and are made with a kick-up over the rear axle. This feature, together with the new drop center front axle, has made possible a general lowering of the body with consequent improvement in appearance and roadability.

No changes have been made in the 3⅜ bore by 4¼ in. stroke Continental engine, but the clutch, transmission and axles are entirely new units.

Prices and body styles making up the Improved Star Four line follow:

Commercial chassis	$425
Roadster	525
Touring	525
Coupster	610
Coach	695
Sedan	805

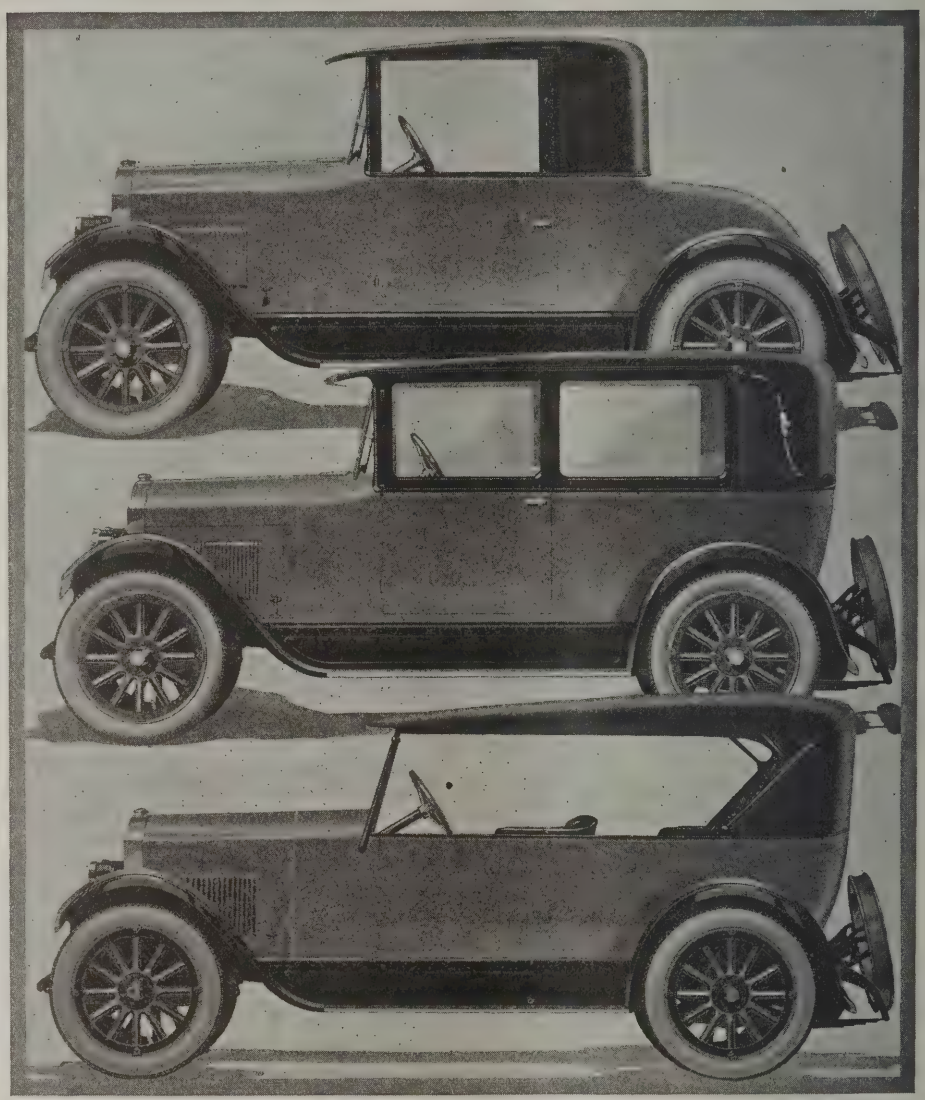
Bodies, which are built by the Hayes-Hunt Corp., have a well stream-lined appearance and are of substantial construction. Lacquer finish in conjunction with a gold stripe around the belt molding, is used on all models. The shells enclosing the Fedders radiators are of a new design, heavily nickeled and highly polished, and carry the new Star name plate.

The coach is finished in biege brown and is upholstered in gray cloth having a brown stripe. The sedan is done in bronze green with brown velour upholstery. Both of these models are equipped with one-piece ventilating windshields, two screened ventilators above the shield, cowl ventilators, integral sun visors, automatic windshield wipers, rear vision mirrors, dome lights and rear window shades. In addition, the sedan has shades on the rear quarter windows.

Finished in Royal Blue

Both the coupster and touring models are finished in royal blue and are upholstered in artificial leather, the colors being gray in the former and black in the latter. A feature of the coupster model is the large compartment in the rear deck. The windshield on this model is a one-piece type and a cowl ventilator is provided. On the touring car, a two-piece ventilating windshield is used.

All models have black artillery wheels fitted with 20x4.40 in. balloon tires except the open cars, which have 30x3½ clinchers.



Three of the new body models of the Star Four. Top to bottom, the coupster, coach and touring car. Lacquer finish with a gold stripe around the belt moulding is used on all models.

The clutch is of the single plate, dry disk type. It is self-adjusting and operates with a light pedal pressure. Between the clutch and the transmission, which is carried amidships in a substantial sub-frame, is a rubber-ball type of universal.

The transmission provides three speeds forward and reverse and drive to the rear axle is through a tubular propeller shaft and Spicer universal joints. Rear axle torque and propulsion are taken through the springs.

A semi-floating, helical bevel rear axle is used with alloy steel reduction gears providing a reduction of 4.87 to 1. Axle shafts are a spline fit in the differential, which is mounted in heavy duty ball bearings. The pinion shaft and wheel bearings are Timkens. The front axle is a reverse Elliot type of I-beam section with Timken bearings at the wheels.

Rear springs have been lengthened several inches, their length now being 55¾ in., while the corresponding dimension for the front springs is 35⅞ in. The service brakes act internally and the parking brakes internally on 11 in. diameter drums on the rear wheels.

Two Record Systems for Repairs and Parts

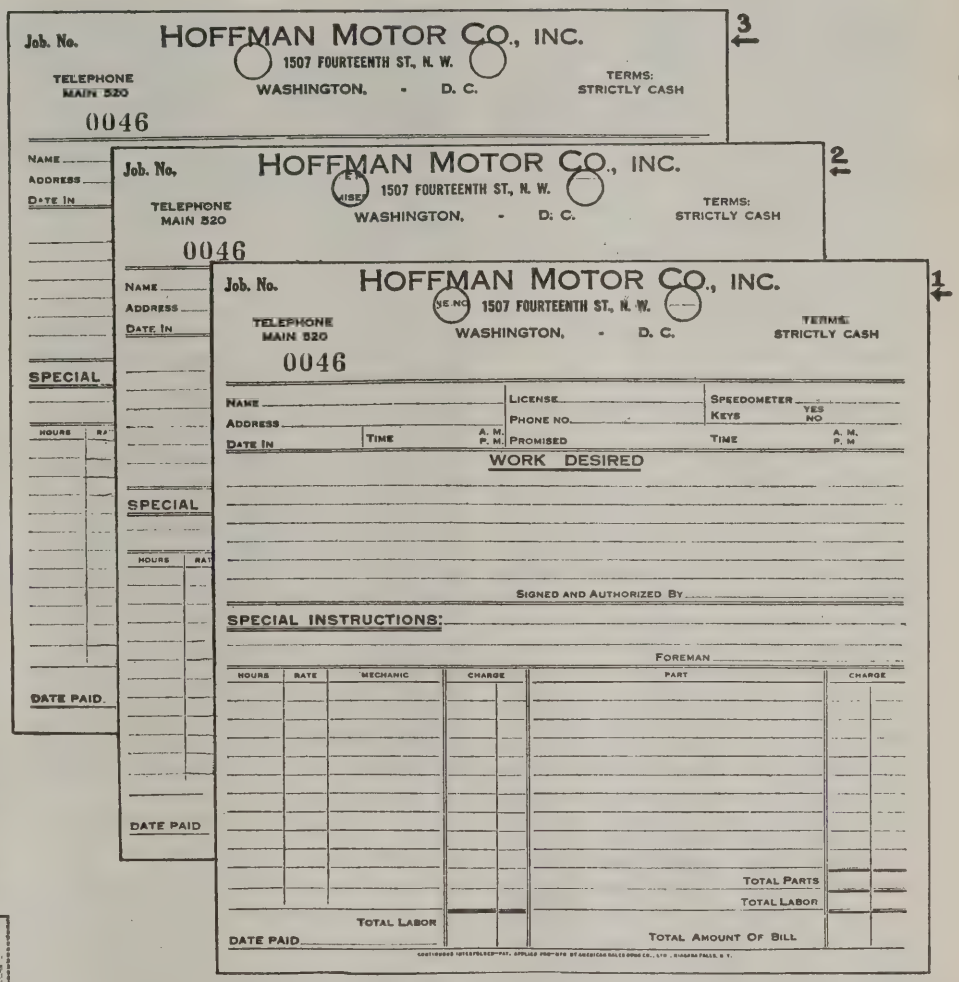
TWO of the automotive accounting forms furnished by the American Sales Book Co. of Elmira, N. Y., are described in printed matter recently issued by that company. One of these is a triplicate system for repair orders in a moderate sized garage and the other is a quadruplicate system for all classes of sales in the parts department.

The Hoffman Motor Co. of Washington, D. C., makes use of the repair order forms, which are carried in a special Wiz flat packet register made by the manufacturer of the system.

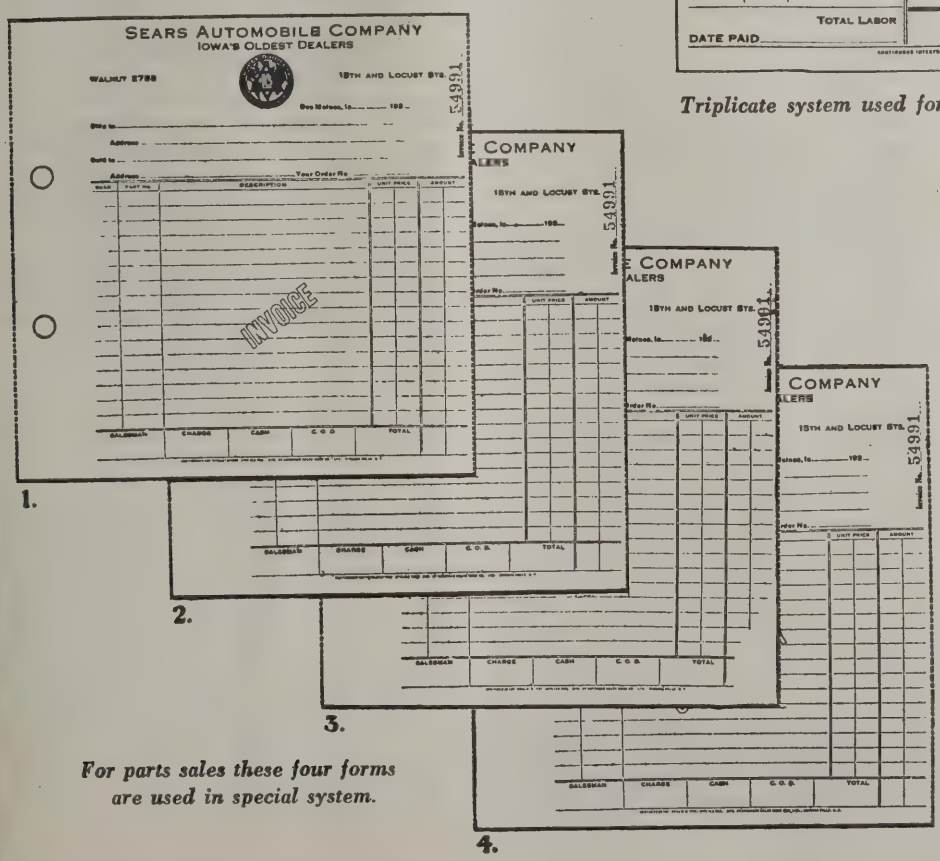
All repair work is done on a cash basis. When the customer brings in his car, a record of his name, address, phone number, license number, etc., is taken on the tickets while in the Wiz machine, as well as the date, time placed in the garage, and time the garage promises completion of the work. The speedometer reading is entered to show the mileage the car has traveled to test out repair work, and a notation is made whether or not the keys are left.

Following this, the car is examined in the presence of the owner and notations are made as to the work desired. The customer signs the repair ticket, thereby showing the authorization for the work that is to be done. A job number is assigned to all tickets.

The original ticket goes to the office



Triplicate system used for all repair work in medium sized garage.



For parts sales these four forms are used in special system.

where it is filed alphabetically as a memo of work that is in the shop, and serves as information memorandum for the employees, in case a customer calls up as to the progress, etc., of the work.

The duplicate goes to the office where it is filed according to the job number. As parts used in the repair work are called for by the mechanic on the job, the stock keeper enters the charge in the lower right hand portion of the ticket as indicated by specimen.

The triplicate is printed on 80 lb. tag manilla to stand up against rough usage. It is placed in a look-out leather folder which is attached to the radiator of the car. This is a convenient place where the foremen can enter in the lower left hand corner of the ticket the hours, rate per hour, the mechanic, and the total charge.

On completion of the work the tickets in the shop and the one in the stock department are totaled and taken to the office. The stock and shop charges are there refigured, checked, and copied on

(Continued on next page)

A Differential and How It Operates

IN a recent sales bulletin issued by Dodge Brothers, Inc., there was given a simple explanation of the conventional type of differential gear used in present day motor vehicles.

In the belief that many readers of MOTOR AGE would like to know more about the principles on which a differential operates we give here the bulk of the sales bulletin as well as the illustrations.

A differential gear is a mechanism that allows one wheel to travel faster than the other when the vehicle rounds a corner. It applies the power delivered by the pinion through the master ring gear to each wheel in inverse ratio to the resistance offered.

If you will jack up the rear axle assembly so that both rear wheels are off the ground—if you will put the low gears in mesh by placing the shifting lever in first speed position—if you will then, by hand, revolve either wheel the other wheel will revolve in the opposite direction. If you will now place the transmission gear in neutral, start the motor, disengage the clutch, place the shifting lever in first speed position, let in the clutch gradually, then both wheels will revolve as they would if the car was going forward. If you will then resist the movement of either wheel you will see that the other wheel increases speed. If you hold one wheel stationary the other wheel will double its original speed.

Here is a device that will show you how a differential works. The pieces E and F, Fig. 1, are bolted solidly to the table. The racks A and B are free to move in the directions of the arrows. The pinion C is also free to move. It is attached to the rod D which can be moved forward or backward by the hand H.

If the hand pulls the rod, the three (A, B and C) will follow without changing their relative positions.

If, however, the rack B is held in place and the hand H pulls the rod D, the pinion C will roll on the rack B and will thrust the rack A to the left.

If the rack A is held in place the pinion C will roll on A, causing the rack B to be thrust to the left.

Now, it doesn't matter whether or not A or B is held in place or whether their movement is merely resisted. The total distance covered by A and B will be just twice the distance covered by C.

Let us take the racks A and B and put them in the form of gears, Fig. 2. The same principle applies. Suppose the hand H moves in the direction of the arrows. Then if we hold the gear A stationary C will roll on A, causing the gear B to revolve. If we hold the gear B then A will revolve.

In Fig. 3 is the same layout except that we have placed an automobile wheel on each shaft and have used bevel gears instead of the straight gears.

As the differential must be carried in the rear axle housing we need something to make it revolve. This is accomplished by connecting the assembly to a large ring gear H, Fig. 4, which supplies the turning power just as the hand did in the previous illustrations. We also have added the gear D.

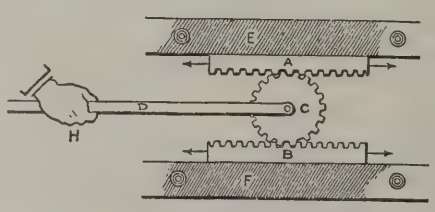


Fig. 1

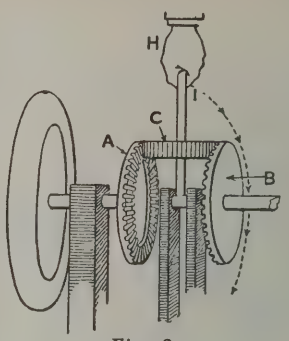


Fig. 2

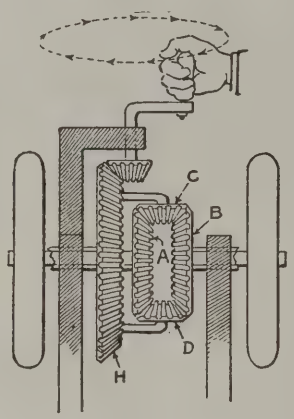


Fig. 4

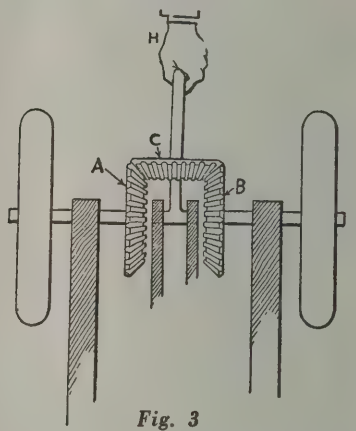


Fig. 3

Two Record Systems

(*Continued from page 19*)

the original ticket. This then becomes the bill to the customer. It shows the orders for repairs, hours spent on the car, rate per hour, mechanic, as well as all parts used and their cost. This bill is receipted and goes to the customer. From the duplicate the hours of labor and the mechanic's name are copied on the triplicate or the heavy tag manilla sheet and it is filed in the office in alphabetical order. The duplicate is sent to the stock room to enable them to keep their perpetual inventory record, and it is filed there by the job number.

The Hoffman Motor Company, claim long life and light upkeep for their cars and to prove their statements to a prospect they can refer to the tag manilla card in the office and show a record of every car in use and what it cost to maintain the car over a given period. It is an original entry, no guesswork. It gives the salesman definite information to use to hand out to his prospects.

A typical use of the system for parts sales is that by the Sears Automobile Co. of Des Moines, Ia. The four forms for this system are printed lengthwise and issued to the left. The first carbon is cut back so that net prices do not appear on the second sheet (packing slip). This is desirable, because when car owners call for parts to be charged to the garage which is to install them, they should not see the discounts, but only the "unit" figure, or regular retail price.

Sheet No. 1, Invoice—The invoice is priced, extended, and mailed to the customer the same day the goods are shipped.

Sheet No. 2, Packing Slip—This slip is put into the package and sent to the customer so he may check the shipment when it arrives.

Sheet No. 3, Parts File—This sheet remains in the Parts Department where it is used in filing the order. It is then filed in numerical order for future reference and to check inventory records.

Sheet No. 4, Office Copy—This remains in the locked compartment of the WIZ until the end of the day. It is removed in a continuous Flat Ziz-Zag Folded packet and taken to the office. Slips are there torn apart at the perforations and sorted into classes of sales. Charge sales are posted to the ledger and filed on post binders in numerical order.

With the new system the customer's invoice, in every instance, goes out the same day the goods are shipped. In addition to this, the customer gets a memorandum with the goods, showing the unit retail price for each article.

Farmers Are Good Radio Prospects

NINETEEN TWENTY-FIVE has been an exceptionally good year financially for the agricultural sections and farmers have plenty of money with which to buy things other than the bare necessities of life.

Automotive dealers who handle radio can cash in on this economic situation by selling radio sets to this class of prospects. It ought to be easier to sell farmers than urban dwellers due to the fact that those out in the open spaces do not have to face the competition of multitudinous local stations which interfere with satisfactory DX reception.

That those in the rural communities are intensely interested in radio and hence good outlets for receiving sets, is indicated by the following:

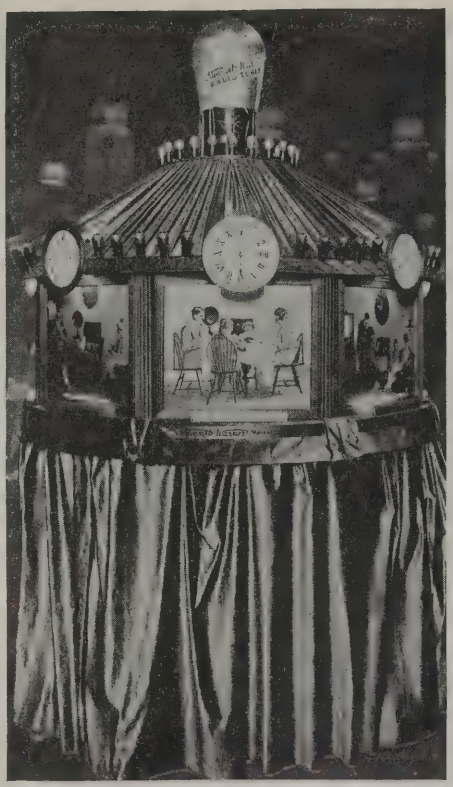
Winconsin farmers are finding radio of real value to them in addition to its entertainment value, according to the findings of a state-wide investigation, just made public at Madison. By the end of 1925 it is expected that there will be between 12,000 and 13,000 radio receiving sets on Wisconsin farms, in sharp contrast to the 4,500 in use in 1924. During 1926 it is expected that the figure will be doubled. Farmers are finding especially useful Station WLBL at Stevens Point, where market reports for farmers and handlers of farm products are broadcast daily. Other market reports and farm information of great educational value is available on the air for the farmers of the state, and this is proving a great incentive to purchase of receiving sets.

To Get the Message Out

CINCINNATI, O., Dec. 19.—Kodel Radio Corporation is erecting a steel tower 125 feet in height on top of the Hotel Alms where their broadcasting station WRKC is situated. It is said that this tower will be one of the highest in the country when completed and certainly it will be completely in about six weeks, it is stated.

Atlanta Association Formed

ATLANTA, Ga., Dec. 18.—A temporary organization known as the Atlanta Radio and Electrical Association has been formed here by dealers in the city and suburban territory handling radio merchandise, and W. D. V. Hopkins, president of the Hopkins Auto Equipment Co., Atwater-Kent dealers in Atlanta, and distributors of this line for the state of Georgia, has been elected temporary president of the new association. Later this year, or during the early part of 1926, another meeting of the dealers will be held, at which time a permanent association will be organized.



Unique Stewart-Warner Exhibit at Chicago Radio Show

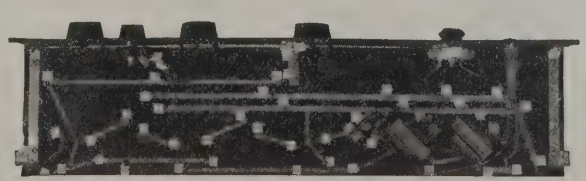
The new association directly results from the successful radio exposition held in Atlanta the early part of December, and which proved so successful, particularly from a sales standpoint, that the association will hereafter hold this exposition annually.

Nearly all of the dealers and jobbers in Atlanta handling automobile accessories are charter members of the new association, as they also operate radio departments.

Does Radio Pay?

THE Splitdorf Electrical Company of Newark, N. J., a subsidiary of the Splitdorf Bethlehem Electrical Co., through its president, Mr. M. W. Bartlett, reports for the four months ending October 31, 1925, an increase of nearly one hundred per cent in sales as compared to same period 1924.

Consolidated figures for the company and its subsidiaries are as follows: sales (net), $1,829,185.44; profit (from operations), $214,572.31; net income (before charging depreciation), $175,169.85.



View of Ambu Five radio receiver showing copper connections inlaid in panel

Around the Clock

STEWART-WARNER had a novel display at the Chicago radio show, pictured on this page. The company has been circulating a booklet with illustrations showing how radio plays an important part in American home life every hour of the day. The exhibit contained three of these illustrations. The title of the picture on the left is "Tea Time Is Radio Time for the Ladies." In the center the family is pictured enjoying music with their meal, and on the right is illustrated "Children's Hour" and Sonny is tuning in.

New Orleans Business Booms

NEW ORLEANS, La., Dec. 18.—Radio business in both New Orleans and the territory of Louisiana and Mississippi in the New Orleans jobbing district is at a high mark at the present time, according to reports from the New Orleans radio jobbers and from Robert H. Cone, Jr., president of the New Orleans Radio Association.

The dreams of some dealers, especially the new ones, were too roseate, according to the reports, but with the older, more experienced establishments the present conditions and prospects are very satisfactory. Retail business in radio began to pick up about October 15, and has continued to climb, radio playing a big part in the Christmas gift trade.

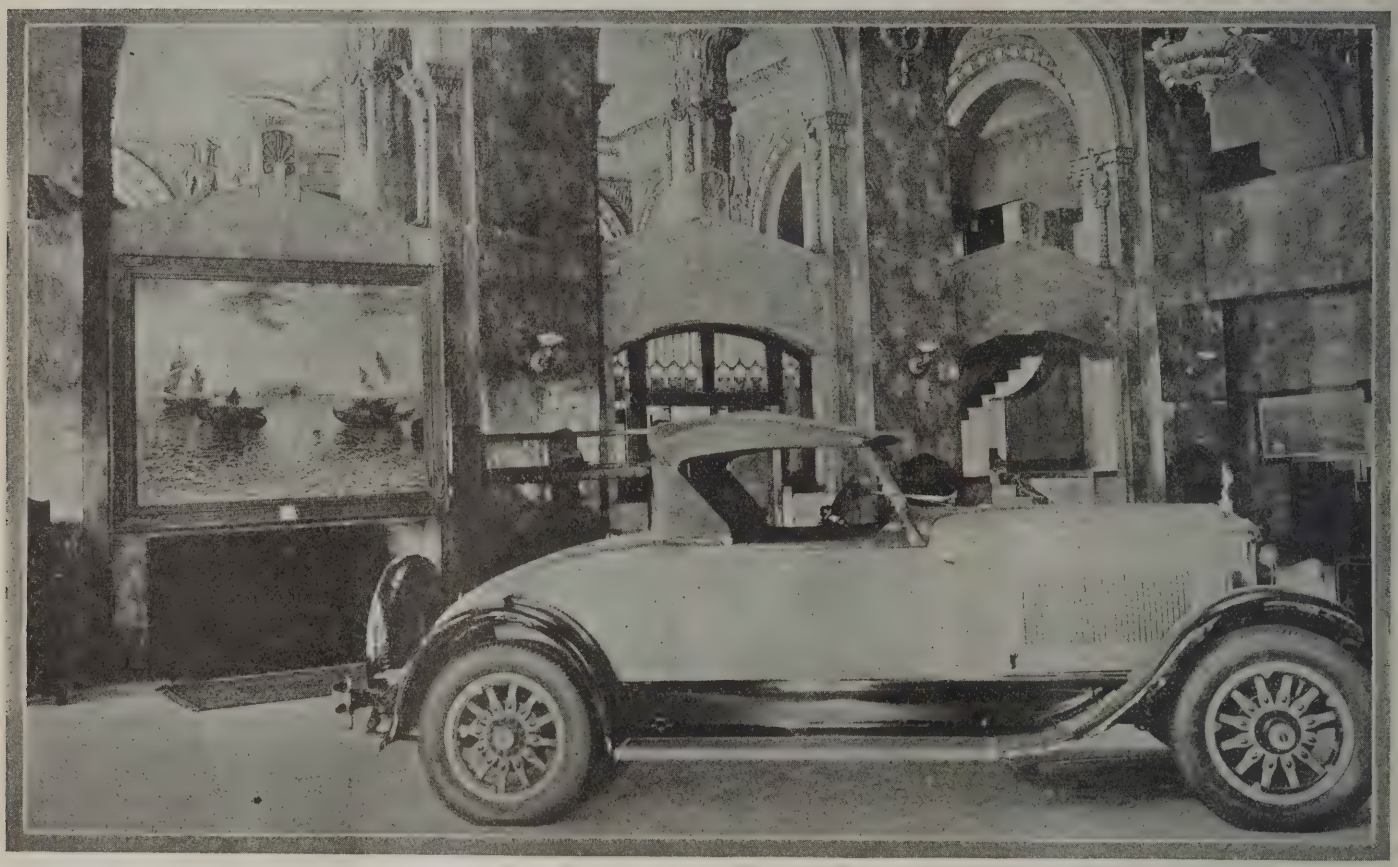
Both retailers and jobbers say that the people are as a whole demanding the higher priced sets. Instruments in period designs that will be ornamental to a home and which will harmonize with other fine furnishings are in demand, one department store reporting that its average price per set of all radio instruments sold during the last month reached $190.

Both the Interstate Electric Co., and the Walther Battery & Equipment Co., electrical and automotive jobbers, and radio jobbers, report a big distribution business throughout their territory.

Ambu Five Radio Receiver

AN outstanding and exclusive feature of the new five tube radio set made by the Ambu Institute, Radio Division, Chicago, Ill., is the so-called "shot" panel which eliminates the usual wiring necessary to connect up the various parts of the set. Grooves traced in this panel and filled with hot copper provide the necessary connections when the parts are screwed into place. Thus permanent connections are quickly made without the use of solder. The Ambu set also is equipped with the Armstrong all-wave coils which provide for reception of all wave lengths from 40 to 600 meters.

MOTOR AGE'S PICTURE PAGES



A GORGEOUS SETTING. The Diana Light Straight Eight Roadster on display in the beautiful lobby of the Paso del Norte Hotel, El Paso, Texas. The exhibition was arranged by Mr. Oscar Stroebel, manager for R. C. Sowder, distributor at El Paso, through the courtesy of Mr. Paul Harvey, managing director of the hotel.



TO SPEED UP TRAFFIC. The California Highway Commission has had painted on the Peninsula Highway, immediately adjacent to San Mateo, south of San Francisco, one strip 4½ in. wide down the center line of the pavement and two additional strips with 9 ft. 6 in. clearance on either side of the center line strip. All three strips are painted on the asphalt concrete surface which is slightly over 20 ft. wide, leaving two 8-ft. strips of bare concrete shoulder on either side of the old pavement, or a total of 8 ft. 6 in. outside the traffic strip. The width of the lanes is: outside strips, 8 ft. 6 in., and the two center lanes 9 ft. 6 in. Slow moving traffic is expected to confine itself to the outside lanes.

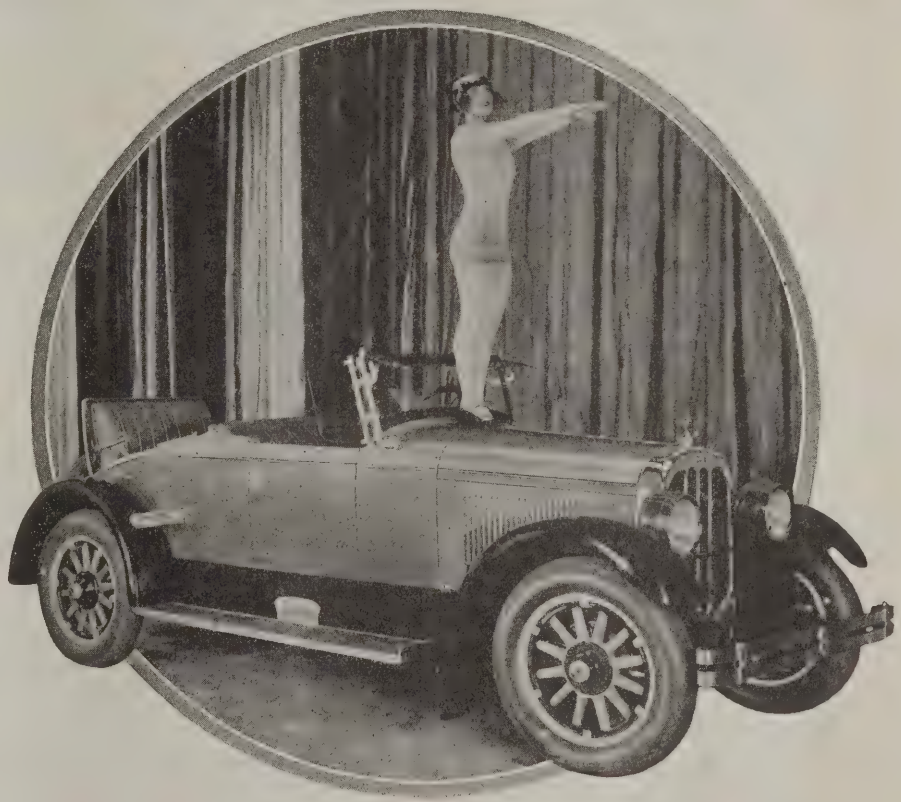


AN ECHO OF THE PAST. At the left is the Maxwell of remote vintage exhibited at the recent Southwestern Automobile Show, Dallas, Texas, by W. W. Glover, one of the first motor car owners in Dallas County. Mr. Glover forgot when he bought his bus, but thinks it was about 1913.

OF AUTOMOTIVE INTEREST



HERE'S SOMETHING NEW UNDER THE SUN. Above is shown the monster Remington Burnelli plane, the largest commercial aircraft in the world, the interior of which has been converted into an automobile salesroom. A complete coach and office equipment have been installed inside.



A DIVER'S DIVERSION. At the right we have Miss Annette Kellerman, internationally known diving Venus, and the new Chandler Comrade Roadster. This undoubtedly is a Class A publicity stunt.

A FLEET FLEET. The Chicago, North Shore & Milwaukee R. R. has bought four new Studebaker buses from W. F. Russell, Kenosha, Wis. The three pictured below are of the 18-passenger type. A 21-passenger bus also has been delivered.



The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Adjusting Vacuum Controlled Oil Pressure

Q—There is a Stephens Salient six car here that other garages tried and failed to raise the oil pressure on. The pressure works o. k. when oil is new or cold, but will not register on the gage when it gets warm. The pressure is regulated by the vacuum in the manifold. The trouble may be in the bearings or gears in the pump, but I do not think so as this car has only been driven eight thousand miles. I have not had a chance at it yet, but if I do I would like to know how to remedy it. Any information you can give me will be appreciated very much. The motor No. 35750.—James E. Jackson, Foxpark Service Station, Foxpark, Wyo.

Oil Pressure Regulated Through Vacuum

The information on the engine lubricating system taken from the Stephens instruction book is as follows: A vacuum controlled oil pressure system has been employed; this system carries a pressure gage on the instrument board with reading up to sixty lbs. oil pressure. The oil pressure is regulated through vacuum, with vacuum line running from intake side of motor to the adjustment on right side of motor and directly over the front main bearing.

The regulator is of the plunger and piston type and is so regulated that more pressure is available while the motor is laboring, i. e., at a set speed on level road, the pressure shown on gage will not register as high as at the same speed on a hard pull. In other words, the oil pressure increases in relation to the demand as required. The adjustment is arrived at as follows: back off the large lock nut and screw adjustment down (clockwise) to increase pressure, back out the adjustment (anti-clockwise) to reduce pressure, after the proper adjustment is made making sure that the lock nut is again firmly tightened. The pressure should be set to read 40 lbs at a maximum speed with warm water, sudden wide open acceleration of the throttle. Watching the travel of the hand on gage will show you when this point is reached. Be sure and close the throttle again immediately after opening it.

Never open the throttle and race the motor when car is stationary for a period longer than five seconds, nothing can be more detrimental to your motor. At idling speed the pressure gage will not show any pressure, but will respond at once to the slightest acceleration, however, on idling, while no pressure is shown there is sufficient lubrication for all purposes.

The overflow of oil after lubricating such points as already mentioned, is utilized to lubricate the timing gears, returning to the oil reservoir and its original point of entry in the pump. Aside from the positive lubrication as noted, the pistons, piston rings, piston pins, and cylinder walls are lubricated by the oil spray which is thrown from the main and connecting rod bearings. The oil mist formed by the operating conditions rises through the holes in the tappet ledge and lubricates the entire valve mechanism, providing adequate lubrication to these parts at all times.

In pressure systems it is essential to see that there is no leakage of a great quantity of oil from any one bearing. A test of this kind is made by removing the engine pan and pumping oil through the system. Another suggestion would be to disconnect the vacuum line and see if the pressure is quite high.

The Readers' Clearing House

THIS department is conducted to assist dealers and maintenance station executives in the solution of their problems.

All questions are answered direct by letter, so the name and address should be given in full. This saves waiting for the answer to be published, which sometimes occurs several weeks late, depending upon the space available.

Readers' names will not be published with articles, if a request to this effect is received with the letter.

Inquiries not of general interest will be answered by personal letter only. Emergency questions will be replied to by letter or telegram.

Also state whether a permanent file of MOTOR AGE is kept, for many times inquiries of an identical nature have been made and these are answered by reference to previous issues.

Addresses of business firms will not be published in this department but will be supplied by letter.

Technical questions answered by B. M. Ikert and A. H. Packer; Legal, by Wellington Gustin; Paint, by G. King Franklin; Architectural, by Tom Wilder; Tires, by a Practical Tire Man; General Business questions, by MOTOR AGE organization in conference.

Car O.K. in High But Quits in Low

Q—I have been working on all kinds of cars for four years and now have a Ford that has me stopped. Not only that, but every man here in town that is working in a garage. This car pulls all right on high and never misses, but when you have to go into low it will not pull itself. Sometimes on the level you have to push it. We put on new coils and new carbureter, also new timer and new plugs, everything new and still the same trouble. When standing the engine will race, but it will not pick up in low gear. The valves have been ground and the compression is good. When you go from high into low it does not spit or choke, but absolutely will not pull. We have done everything but put in a new engine. Some say the trouble is in the transmission, but it was worked on by an experienced mechanic on Fords and he gave up.—George Shaffner, Warren, Ill.

Check Transmission

We would suggest checking the transmission. To do this jack up both rear wheels and block the axle so that the car will not roll off of the jack. Then remove the spark plugs and leave the emergency brake lever in the down position so that the transmission is in high. Now turn the engine over with the crank which of course, will result in turning the rear wheels. This will give you an idea of how hard it is to turn the rear wheels when in high gear.

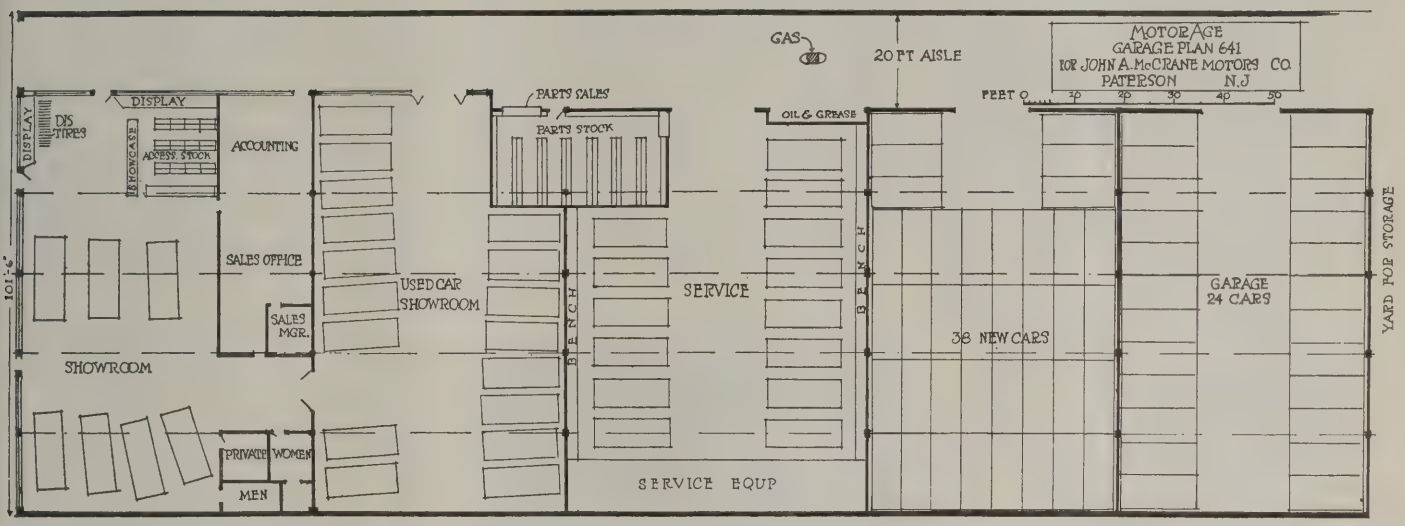
Now have someone get in the car and push down on the low speed pedal so as to put the transmission in low. Then turn the engine over by hand with the crank and see how hard or how easy it is to turn the rear wheels by cranking the engine by hand. If it turns very easily, then it shows there is no trouble in the transmission and it should also be easy for the engine to drive the car in low gear. However, if it turns with great difficulty, it shows there is something wrong in the transmission and that in overhauling it, it was not properly assembled. We would like to know the rseult of this test before making much of an effort to solve the problem on the basis of engine trouble. The only thing that occured to us along this line is a possible stoppage in the gasoline line which allows gasoline to flow slowly, but does not permit it to flow fast enough to take care of the engine requirements when in low gear. You can check this by disconnecting the gasoline line from the carbureter to see if a full stream of gasoline will flow out.

Planning Your New Building

The READERS CLEARING HOUSE

By TOM WILDER

Wants to House a Rapidly Growing Business



The long straight passage would be a convenient avenue to connect up all departments including the yard at the rear.

Q—We have the Reo contract for Passaic County, New Jersey, handle about 250 units per year out of a showroom, service station and parts department with a floor space in all about 7,000 sq. ft. We recently found it necessary to rent an additional garage for our new car stock and used cars about 5,000 sq. ft. As it is, our show room, service station, the street, empty lots adjoining us, plus our 5,000 sq. ft. building are always crowded, necessitating considerable shifting of cars daily.

Market Street is a main automobile street in our city and I have purchased, ten blocks further out Market Street, property consisting of 101 ft. 6 in. front and 500 ft. deep, and I have figured that rather than pay rent it would be profitable to build as soon as possible, therefore my problem is: What would be a suitable layout, suitable construction and suitable size for my business? No doubt you can give me ideas that make for a modern automobile establishment. I do want to avoid making all mistakes possible in building also as to the size of the building and layout. Therefore I would appreciate your opinion in the matter.—John A. McCrane Motors, Inc., Market at 24th Street, Paterson, N. J.

There are so many ways of laying out a building as large as you contemplate that it is hard to decide on which one would be best. The floor space that you have at present, if combined in one building would amount to 100 by 120 feet and since you say you are crowded in this space, we would suggest that you build your new structure in the neighborhood of 250 feet deep on the 100 foot lot.

The main advantage in the layout we have made is that it can be extended without materially changing or rearranging any of the present building and simply by adding 50 or 60 foot sections as they are needed for garage or service station use.

A double drive way is maintained straight through the building to the yard behind which may be used for storage purposes, washing or any other purpose that seems desirable. The used car showroom is placed just back of the main new car salesroom and offices and cars may be brought into the showroom through the used car room. The stockroom is handy to the service station and is comparatively handy to the street for retail sales. In one section we show how new cars may be packed in to get as many in as possible. We are attaching also a pencil sketch showing another arrangement for the rear part of the building, dividing it in two longitudinally using one half of the space for storage garage and the other half for service. In some respects this arrangement is better than the other. There would be a little more space for storage, but not quite so much space for new car storage, although that would depend upon whether you used the space for shop purposes or for new car storage.

In this plan the trusses would be placed crosswise in the building and supported on a row of posts through the center, while in the other each section would have its own truss system with the trusses running forward and back.

All the lighting and ventilating would be by skylight and roof ventilators.

1917 Model May Need New Carbureter

Q—Would like some information on a Jordan 6-60. It seems the carbureter cannot be set right. The engine is in good condition and works fine when the car is warmed up, but when you first start it will not hit on all six unless you have choker out and then the mixture is too rich, and it lopes and gas comes out of the exhaust pipe. But after it warms up gradually it hits on all six and runs fine. On a hard pull however, it will lope and does not pull well. Carbureter was sent to the factory a year ago and was overhauled.—An Illinois Reader.

We believe that this car is a 1916 or 1917 model and we understand that the gas was taken through a passage in the cylinder head so that in cold weather it would be necessary for the engine to warm up considerably before proper carburetion would be obtained. On a car as old as this one it might pay to install a new type carbureter adapted to the use of present day fuel. It might also be well to install a hot spot in addition to the use of cylinder jacket for heating purposes. Addresses of concerns making hot spot manifolds will be given by letter.

It might also be well to check up the compression and to see that the spark is a hot one. To check the spark you should remove a wire from a spark plug and hold it within $\frac{3}{16}$ in. of the engine while the engine is running. The spark should jump regularly without missing and when viewed in a dark place should show considerable red color or flame surrounding the blue center of the spark.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Timing Ford Valves by Piston Position

Q.—Would you please give me the best method of setting Ford valves as to piston travel and also the necessary clearance for them.—Lloyd Flanagan, Camargo, Ill.

The following method of timing valves is taken from the Ford service bulletin and does not give any specific clearance between the valve tappets and the valve stems. The clearance is made such, however, that the valve timing will be correct. The clearance will be approximately .012 or .015 inches. The procedure is as follows:

The method of accurate valve timing on a Ford engine is to time the valves by piston travel. The measurements are given below.

Previous to 1913 model:

Exhaust opens 3/8 in. before bottom center.

Exhaust closes 1/64 in. past top center.

Intake opens 7/64 in. past top center.

Intake closes 3/8 in. past bottom center.

Later than 1913 model:

Exhaust open 5/16 in. before bottom center.

Exhaust closes top center.

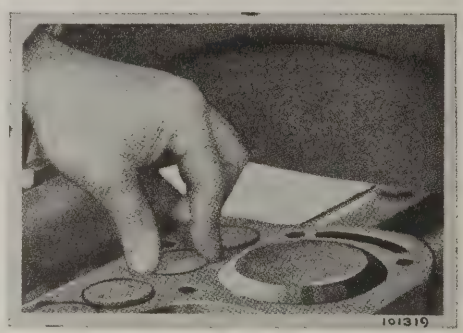
Intake opens 1/16 in. past top center.

Intake closes 9/16 in. past bottom center.

The piston as the cylinder is being timed is first brought to top center. (The highest point to which piston rises.) A scale is then laid across the piston and the distance from this scale to the top of the cylinder is measured. The engine is then turned to bottom center and the distance from the piston to the top of the cylinder block is measured again. This is the "bottom center." For example, the top center is 5/16 in. above the face of the cylinder block and the bottom center is 3 11/16 in. below the face of the cylinder block. On a 1913 engine, the exhaust opens at a point 3 3/8 in. below the face of the cylinder block on the down stroke of the piston, the crankshaft turning in the direction of rotation of the engine and closes on top center. The inlet opens 1/4 in. above the face of the cylinder block on the down stroke, and closes 3 1/8 in. below the face of the cylinder block on the upstroke.

Should a valve open early and close late, a small amount of stock should be ground from the end of the valve stem. If the valve opens late and closes early, the stem is too short and a new valve should be substituted. Some repair men draw out the stem by peening the lower end, but this is poor practice as the average man merely turns a burr on the edge and this is soon worn off by the incessant tapping on the stem. The intake valve should be timed accurately on the opening and the exhaust should be timed on the closing as in a motor whose camshaft may be worn it is not always possible to have both the opening and closing check accurately with the figures given.

The method of determining when the valves open and close is as follows: With the spring assembled, close the valve. When it is closed, hold it with the fingers as shown. Twist back and forth on the head while some one cranks the engine slowly. The instant the valve will turn, it has started to open. In the same way the valve may be checked for closing, the valve turning



Checking Ford valve timing according to official instructions

until it has seated. Another way to check the opening and closing is to insert a .001 in. feeler, or a thin piece of paper, between the stem and push rod. The instant the feeler will not move, the valve has opened. The instant it will move after being held tight, the valve has closed.

FLAT RATE INFORMATION EVERY WEEK, TOO

Q.—We are interested in your article in one of the recent issues of MOTOR AGE in regard to the flat rate business on all models of cars. We would like to know where we can get a complete record of all the factories that have this data figured out. If you can get this for us please let us know what it will cost for the data on about a dozen of the standard cars.—Petterborg-Nash Motor Co., Preston, Idaho.

The factory compiled official flat rate repair operations and other flat rate data are available only to authorized dealers selling or repairing the make of car covered by the data. In other words, unless you are a Buick dealer or an authorized Buick repair shop you cannot secure the Buick flat rate schedules. In the April 30, 1925, issue of MOTOR AGE there was printed a chart giving 277 operations on more than 90 per cent of the passenger cars in production. This table is sufficient to be of considerable help to the small town shops doing repair work on all makes of cars.

Front End and Engine Bearing Trouble

Q.—Is there any way of preventing the shock caused by rough roads from jarring the driver's hands. Some eights are quite bad in this respect and we are at a loss to know what to do to prevent it. Is this due to balloon tires or to the steering gear or both.—H. R. Ross, H. G. Markham Co., 2901 Broadway, Oakland, Calif.

In some cars it is essential to balance the wheels when balloon tires are used. This means that when the wheel is jacked up there should be no tendency for it to turn and settle in a certain position. This may mean adding weight to one side of the wheel by means of washers bolted on or by any other convenient method. Looseness of the front wheel bearings will also contribute to this condition. It might also be desirable to check up on the spring in the tie rod and also in the drag link. On some cars it has been found almost essential to use a stiffer spring in the tie rod and drag link or to eliminate the spring.

We are sending you by separate letter instructions which have been prepared by J. S. Bushey Company, 717 W. 11th Street, Los Angeles, Calif., distributors of motor wheel products and Gruss Air springs. These instructions give general information on precautions to take in installing balloon tires, and will doubtless be of assistance to you in checking up on eights or any others which show a tendency toward shimmying.

Q.—What is the best method of preventing rod burning out in a 1925 Studebaker special? Is it necessary to install new pump, oil pan and main bearings?

We believe that this must be some peculiar trouble in the car on which you are working, as we have had no general complaint along this line. The oil pump sends oil to the main and camshaft bearings and ducts in the crankshaft carry oil to the connecting rod bearings. Discharge from a longitudinal groove in the front camshaft bearing lubricates the timing chain. Excess oil draining back from the engine is caught in a pressed steel tray. This tray which is supported by the oil pan has a flared opening at its lowest point. The oil drains through this opening into a cylindrical wire screen supported by a circular plate bolted to the bottom of the oil pan.

The oil must pass through this cylindrical screen before entering the reservoir formed by the base of the oil pan. We believe that bearings burning out would be due to obstruction in the oil line or to leakage or to some trouble in the pump. It might be well to remove the pan and force oil through the system to see that it flows equally from all bearings and does not come in a flood from any one. This would show excessive clearance at that bearing. You could also drive the pump separately and see if this operates effectively.

Clearing Up Electrical Trouble

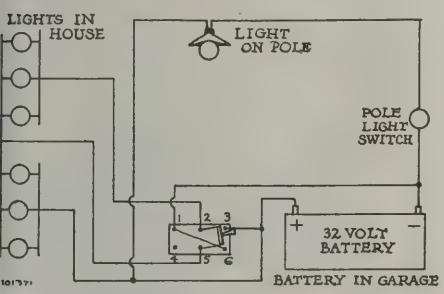
EDITED BY A. H. PACKER

The READERS' CLEARING HOUSE

Trick Wiring for This Garage Man's House

Q.—I am enclosing a hook-up from my garage to the house. I would like to dim the lights in the house from the garage. Please let me know if the hook-up is right. Also let me know if the lights in the house can be put in series to dim them.—Charles Tuckfield, North Branch, N. Y.

In your sketch you show the lamp bank in the garage which would be in series with the lights in the house. This would work after a fashion, but wastes



Series parallel circuits to dim lights in the house.

current. The series parallel method is best and is shown by a diagram we have made. You will notice that we have divided the lights in the house into two sections. It is necessary that the same number of lights and the same size lights be used in both sections. We have also shown a light on the pole, but have not shown any lights in the garage.

These could be connected up to the plus and minus terminal of the battery after you have the rest of the wiring working all right. You will need a two pole double throw switch for the series parallel hook-up. It will be necessary to wire up carefully to make sure that you follow out the diagram. From positive battery a wire goes to the No. 3 terminal on the switch and an extension of this wire goes to the house, to one side of one of the lamp banks. You will notice that you can also take a connection from the positive wire and run it up to the light on the pole.

A connection from negative battery goes to the No. 1 terminal of the switch and a short circuit or jumper connection must be used to connect the No. 1 and No. 6 terminals of the switch, although there is no external wire put on the No. 6 terminal. The No. 4 terminal is also not used. With the switch thrown to the right the lamps in the house will be bright and with the switch thrown to the left they will be dim. The light on the pole will not be affected by the dimming of the lights in the house.

Q.—I have a Gardner car model 1923, four cylinder using a 6 volt 80 ampere battery with positive side grounded. I use the same battery in a Chevrolet model 1921, four cylinder with the negative side grounded. Is this battery being charged from the same terminal when on either car?

Yes, when the positive terminal is grounded the current is supposed to flow from the frame of the car to the positive terminal and then back to the generator through the wiring. When the negative terminal is grounded the current is supposed to flow from the generator through the wiring to the positive terminal and back through the frame of the car. The direction in which the current flows does not make any difference just so it goes the right way through the battery. It corresponds in a sense to crossing a belt in order to make a machine run in the opposite direction. You might have a machine which has to be driven a certain way. You could either do it with a left hand motor with the belt crossed or with a right hand motor with the belt straight. The results in either case would be that the machine would be driven in the proper direction. The same thing is true electrically when you change the battery from one car to another.

QUESTIONS ON C. P. CHARGING

Q.—I would like to have a little information on battery charging. Is charging with a constant potential machine as good as charging with a Tungar or old style motor generator.—D. C. Slick, 2625 Lincoln street, Granite City, Ill.

The constant potential method is quicker, but we do not believe there is any difference in the results if proper care is used in either method.

Q.—Do the batteries take and hold as good a charge?

Yes.

Q.—Do some batteries get too hot on the constant potential system and buckle the plates?

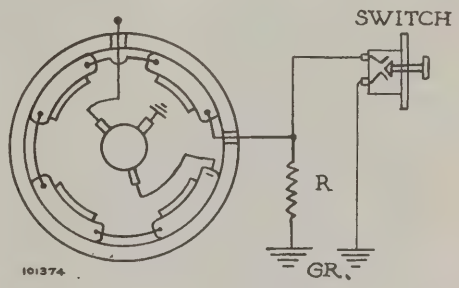
Not if ordinary precautions are used, to see that temperature does not become excessive.

Q.—How do you take care of new and sulphated batteries on this machine?

Resistance wire is used in the connection from the battery to the bus bar. These may be improvised out of iron wire or may be obtained from one or more of the companies making constant potential equipment. These resistance units supplied by these companies can be used in connection with an ammeter so that the exact amount of current flowing is known. They are also adjustable for various conditions of sulphation or heating. Overheating of a sulphated battery is also possible on a constant current charging line unless the current flow is cut low enough to suit the sulphated battery. Under these circumstances the charging rate is unnecessarily low for the others.

The Thermostat Effect, Hand Operated

Q.—Here's a little idea I have copied from the thermostatic generator, but I have made it a hand control. This time of the year it is very hard to get as much current for the battery as is used. If the generator is set up enough, there is danger of burning it out on a long run. My scheme is to set the generator up to 20 amperes as on a Ford for example, then disconnect the field wire which goes to the ground brush and



Circuits used to keep battery fully charged in winter.

bring this wire out and connect it to a resistance, then ground the other end of the resistance. Also run a wire from the resistance to a switch and from the other switch terminal to ground. Now when you start out on a cold morning, leave the switch button pushed in so that the resistance is shorted out and you get the full 20 amperes. Then after you have run 10 or 15 minutes pull the switch out and the charging rate will be about 10 or 12 amperes. If the current is too low when the switch button is pulled out it means that there is too much resisance and if the current is too high it means that there is too little resistance.—E. J. Petry Auto Electric, 326 E. Capitol Ave., Jefferson City, Mo.

This is a good idea and will accomplish by hand control what the Remy thermostat accomplishes automatically.

DOPE ELECTROLYTE

Q—Would like to have your opinion on the ———— battery mixture. I am sending you some literature that I have which refers to this mixture.—A Reader.

It is our opinion that nothing but diluted sulphuric acid, otherwise known as electrolyte, should ever be used in a lead storage battery. We have no knowledge of the mixture in question, but many products making similar claims have been analyzed and found to contain chiefly sulphuric acid and other ingredients which have no benefiical effect.

The READERS CLEARING HOUSE

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Preserve Your Flat Rate Shop Data

ONE concern running a large automotive business wrote to MOTOR AGE asking for another copy of the electrical flat rate chart, saying that they had used up two copies, these being entirely worn out. They said they would frame the next one, or put it on a card and shellac it so it would be preserved in spite of rough handling.

This brings up a point that is often overlooked in the average shop, for valuable wiring diagrams, service bulletins from the factory, or charts which are helpful to the men are allowed to be damaged on account of being put into the hands of the shop men without protection of any sort.

Where service bulletins from the factory contain essential data for the men, they should be kept in covers which are usually supplied for this purpose. Then if the book or bulletin is in danger of being damaged, it might be well to have it in charge of the shop foreman.

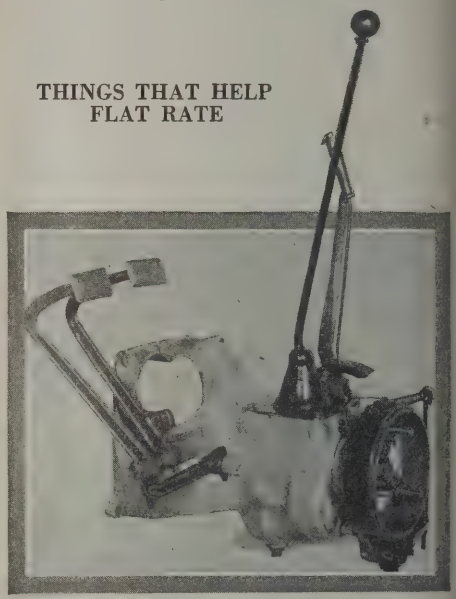
In some shops each flat rate job requires certain tools, with which there are also instructions. The man doing a valve grinding job, for example will go to the tool room where he will get the tools required, also a cardboard on which is shellaced a blueprint which tells exactly what to do and in what order. This would be out of the question for the one man shop or even some larger shops, but the plan of putting shop instructions and job data on blueprints shellacked to cardboard is a good one. These may be washed without damage to the print and an occasional coat of shellac will preserve them indefinitely.

If instructions or a flat rate chart should be used by the service salesman only, it might be mounted under glass near the entrance or wherever the customer gets out of his car and tells what he wants. Then he as well as the salesman could refer to it and see that the price he paid depended on what was needed and was on a fair basis.

Having a flat rate chart laid out flat, either shellacked or under glass, has some disadvantages. Some shop managers feel it is too easy to have the customer make comparisons of the prices on his car with those on some other, and while the variations may be perfectly justifiable, it is not always easy to explain such variations to the customer who is not familiar with the construction of the two cars.

For this reason it would be entirely possible to mount the chart on a cylinder of cardboard, which could be mounted on hubs and spokes and made to rotate with its axis in a vertical position. An outer cylinder of cardboard could then be made which would cover the other, but have a vertical window through which any price could be read. At the side of the window the operation numbers would be pasted. To use the cylinder the inner one would be turned until the car wanted appeared in the upper part of the vertical window. The prices would then be shown, each opposite its own operation.

THINGS THAT HELP FLAT RATE



Clutch throw-out mechanism on one of the popular-priced models showing the adjustment on the outside of the lever which works in conjunction with the clutch pedal. The adjustment is made by releasing the lock nut with a wrench and turning the screw in the boss in or out as the case may be, after which the adjustment is locked

A Flat Rate Thought

A proper recording system is very necessary with flat rate. Few men are well enough posted to give a fair price for all jobs that come into their shop and it is therefore necessary they have some guide. Proper service records will supply this. Another feature of these service records is that it serves as a check on the mechanics. One mechanic may be taking a half an hour longer for a particular job than another. Perhaps if the slower man were shown the method used by the quicker man, he would be able to duplicate his time record.

The Foreman's Desk

Many times a mechanic is in doubt as to whether or not a new part should be installed. He tries to locate the foreman and unless the building is small there is no telling how much time may be lost before he is found. Then, too, it may be a long ways to the parts department and more time is lost.

One company places the foreman's desk between the shop and parts department and the mechanics easily can confer with the foreman as to the necessity of using new parts, reconditioning the old or using them as they are.

MOTOR AGE'S FLAT RATE FORUM

No. 45

FLAT RATES FOR HUPMOBILE FRONT AXLE OPERATIONS

Cars Under R-140,000

Manufacturer's Official Designation		Time Hrs.	Min.
2-1	Overhaul front axle complete	5	
2-2	Rebush one end of front axle	1	30
2-3	Install one steering knuckle assembly	1	15
2-5	Install one steering knuckle, steering knuckle arm or oversize key	1	15
2-9	Rebush one steering knuckle arm		45
2-13	Install wedges under front springs	1	30
2-14	Overhaul tie rod	1	30
2-19	Take play out of tie rod		45
2-20	Tighten front axle in place—One bend only	1	
2-22	Remove front axle	1	
2-23	Install front axle assembly	1	15
2-24	Overhaul front axle complete	5	
2-25	Rebush one end of front axle	1	30
2-26	Install one steering knuckle assembly	1	15
2-27	Install one steering knuckle, steering knuckle arm or oversize key	1	15
2-28	Overhaul tie rod	1	
2-29	Take play out of tie rod		30
2-30	Straighten front axle in place—One bend only	1	
2-31	Straighten front axle on bench	2	45
2-32	Install front axle assembly	1	15

THE MARKET'S NEW OFFERINGS

Accessories -- Equipment — Supplies

Laminum Junior Kit

THE Laminum Junior Kit is a new offering to the trade by the Laminated Shim Co., Inc., 14th Street and Governor Place, Long Island, N. Y., which was shown for the first time at the recent A. E. A. show in Chicago. The kit contains 86 different shims in envelopes, each envelope being labeled according to car make and bearing an index number. There are pictures of the different shims on the envelopes as a further means of quick identification. Then on the underside of the cover of the kit is an index which directs the repairman to the envelope containing the particular shim desired. The price of the kit is $7.50.

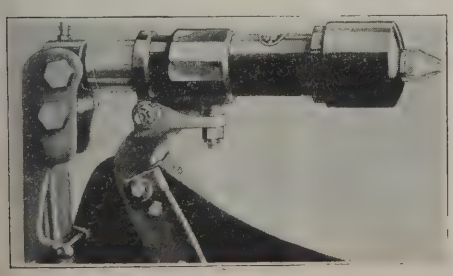


Laminum Junior Kit

Airbuoys

Cut shown below

AIRBUOYS, which are "air spring shock absorbers," are made by the Reliance Manufacturing Co., New Haven, Conn. Fastened between the end of the spring and the frame of the car Airbuoys assist in the depression action of the spring and also control rebound. Road shocks are first taken up by the Airbuoys and then transmitted gradually to the springs. With Airbuoys it is claimed the recoil from rebound is not carried through the body of the car. List price per set of four, installed, $125.





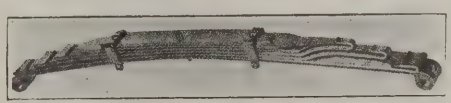
(Left) Pedersen Oiljak
(Right) Bemis Motor Heater

Pedersen Oiljak

The Pedersen Oiljak is being manufactured by the Oil Jack Co. Inc., 1457 Broadway, New York. Only the 10 ton size is now in production but other sizes will be ready for distribution at an early date. The jack is raised by means of an 18 in. handle and lowered by means of a needle valve which permits the oil to travel back into a reservoir. It is stated that the jack may be operated by either short or long strokes of the handle, which permits its use in cramped quarters.

White's Spring Rollers

WHITE'S Spring Rollers consist of roller bearing inserts to place between the leaves of the automobile's springs. The insert is held in position by a clip which clamps over the end of the spring and flanges which prevent the insert's side displacement. The roller bearings are but one-thirteenth of an inch in diameter and are made of very hard steel. They separate the spring leaves but slightly yet it is claimed they serve to reduce friction and produce improved spring action and smoother running. Sets for Ford, Overland and Chevrolet, $5. Made by White Roller Bearing Spring Insert Co., Bowling Green, Ohio.

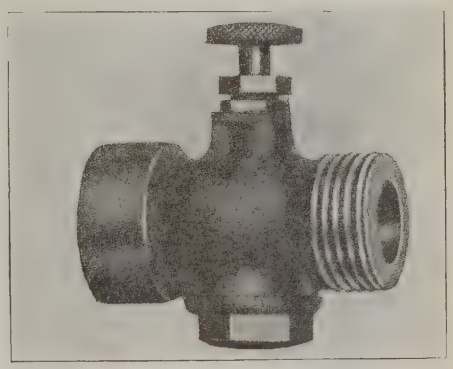


White's Spring Rollers

Additional Descriptions
On Next Page

Bemis Motor Heater

A DEVICE for keeping the engine warm while in a cold garage is being put on the market by the Bemis Motor Heater Co., 601 Andrus Bldg., Minneapolis, Minn. This is an electrical device operating on 110-volts and consuming two amperes. It is applicable to any water cooled car. In installing the device two holes are tapped into the water jacket and a connection is made. Water then circulates from the water jacket of the engine through the heating device on the same principle which is used in thermo-syphon cooling systems. The heater is supplied complete with necessary fittings and 6 feet of electric cord with connection. The list price is $15.00.



Gaylord Water Saver

Gaylord Water Saver

IN the Gaylord Water Saver made by the Gaylord Mfg. Co., Paterson, N. J., is a handy device for the person, either owner or garageman with a job on hand of car washing. It is equipped with a button which controls the flow of the water. A slight pressure on the button maintains the flow while relaxation of the pressure stops it. The price is $2. The company also furnishes nozzles for any sort of washing jobs. A combination offer of six nozzles and one Gaylord Water Saver for garages lists at $3.50.

Western Wire Products Prices

THE "Twin" Assortment Package containing 50 lock washers and 100 cotter pins put up by the Western Wire Products Co., Third and Spruce Streets, St. Louis, Mo., was designed to provide the trade with a convenient supply of these necessary articles. This package was described and illustrated in the December 3 issue of MOTOR AGE but through an error the prices were incorrectly stated. This company does not quote retail list prices and therefore no prices should have been given in connection with the article. Prices to the trade are quoted upon application.

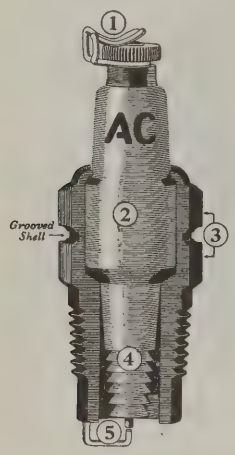
THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

(Continued from page 29)

AC One-Piece Plug for Fords

BEING a development of the regular "AC 1075" and designated as "Type T" the AC Spark Plug Company has perfected an improved type spark plug for Fords. The new plug is of one-piece design, insuring against compression leaks. The hexagon is made long enough to provide an easy wrench-hold. It has the special features of the "carbon proof" porcelain, made from Kyanite, a new AC material, heavy electrodes and the spring terminal clip which permits quick removal of the secondary wire for testing plugs or coils.



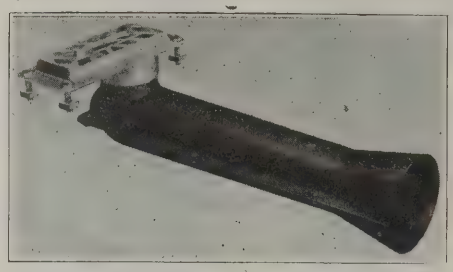
A. C. One-Piece Plug for Ford

Lyon Tool Box

LYON Metallic Manufacturing Co., Aurora, Ill., is producing a tool box designed for use by the mechanic, to keep in the private garage or home or carry in the car. The box is finished in green enamel and strongly made. It comes in four sizes, from 18 to 22 in. long, six and seven in. wide and six deep. The weight of these boxes ranges from nine to 12 pounds and trays are available for each. Prices from $2.50 to $3. "Make Yourself a Present of This Box" is a sign used in connection with the company's Christmas selling campaign.



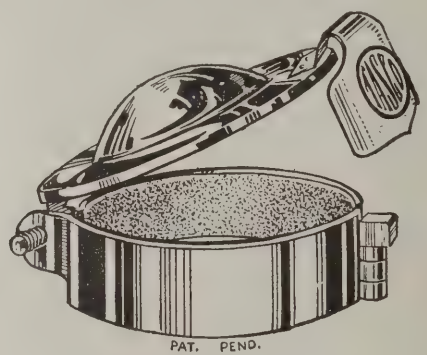
Lyon Tool Box



Perfection Heater for Fords

(Cut shown above)

SEVERAL advantages are claimed for the new Perfection Heater for Fords by the Perfection Heater & Mfg. Co., 6545 Carnegie Avenue, Cleveland, Ohio, the manufacturers. This unit is compactly made and is said to possess unusually quick and powerful ability to supply warmth for the car. The body of the heater in two parts, is clamped around the exhaust pipe from which the heat is taken, the heat entering the car through a register bolted to the floor over an opening of but 2½ in. in diameter cut in the floorboarding. Retail price is $6.50.



Tasco Tank and Radiator Cap

Tasco Tank and Radiator Cap

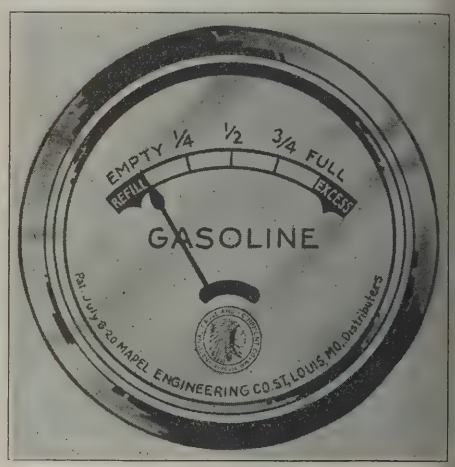
A CAP designed for either the gasoline tank or radiator is offered the trade by the Automotive Specialties Corp., New York City. Being hinged, rather than threaded, the cover of this cap cannot be lost. It opens with a lift of the spring shield and snaps shut. Two sizes fit all cars. The device is made of nickel plated brass and is easy to attach. Price $1.50 each.

"Magnetic" Succeeds "Connecticut"

ANNOUNCEMENT is made by the Magnetic Clock Company, Hartford, Conn., that it has succeeded the Connecticut Clock Co., makers of electric clocks for automobiles, motor boats, airplanes and radio. Products of the Magnetic company will bear the name "Magnetic" instead of "Connecticut".

Mapel Gasoline Gage

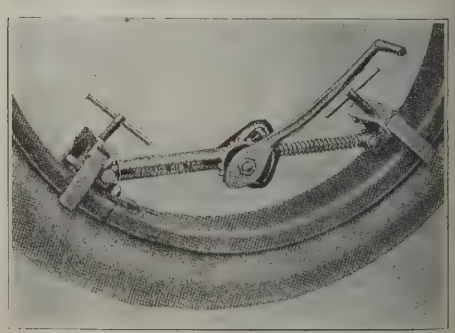
THE Mapel Engineering Co., 416 N. Third St., St. Louis, Mo., is manufacturing a gasoline gage with the indicating strument located on the dash. It operates on the hydrostatic principle in conjunction with the fuel supply system and renders a practically constant indication of the amount of gasoline in the tank. The rate of gasoline consumption is also indicated by the pointer moving to the "refill" position each time the vacuum tank is refilled. The instrument is 2 1/4 in. in diameter and is similar in design to the temperature gage manufactured by the same company. The list price is $10.



Dash Indicator of Mapel Gasoline Gage

A. S. Wallace Rim Tool

SIMPLE, yet sure and quick operation are incorporated in the action of the A. S. Wallace Rim Tool, according to the manufacturers, the A. S. Wallace Rim & Tire Tools Co., 12-14 Jefferson Street, Chicago. In operation a clamp attaches to the rim near the split, with another clamp holding to the rim for fulcrum on the other side of the split. A crank is used for expanding the rim.



A. S. Wallace Rim Tool

EDITORIAL

A Sound Industry

NATIONAL prosperity seems to assure continuation in 1926 of the normal growth that the automotive industry has enjoyed since the war, and in turn an active automotive business will contribute in large measure to the general welfare of the country.

Progress of the automotive industry in 1925 has been much more than the establishment of new production and sales records. Its most important aspect has been the general recognition in this country of the motor vehicle as a definite and essential element in the nation's transportation scheme.

It is true that production of motor vehicles reached a new high record this year, the total up to Dec. 1 having been 3,997,954, with December almost certain to add another 300,000, bringing the year's aggregate in excess of 4,200,000. It is also true that sales in nearly every section of the country kept right up with production.

But if the industry had not progressed in the direction of greater usefulness and adaptability in our national transportation program we could hardly expect it to maintain its present position, much less continue its growth. The fact is it has progressed much more in this direction this last year than in any like period in the industry's history. In design and performance the motor vehicle has established itself in 1925 as a comfortable and efficient means of personal transportation and a very economical and practically necessary conveyor of commodities.

The passenger car has left far behind it the tradition of novelty that led hundreds of thousands of persons to use it when to do so was to subject themselves to weariness and discomfort which they bravely bore in a spirit of pioneering. This has been accomplished largely through improvement in the design and construction of vehicles. Better spring suspension, balloon tires, smoother operating engines, more dependable mechanisms, easier steering, sustained speed for long distances, comfortable enclosures at low price, better seating arrangement, and better looks—these are the respects in which the passenger automobile has made its greatest progress in the last year and which practically guarantee its continued growth in popular demand for 1926. As it appears now the demand for passenger cars in 1926 will be limited only by the country's capacity to pay for them and this as we have seen has increased almost beyond belief as the national wealth has multiplied and been better distributed, and as credit facilities have been expanded along lines at one time considered impossible.

The commercial car, too, has grown in popular favor this year. A new degree of safety and comfort has been reached in the design and construction of buses. Motor trucks have increased in production and sale in even greater proportion than passenger cars.

Public acceptance of motor transportation has led to immense state and national highway systems designed and built specifically for the use of rubber tired motor vehicles. These roads are going to be used just as fast as they are built.

A factor promising strong stimulation of passenger car sales in 1926 is the growing tendency for families in moderate circumstances to own more than one car. This practice heretofore has been confined almost exclusively to a few wealthy families. Today original cost is so reasonable and the scale of prices so accommodating, maintenance so well within average means, utility so well established, that many average families are coming to consider more than one car a necessity.

All these factors indicate not only a strong and healthy condition in 1926 in the field of motor vehicles, but also in production and sale of tires and all those articles of equipment and supply that are required for the operation and maintenance of automobiles.

"What's in a name?" is one question and "What's in a window?" is another. Properly trimmed, the answer to the latter is—"Profits."

Try This in Your Selling Policy

ONE of our highly successful dealer organizations has a note in its merchandising policy which it would be well for many other automotive merchants to copy. It is simply this:

Refusal to concede that the winter season is naturally a slump period.

In the beginning of the winter season this company buckles into the effort of selling all the harder. It holds its spring delivery orders to a minimum because of its dogged determination to sell for immediate delivery. It tries to sell the prospect on the thought that the automobile is not merely a seasonal conveyance but in popular acceptance an all-year facility of transportation. And its winter sales hold up remarkably well.

Sales might taper off in the winter but when the dealer succumbs to the notion that winter is bound to be a slump period he establishes at once a hopeless psychology within his own organization. Admit defeat and you are licked. Refuse to "lay down," insist on going ahead, imbue your salesmen with this same inspiration and sledding over winter's snows will be much easier and more profitable.

In some lines all things may come to him who waits but in automotive merchandising they're more apt to come to the go-getter.

Factories Concentrate on New Year

General Price Reductions at Show Believed Unlikely

Raw Materials and Tires Are Up and Higher Lists Expected Early in 1926

NEW YORK, Dec. 24.—Production of motor cars is marking time, while the factories concentrate on preparations for the new year which will begin for the automobile industry with the opening of the national show in New York Jan. 9. The model and price changes that will be made share the center of interest with the legislative projects affecting the industry now before Congress.

Announcement of a drastic price cut last week by a leading producer of four cylinder cars, the extent of which will not be known until show week, recalls a similar situation three years ago at this time. The reduction made then led to a wave of price-cutting, but the state of the market and of production costs as compared with prices is now much different. The producer in question has for several weeks been expected to reduce prices, and the announcement created little surprise in the industry.

The forces tending to increase prices are so strong that any general reductions would be very difficult to bring about and it is believed that if one or two of the larger companies made advances in the lists the others would follow suit. Tire prices are the principal factors that have raised the cost of producing cars in recent weeks, but raw materials have also been generally on the upgrade.

A bill to regulate trucks and buses introduced in Congress last week and supported by powerful interests is a matter of major importance to the commercial car end of the industry. It is widely felt that the growing business of common carrier trucking will be dealt a blow from which it will not recover for years if the bill is passed in its present form. Some form of regulation is regarded as almost inevitable by many, but the legislation now proposed would, it is held, place a tremendous burden on the independent operators.

"CHRISTMAS SHOW" SUCCESS

CINCINNATI, Dec. 19. — Christmas sales of Buicks in the Cincinnati territory took on a big increase due to the movable "Christmas Car Show" arranged by Salesmanager Joseph W. Conner and Harry Leyman, owner of the Leyman-Buick Co. More than 50 cars were sold during the 15 days of the holiday period as a result of the successive exhibit and the special Christmas campaign of the Leyman-Buick Company in Kentucky and West Virginia was productive of fine results. Sixteen models were used in the "Christmas Show."

New York Show Week Events

NEW YORK, Dec. 21.—A list of meetings, dinners, luncheons and banquets to be held by various bodies of, or connected with the automotive industry, to be held during the week of the National Automobile Show here is given below:

Saturday, January 9

Meeting, Packard Motor Car Co., Biltmore.

Monday, January 11

12:30 a. m.—Luncheon, Motor Transport Congress, Hotel Roosevelt; luncheon, United States Advertising Corp. of Toledo, Hotel Biltmore; luncheon, members of Committee of 75, Rubber Association of America, Hotel Commodore.

6:30 p. m.—Dinner to 1,000 guests of Rubber Association of America, Hotel Commodore; dinner, Cadillac Motor Car Co., Hotel Biltmore.

6:30 p. m.—Dinner, Metropolitan Section, Society of Automotive Engineers, Hotel Commodore; dinner, National Automobile Dealers' Association, Hotel Commodore.

Tuesday, January 12

12:30 a. m.—Luncheon, Motor Transport Congress, Highway Division, Hotel Roosevelt; luncheon, Oakland Motor Car Co., Hotel Commodore, Chilton Class Journal Co., Hotel Commodore.

6:30 p. m.—Banquet, National Automobile Chamber of Commerce, Hotel Commodore.

Wednesday, January 13

10 a. m.—Meeting, Board of Directors, American Automobile Association, Hotel Roosevelt; luncheon, Auburn Automobile Co., Hotel Commodore; meeting and luncheon , Velie Motors Corp., Hotel Commodore; luncheon given by President H. H. Franklin, H. H. Franklin Mfg. Co., to visiting Franklin men, Hotel Commodore.

7:30 p. m.—Dinner, Motor & Accessory Manufacturers Association, Hotel Astor.

7:30 p. m.—Dinner, Studebaker Corp., Hotel Plaza; annual dinner, Ols Motor Works, Hotel Commodore; annual dinner, Chevrolet Motor Co., Hotel Commodore.

Thursday, January 14

Luncheon, Chrysler Sales Group, Maxwell Motor Co., Hotel Commodore; luncheon, distributors and dealers, Rickenbacker Motor Co., Hotel Commodore; annual dinner and entertainment, Paige-Detroit Motor Car Co., Hotel Commodore.

6:30 p. m.—Dinner and dance, Greater New York Tire Dealers Association, Hotel Pennsylvania.

6:30 p. m.—Dinner, Society of Automotive Engineers, Htel Astor.

6:30 p. m.—Dinner, Overseas Booster Club No. 9, Hotel Empire.

10 p. m.—Boxing show, Boosters Club No. 13 of New York, 153 West 64th St.

Efforts to Provide Better Distribution Are Planned

National Conference Would Have Congress Provides Census Same as For Manufacturers

WASHINGTON, Dec. 19.—Efforts to improve conditions of distribution, to bring to light the major wastes of marketing and to set up and enforce ethical and economical standards of business practice were brought to a focus at the general meeting of the National Distribution Conference held in Washington, December 15 and 16, under the auspices of the Chamber of Commerce of the United States.

A general program of business and trade association activity in the field of distribution was outlined. Steps were proposed, in accordance with the recommendations of Secretary Hoover, looking to the co-ordination of business effort in the assembling of basic information relating to marketing. Machinery for the self-regulation of business was arranged.

Among the specific steps recommended by the Conference are:

That the Chamber of Commerce of the United States be requested to establish a permanent committee on the collection and publication of commercial statistics.

That Congress be requested to provide funds for an enumeration of distributors and a census of distribution comparable with the biennial census of manufacturers.

That the President of the Chamber of Commerce of the United States be requested to appoint a committee to constitute a Joint Trade Relations Committee, formed of representatives of manufacturers, wholesalers, retailers and the consuming public to act as a clearing house for complaints of objectionable and destructive practice and to promote such coordination as will effect economies and improve mutual relations.

In addition the conference outlined a wide range of activities to be carried on by business men, individually and through their trade organizations, all designed to contribute to the common purpose of putting distribution on a systematic and efficial basis.

GIVE NEW LICENSES

DALLAS, Tex., Dec. 19.—The Franklin Motor Company of Dallas stimulated used car buying this week by giving a 1926 state license with every used car bought. The license was given without additional price on the car. In Texas license for automobiles has to be paid by February 1, 1926. They are due to be paid now.

Stutz Dealers Gather to See 1926 Car at Factory

Service Methods Are Shown to Representatives Who Will Sell New Product

INDIANAPOLIS, Dec. 19.—About 250 members of the dealer and distributor organization of the Stutz Motor Car Co. attended the convention here during the first three days of this week. During the course of the meetings the Stutz product for 1926 was shown to the sales organization and service demonstrations in charge of Bert Dingley, service manager, occupied an important position.

In addition to addresses made by F. E. Moskovics, president, and Col. E. S. Gorrell, vice-president in charge of sales, the meeting was featured by speeches by Charles M. Schwab, E. V. R. Thayer and Carl J. Schmidlapp, who are the most prominent members of the Stutz directorate.

Dealers from all parts of the country were in attendance and several of them brought members of their local organizations. Stutz executives report that a number of dealers of high caliber have been signed up during the last few weeks and that several more can be expected in the near future.

"No orders for deliveries of new Stutz cars accepted for shipment after April first; orders for immediate shipment or shipment within three months only accepted" was the keynote of the convention.

It was not only enthusiasm on the part of some 250 men gathered from all sections of the country to hear about the new policies of the company, to see the new Stutz 1926 automobile offerings but an enthusiasm best expressed in orders for 1,010 automobile for immediate shipment of standard production cars. There was no urge on the part of the company executives on the dealer organizations—no special pressure brought to bear in an effort to move the cars from the factory.

Dodge Brothers Reduces Prices on Complete Line

DETROIT, Dec. 19.—Dodge Bros., Inc., has announced price reductions on the complete line of cars. The exact amount will be announced January 7.

According to the announcement the reductions will apply on all cars purchased after midnight December 15. The amount of the reduction will be immediately refunded to purchasers since December 15.

The reductions, it was further stated, are made possible by completion of the new $10,000,000 expansion program which consists of buildings and equipment which will enable the company to double its capacity during the coming year.

Horse Driver Is Speeder

MILWAUKEE, Dec. 19.—The final straw has been added to the list of insults suffered by Old Dobbin in the wake of the motor age, with the arrest at Stevens Point of a horse driver on a charge of exceeding the speed limit of eight miles per hour. While cars breezed along at much above this speed, and stately limousines "did" Main Street in even less time, Hugh Leonard, teamster, was halted by officers of the law, haled into court and fined $10 and costs for reckless driving. His gallant steed was snapped by a motor cop at eight miles plus. Leonard expressed the thought that it might not have been so humiliating had the arrest been made by a mounted horseman instead of a motor cop.

RADIO CO. INCORPORATES

DECATUR, Ill., Dec. 19.—The Decatur Radio Company, 221 East William Street, which has been manufacturing five-tube sets, has been incorporated and application for charter is now pending. The personnel of the company consists of A. W. Cartwright and H. W. Winings, in charge of the mechanical and engineering departments; C. D. Warren and F. H. Wight. The latter is business manager and Mr. Warren is a former Lakewood banker. When the factory is established the company will begin production on greater scale with prospect of heavy 1926 business. Mr. Winings is well known in this section as a radio engineer.

NEW BUDD PLANT

DETROIT, Dec. 19.—Production is now under way at the new all-steel body assembly plant of the Edward G. Budd Manufacturing Company. The building, covering 290,000 square feet, has been completed in record time—the construction being started early in September and the first body turned out December 8. The new facilities provide for complete finishing of the bodies, a task hitherto left to car manufacturers. The units are shipped in the "white" from the main factory in Philadelphia, thereby taking advantage of low production costs, and are being assembled to the last detail in Detroit, ready to drop into place on the chassis.

SWEET BUYS IN BOSTON

SOUTH BEND, Ind., Dec. 19.—G. W. Sweet, assistant sales maanger of the Studebaker Corporation, has purchased the business of the Donovan Motor Car Company of Boston, distributors for that city and surrounding territory. He will take over the business January 1. The transfer involves taking over a large salesroom and used car department building and the large service building as well as the stock of parts, cars, etc.

Kansas City Salesmen and Dealers Meet with N.A.D.A.

Vane and Shaw Present Program—Several New Members Are Obtained

KANSAS, CITY, Dec. 19.—More than 500 dealers and salesmen attended the national sales congress sponsored by the N. A. D. A. at the Hotel Baltimore here. According to George A. Bond, secretary of the Kansas City Motor Car Dealers' Association, there were about an equal number of dealers and salesmen.

C. A. Vane, general manager of the N. A. D. A., was in charge of the meeting. He stated that it was among the best, and the largest yet held by the association team, with the single exception of the meeting in New York.

Lynn M. Shaw, assistant manager, and H. D. Bullock, field representative of the association, assisted Mr. Vane in presenting the program of the afternoon. A. R. Kroh, sales specialist, was called home on account of sickness in the family before he reached this city.

Among the outstanding features of the congress were the charts showing outlines of the findings of the association in regard to sales, markets, etc., upon which basis of facts a dealer might intelligently plan his sales campaign.

After a short presentation of the work of the national association, a number of new members were obtained. It was announced that the sales congresses would be held more frequently by the association as soon as the income from an enlarged membership would justify the expense.

Registrations in Illinois Show November Decline

CHICAGO, Dec. 19.—November witnessed a marked falling off in the number of new passenger cars registered in Illinois, the decline being 37 per cent as compared with the figures of the preceding month. Losses were general ranging from 24 per cent in the Ford class to 52 per cent for low priced vehicles excluding Ford. In the medium and high priced divisions the losses were 41 and 26 per cent respectively.

Following are the detailed figures for eleven months of 1925:

Month	Fords	Low, Excl. Fords	Medium	High	*Total
Jan.	4,060	2,275	5,748	808	12,891
Feb.	3,424	1,718	4,977	612	10,731
March	5,714	2,729	6,416	784	15,643
April	9,010	3,755	8,801	861	22,427
May	8,751	3,644	8,014	899	21,308
June	6,473	3,400	6,383	828	17,084
July	8,499	4,305	8,787	1,035	22,626
Aug.	4,686	3,218	6,646	720	15,270
Sept.	1,831	3,145	6,292	661	11,930
Oct.	3,953	2,430	4,652	615	11,650
Nov.	2,993	1,143	2,716	451	7,303
Total	59,394	31,762	69,432	8,274	168,863

*Includes miscellaneous cars not named.

The foregoing statistics were compiled from figures furnished to MOTOR AGE *by Robinson's Advertising Service, Springfield, Ill.*

Firestone Declares Extra $1 Dividend on Common

Annual Meeting Results in Election of Harris Creech as Only New Director

AKRON, Dec. 19.—Directors of the Firestone Tire & Rubber Co. have declared an extra dividend, upon the recommendation of President H. S. Firestone, of $1 on the common stock, placing the junior issue equivalent to a 7 per cent basis. This recommendation came, Firestone said, "in view of the very prosperous past year and of the splendid prospects for 1926."

The directors have decided to set $10,000,000 of 7 per cent preferred stock to face the hazards and speculative conditions of the crude rubber market, he said. Harris Creech, president of the Cleveland Trust Co., is the only new director elected. He succeeds the late Dr. L. E. Sisler. Other directors re-elected are, H. S. Firestone, J. W. Thomas, S. G. Carkhuff, C. A. Myers, H. S. Firestone, Jr., and J. J. Shea.

"This year we have a capital and surplus of $60,680,641 sales of $125,000,000 and a profit of $12,800,000," Mr. Firestone said. "We have received many complimentary letters on our wonderful progress and development in such a short time." Mr. Firestone said the number of employes increased from 7,000 to 10,000 during 1925 and that an unusually low turnover indicated stability and satisfaction.

Tire plants in Akron produced over 200,000,000 pounds of product during the year, which is 43 per cent more than in 1924. He said the average daily production of tires reached 32,000 and the tubes 38,000. To emphasize the necessity of better control over raw materials, Firestone said it is necessary for the company to have on hand, afloat and under contract in the Far East, a four month's supply of crude rubber.

"As we are using 10,000,000 pounds a month, it means that we must have 40,000,000 pounds of rubber on hand and under contract," he declared. Rubber today is selling at from 400 to 500 per cent above its value, and is fluctuating very rapidly. It is not at all impossible that within the next few weeks or few months that rubber will drop 50 cents per pound. If the British take off the rubber restriction, no one knows how low the price will drop, and if they tighten restriction, no one knows how high it will go."

NEW CHEVROLET ZONES

DETROIT, Dec. 19.—Chevrolet has just completed the opening of three new zone offices in New York City, Cleveland and Omaha. Four especially designed service buildings have been erected at Des Moines, Minneapolis, Charlotte, and Jacksonville. The establishment of these offices marks the completion of the expansion program and according to R. H. Grant, general sales manager, is to assure quick distribution of cars and parts to Chevrolet dealers.

PLANS PERMANENT EXHIBIT

NEW YORK, Dec. 19.—The Studebaker Corp. of America has taken a five year lease at a total rental of $250,000 on the Rose Room of the Hotel Plaza, where beginning March 1, 1926, it will maintain a continuous display of custom built bodies mounted on a modified Big Six chassis of 136 inch wheelbase. The Rose Room is the only ballroom in the lobby floor of the Plaza and occupies the southeast corner of the hotel facing on Fifth Avenue and Fifty-eighth Street. At the present time Studebaker is utilizing the Rose Room for a display of custom built bodies by Le Baron.

SEIBERLING MAILS CHECKS

AKRON, Ohio, Dec. 19.—With the mailing of checks to stockholders of record December 5, covering final payment (4 per cent) of deferred dividends on its 8 per cent preferred stock, announcement was made that the total business of the Seiberling Rubber Co. this year will be approximately $12,000,000 as compared with $8,500,000 last year. It is estimated by company officials that next year's business will exceed $18,000,000.

FORD PLANS INVENTORY

DETROIT, Dec. 19.—Nine of the Ford manufacturing and assembling plants will close for inventory Dec. 24, it is announced. The date of reopening is not given. The plants are Highland Park, River Rouge, Iron Mountain, Holden Ave., Lincoln, Hamilton, O., Glassmere, Pa., Green Island, N. Y., and Flat Rock, Mich.

Court Restrains Sale of Apperson Service Section

KOKOMO, Ind., Dec. 19.—The legal fight over the right to sell the service department of the Apperson Automobile Co., to the General Parts Corp., of Detroit, resulted here yesterday in the issuance of a restraining order in circuit court, asked by the Pioneer Automobile Co., the holding organization for Apperson real estate and property. The holding company also petitions receivership for the Apperson Automobile Co., the operating concern formed at the reorganization a year ago last July.

The complaint charges that the Apperson officials were proceeding to sell the service department without the knowledge or consent of the stockholders and creditors, causing the request for an injunction against the sale, which was almost completed.

A hearing is to be held next week on the receivership petition. The Apperson company is one of the oldest in the industry. It has not built cars since August, but has planned the manufacture of a mechanical gearshift.

Truck Makers Refuse to Approve Tax Rebate Plan

They Would Rather Absorb Excise On Cars Than Have Effective Date Advanced

WASHINGTON, Dec. 19.—A wire referendum vote from truck manufacturers that they would prefer to absorb the tax rebate on trucks to their dealers, rather than have Congress extend the effective date in the new bill one month and notification to Congress by the American Automobile Association that that body of passenger car users would not be satisfied with less than complete repeal of all passenger car excise taxes, marked the two outstanding developments this week in the new tax legislation now before Congress.

In order to protect dealers and agents handling trucks from being forced to pay taxes of 3 per cent to the government on trucks in stock the day the new tax bill passes, arrangements had been made to have the truck provision of the new bill extended for one month, similar to the passenger car provision, and then the government would rebate to dealers for trucks in stock at the end of the thirty-day period.

A telegraph poll, however, made by the National Automobile Chamber of Commerce to the truck manufacturers resulted in a consensus that the truck manufacturers prefer that the tax to be taken off trucks at the earliest possible moment and that the manufacturers should make some equitable arrangement with their dealers in prorating the tax paid on trucks in stock the day the bill passes. Chairman Green of the House Ways and Means Committee, in charge of the bill, was so notified this week by H. H. Rice, president of Cadillac Motor Car Company and chairman of the legislative committee of the N. A. C. C.

Notice was also sent Chairman Green by Thomas P. Henry, president of the A. A. A. that the national motoring body represented by his association would be satisfied with nothing less than complete repeal of excise taxes on passenger cars and all classes of motor vehicle equipment.

COMMITTEE IS APPOINTED

NEW YORK, Dec. 19.—A committee consisting of Merrel P. Calloway, vice-president Guaranty Trust Co., Henry L. Bogert, Jr., of Eastman Dillon, W. C. Rands of Detroit and Charles H. Platner, secretary, 140 Broadway, has been organized to represent the company's mortgage 6½ per cent ten-year sinking fund of the Murray Body Corp., which went into temporary receivership. They invite holders of these bonds to forward them under a deposit agreement now being prepared. All bonds should be sent to the Guaranty Trust Co., New York, or the Security Trust Co., Detroit.

General Motors November Sales Total 60,371 Cars

Volume Delivered to Users Is Almost Double That of Same Month Last Year

DETROIT, Dec. 19.—Sale of General Motors passenger cars by dealers to users in November almost doubled the sale for the same period a year ago. The past month the sales totaled 60,371 cars and trucks as compared to 33,095 in November, 1924.

Sale of car and trucks to dealers and distributors by the various manufacturing divisions more than tripled those for November, 1924. November, 1925, sales totaled 73,624, a year ago it was 23,631.

The following tabulation shows monthly sales of General Motors cars by dealers to ultimate consumers and sales by the various manufacturing divisions to dealers and distributors.

Dealer Sales

	1924	1925
Jan.	33,574	25,593
Feb.	50,087	39,579
March	57,205	70,594
April	89,583	97,242
May	84,715	87,488
June	65,224	75,854
July	60,836	65,872
Aug.	54,842	78,638
Sept.	48,565	83,519
Oct.	46,003	86,281
Nov.	33,095	60,371

Divisions Sales

	1924	1925
Jan.	61,398	30,642
Feb.	78,668	49,146
March	75,484	75,527
April	58,600	85,583
May	45,965	77,223
June	32,984	71,088
July	40,563	57,358
Aug.	48,614	76,462
Sept.	51,995	89,018
Oct.	49,552	96,364
Nov.	23,631	73,624

Used Car Stocks Reported Heavy in Columbus, O.

COLUMBUS, O., Dec. 19.—The used car market in Columbus and central Ohio continues to be rather quiet and prices are being cut by many dealers to move rather heavy stocks of used cars before the end of the year. Some novel advertising schemes are being used but the net result is that these cars do not sell very rapidly.

Stocks of used cars are heavier than usual and a number of meetings among used car dealers have been held in an effort to solve the problem. Repossessed cars which are sometimes offered by finance companies are rather numerous and this is given as one of the cases for the disturbance in the used car market.

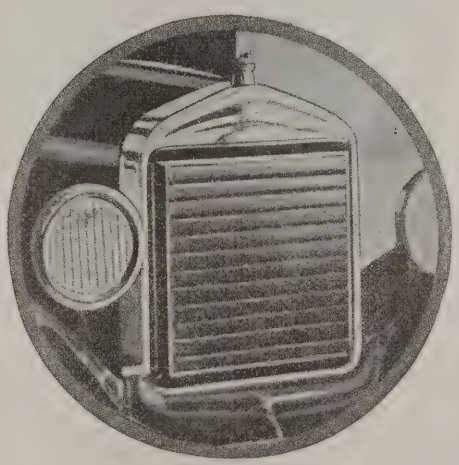
Another factor is the recent ruling of Secretary of State Thad H. Brown to the effect that purchasers of cars at this time will have to provide themselves with 1925 license plates for which they have to pay full price. Efforts to have the ruling that 1926 tags, which are sold at half price would be permitted during the month of December failed.

MAY MODIFY INSURANCE

NEW YORK, Dec. 19.—Modifications of the Chrysler insurance plan have been proposed by its sponsors to a committee of state insurance commissioners. These modifications are designed to meet the objections of the commissioners who have opposed the plan from its first announcement. The changes waive compulsory insurance on cars sold for cash, concede collection of state taxes on premiums received by policy holders and provide that policies shall be delivered through duly licensed resident agents instead of by Chrysler dealers, thereby removing participation by Chrysler dealers in the insuring of the cars, which was the chief objection of the insurance companies and the commissioners to the original plan.

Vernay All Year 'Round Shutter

Laminated Shim Company, Inc., Long Island City, N. Y., is the maker of the Vernay All Year 'Round Shutter for Fords, a new product which was exhibited for the first time at the recent show of the Automotive Equipment Association in Chicago. The shutter while not automatic is said to offer positive hand control from the dash, a feature of the control being that it clamps to the dash without the necessity of drilling holes. The gripping portion of the control is in the shape of a ring, instead of being on the button plan, comfortable



and easy operation being accomplished by inserting a finger through this ring.

Considerably more than the usual radiation surface is claimed for the Vernay when the vanes of the shutter are open. The producers recommend this characteristic to make the shutter good for year-round use. Contributing greatly to the shutter's working efficiency are special all-brass bearings. This eliminates the chance of vanes sticking through rust, dirt is excluded and the job is tight and easy working. All bearings, bearing rods and mechanism are of brass and it is said there is no rattling. The shell is of pressed steel, enameled, shipping weight 5¼ lbs., and the list price is $5.50.

Robert Graham Made General Sales Manager of Dodge Bros.

John R. Lee Is Named His Assistant —Sanford Takes Indianapolis Dealership

DETROIT, Dec. 19.—Robert C. Graham has been elected vice-president and general sales manager of Dodge Brothers, Inc., F. J. Haynes, president of the company announced today. He succeeds F. L. Sanford, formerly general sales manager, who resigned to accept the Dodge Brothers, Inc., dealership in Indianapolis.

Immediately after taking over his new duties, Mr. Graham announced the appointment of John R. Lee as assistant general sales manager. Up to the time of his new appointment, Mr. Lee was assistant to President Haynes.

Since 1921, Mr. Graham had been directing head of the sales department of Graham Brothers and until Dodge Brothers, Inc., acquired control of Graham Brothers a short time ago. He is one of the three Graham Brothers who are now prominently identified with the Dodge organization, a brother, Ray Graham, being general manager. His appointment was announced recently.

Mr. Lee is a veteran in the automotive industry. Becoming assistant to the president he was in full charge of Dodge Brothers' operation in Canada, developing the production and sales organization of Dodge Brothers, Ltd., of Canada. Previous to that he was with the Ford Motor Company.

Chrysler Dealers Meet in Annual Session in South

ATLANTA, Dec. 19.—Dealers handling the Crysler line in the southeastern territory held their annual convention in Atlanta with Harry Sommers, Inc., southeastern distributor, this month, and were practically unanimous in their optimism over the winter business outlook, predicting largest closed car business the next few months in the history of the automobile business in the South.

Harry I. Myers, director of sales for the Crysler company, was the principal speaker at the Atlanta meeting, outlining the company's sales and merchandising plans for the coming year. Other speakers were C. E. Belloate, district manager for the Chrysler company in the Southeast, and Harry Sommers, distributor in this territory.

FORD SALESMEN DINE

SALT LAKE CITY., Dec. 19.—The Ford Motor Co.'s local branch entertained the company's Salt Lake County dealers and their salesmen at the Hotel Utah. Following a banquet on the hotel's roof garden there was a program. Sixty-five guests were in attendance in all.

Milwaukee Sees Greater Show Because of Dates

Exhibit This Year Will Be Held Between Those in New York and Chicago

MILWAUKEE, Wis., Dec. 19.—With prospects of securing many exhibits previously not obtainable because of a conflict in dates with the Chicago show, the Milwaukee Automobile Show to be held Jan. 16-23 this year will undoubtedly set a new record for number and quality of displays, according to the committee in charge. The show follows closely on the heels of the big New York show and many of the exhibits will be brought directly to this city, and from here will be taken to the Chicago show which opens a week after the local exposition ends.

Milwaukee is so favorably situated as to dates this year, that it will also receive many of the miscellaneous exhibits that go to make up a most interesting accessory division. In other years these exhibits did not come here because they could not be released in time to be sent to Chicago for presentation there.

The show committee which consists of Leslie D. Frint, Chairman, A. J. Roehl, Emil Hokanson, M. E. Newald, Herford White, Jack O'Keefe, and Bart J. Ruddle, manager has not yet divulged the decorative scheme. Enough has been learned to indicate that the coloration and general design of the show will be a complete surprise and a novelty from the standpoint of automobile show decoration.

Drawing for space in the passenger car division will take place soon and truck exhibitors will be allotted space by mid-December in order to allow plenty of time for construction of special displays if these are desired. Reservations now in show that there will be more exhibitors in every department than a year ago.

Passenger car distributors who will exhibit at the Milwaukee Automobile Show to be held Jan. 16-23 have been assigned locations for their exhibits and with this important transaction off their hands, Leslie D. Frint, chairman, and Bart J. Ruddle, manager, will begin final work on the decorative scheme which will be completed during the latter part of December.

In the drawing for space, the following distributors of passenger cars in Wisconsin and the cars they will distribute were given space in this order:

Achen Motor Co., Cleveland and Chandler; American Automobile Co., Pierce Arrow; Anger Chevrolet Co., Chevrolet; Buick Motor Co., Buick; Chidester Frint Motor Co., Rickenbacker; Clark Motor Co., Chrysler; Curtis Automobile Co., Reo; A. E. Dufenhorst Co., Peerless; Durant Motors Co., of Michigan, Star; Edwards Motor Co., Dodge Brothers; Ford Motor Co., Ford and Lincoln; Frint Motor Car Co., Oldsmobile; Hokanson-Thompson Co., Oakland; Jonas Cadillac Co., Cadillac; Krueger-Wilson Co., Marmon; Kissel Car Co., Kissel; Lear-Diel-Droegkamp, Inc., Hupmobile; Nash Sales Co., Nash-Ajax; John E. Nelson Co., Inc., Stutz; Osmond Jordan Co., Jordan; Packard Motor Car Co., Packard; Paige Wisconsin Co., Paige and Jewett; Quinlan Motors Co., Moon and Diana; Sanger-Williams Co., Franklin and Rolls-Royce; Stearns Sales Agency, Stearns-Knight; Stebeens-Dentz Motor Co., Case; Jesse A. Smith Auto Co., Hudson and Essex; Shogren-Thomas Co., Wills St. Claire; Velie Sales Corporation. Velie; Willys Overland, Inc., Overland and Willys-Knight; J. G. Wollaeger Co., Studebaker.

CHRYSLER, LTD., PICKS DEWAR

WINDSOR, Ont., Dec. 19.—John D. Mansfield, president and general manager of the Chrysler Corporation of Canada, Ltd., announces the appointment of Alex Dewar as traffic manager. Mr. Dewar's connection in this regard extends over a period of 10 years. He joined the Gray-Dort Motors at Chatham in 1916, as traffic manager, and has been connected with the industry continuously since.

CHEVROLET DEALERS MEET

EVANSVILLE, Ind., Dec. 19.—About 50 Chevrolet dealers and salesmen representing agencies of southern Indiana attended the divisional meeting at the Hotel McCurdy here, Wednesday afternoon. The principal speaker was D. E. Ricketts, sales promotion representative, Chevrolet Motor Car Company, Indianapolis distribution branch. The purpose of the meeting was to map out the sales campaign for 1926.

Oakland Car and Accessory Men Exhibit in Bank Lobby

OAKLAND, Cal., Dec. 19.—Oakland's part in the automotive manufacturing industry is being forcibly demonstarted to the public by means of an exhibit staged by 22 manufacturers of cars, parts and accessories in the lobby of the Oakland Bank. The show opened December 7 to continue for two weeks. The manufacturers in the show represent a capital investment of $6,000,000 and an annual output valued at $30,000,000. Figures present on billboards at the show demonstrate that one automobile in every 25 manufactured in the United States is either made or assembled in Oakland, which has adopted the name of "Detroit of the West."

Practically every product of the automotive industry is shown in the exhibit, in which the officials of the bank are assisting. Among the articles on exhibition are passenger cars, busses, motor stages, motor trucks, tractors, motorcycles, batteries, tires, shock-absorbers, lubricating systems, motor meters, radiator caps, radiators, custom-built bodies, springs, luggage carries, parts of all kinds, aluminum castings, motors, patent axles, bumpers, and all manner of equipment for the comfort of the motorist. Every manufacturing and assembling plant in Oakland is represented. Attendance has been so large that the exhibit has been kept open not only after banking hours in the daytime, but evenings as well.

Columbus New Car Sales Up to November Average

Volume Follows Trend of Former Years and Declines Slightly from October

COLUMBUS, O., Dec. 19.—Motor Car sales in Columbus and central Ohio during the month of November were up to the average, but in most instances were below the records for the month of October. Columbus has always been known as a city where motor car sales always drop off in November and the present year was no exception to the rule.

Dealers report prospects for the coming month as well as after the first of the year as good and are making preparations for a steady pull during the winter. The higher priced vehicles have been rather slow. Farmers in the territory surrounding Columbus are beginning to show some interest and some sales are reported from the rural sections. The volume of business in used cars in Columbus territory was about 12 to 15 per cent less than in October.

Used cars have been very slow and that is the worst feature of the trade. All dealers have heavy stocks of used cars on hand and while cutting of prices has stimulated some buying they have not moved well. This is attributed largely to the rather unsettled economic conditions as well as to the between seasons period.

Most of the distributors have very few new cars on hand while stocks on the average are lower than usual at this time of the year. Banks are making the usual extension of credits and no trouble is being experienced on the financial score.

TIME SELLING NOT USURY

LOS ANGELES, Dec. 19.—A decision was recently rendered in the Superior Court of Los Angeles county which declares that conditional contracts of sale used in the sale of automobiles or any other personal property upon a time payment plan do not come within the purview of the usury laws of the state of California. Is is held that conditional contracts upon a time basis are distinctly contracts of sale upon a time-selling price and have none of the characteristics of a loan or forbearance of money within the meaning of the usury law. The decision holds that anyone selling personal property can have a cash price and also can have a time-selling price, which is considerably higher than the cash sales price. In fact, there is no limit from a legal standpoint as to the amount that can be added by the dealer, if desired upon a time sales basis.

NO PITTSBURGH SHOW

PITTSBURGH, Dec. 19.—Members of the Pittsburgh Automobile Dealers' Association have decided not to hold an automobile show. During the week of Feb. 20 to 27 a special exhibition of all models will be held in each dealer's salesroom.

Six Foreign Sleeve-Valve Cars to Race Here May 31

Michigan Man Buys Three and Guyot of Paris Will Have Three More

PARIS, Dec. 1.—(by mail)—Six cars with sleeve valve engines built under the Burt McCullum patents may be expected to face the starter in the next Indianapolis 500 mile race, by reason of the initiative of H. Albert Schmidt, of Lewiston, Michigan. Mr. Schmidt this week placed an order with Albert Guyot, of Paris, for three 91½ inch single seater racing cars, to be delivered to him April 1. In addition, Guyot is building three similar cars for his own use and will bring them to Indianapolis with French drivers. It is probable that Mr. Schmidt's cars will be handled by American drivers.

Mr. Schmidt, who is of French origin and was connected with some of the leading automobile factories in France during the early days of the movement, is interested in the sleeve valve engine as a possible rival to the poppet valve type and has placed his order for the Guyot cars in order to foster racing and technical development along new lines.

Work on the Guyot sleeve valve engines has been proceding for two years. Next year's 91½ inch models have six cylinders with a roller bearing crankshaft and roller bearing connecting rods. In addition to the intake and the exhaust ports at the top of the sleeve there is an auxiliary exhaust port uncovered by the piston at the bottom of its stroke. The single sleeve has both a reciprocating and a circular motion. A Rootes blower, driven from an eccentric shaft, is used. Chassis feaures are more or less convenional. As it is not intended to race these cars in Europe they will be built with single seater bodies to meet American conditions.

Among other Europeans who may be expected at Indianapolis is E. A. D. Eldridge, who is now building up a couple of 91½ inch cars, in a private shop in Paris. One of these cars will have the engine behind the driver and transmission to the rear wheels by transverse cardan shafts. The other car is a normal type with a four cylinder engine. A feature of the Eldridge cars is their unusually low build and their excellent streamlining. In addition to a considerable amount of racing at Brooklands, Eldridge has been a constant performer during the last eighteen months on Montlhery track, where he has driven the 200 h.p. Fiat.

Pierre de Vizcaya is preparing two straight eight supercharged Bugatti cars, with single seater bodies, especially for Indianapolis. It is understood that one of the cars will be entrusted to Jules Goux.

NEW VELIE DEALERS

MOLINE, Ill., Dec. 19.—New Dealers recently added by the Velie Motors Corp. include:

A. E. Weaver, Penn's Park, Nasife-Velie Company, Philadelphia, Velie Sales Agency, Janesville, Wis., Clyde McKelvey, Potosi, Wis., Standard Motor Sales, Massillon, O., W. A. Goodman, Okeechobee, Fla., Clarence Fenton, Auburn, Cal., P. C. Sacchi, Arcata, Cal., R. O. Spiller, Berwick, Me., Pollard Auto Company, Nashua, N. H., Leon-Swalm Motor Company, Miles City, Mont., Muscatine-Velie Sales, Muscatine, Ia., Al J. Fabry, South Pekin, Ill., G. Albert Barker, Canton, Ill., Capital Auto Livery , Lincoln, Neb., Temple Garage, Temple, Cal., McBride & Kern, Princeton, Ill., W. B. Reynolds, St. Petersburg, Fla., Paul A. Gebhardt, Middletown, Pa., V. F. Weaver, Davidsville, Pa., W. E. Callis, Lompoc, Cal., Llyswen Motor Car Company, Altoona, Pa., C. W. Trumbull, Alhambra, Cal., Norristown Acme Sales Company, Norristown, Pa., D. & B. Auto Sales, Marshall, Mich., H. T. Wetzel, Sterling, Ill.

New King Quality Salesmanager



Burt G. Close, new salesmanager of King Quality Products, Inc., Buffalo, N. Y.

BURST VISITS DEALERS

ST. LOUIS, Dec. 19.—Carl W. Burst, vice-president and works manager of the Moon Motor Car Co., has just returned from a six weeks' trip through the western states where he visited Moon and Diana distributors in the principal cities of 11 states. Burst said he found the stocks of Moon and Diana distributors and dealers low and he also noticed a spirit of optimism prevailing over the outlook for the immediate future and during the coming year for the automotive trade.

OLDS RELATIONS SAME

SPOKANE, Wash., Dec. 19.—Relations between the Olds Motor Works and distributors in the western territory will be continued, F. G. W. Sudrow of San Francisco, Pacific zone manager, announced here. He declared that establishment of direct factory branch connections in other parts of the country will not affect relations in this section where distributors will continue to handle the Oldsmobile.

White Creates New Service Branches in 2 More Cities

Toledo Station Under Cleveland District and Newark, N. J., is Separated from New York

CLEVELAND, Dec. 19.—White Motor company officials here announced today the creation of a new Newark, N. J., service district and the separation of the Newark and Jersey City service branches from the New York city service district.

C. N. Mooney, recently transferred Richmond, Va., to Newark as branch service manager, was appointed district service manager at Newark, in charge of the two branch service stations. H. W. Burch was continued as service superintendent at the Jersey City branch.

At the same time, H. G. Johnson, service superintendent at New Haven, Conn., was appointed shop superintendent at the new Brooklyn service station. George J. Hegan, formerly a service salesman connected with the Long Island City offices, was named service superintendent at New Haven.

Other appointments announced included Ralph Landrum, shop superintendent, as superintendent at Memphis, Tenn., replacing Hale Lyle, who joined the Memphis sales department. W. M. Johnson, formerly with the Memphis sales department, returns to the service department as service superintendent at Little Rock, Ark., branch, and R. L. Leyer, formerly acting service superintendent at the Knoxville, Tenn., branch, becomes service superintendent.

Opening of a new branch sales and service station of the White Motor company, Cleveland, at Toledo, O., was announced. W. M. Kelley, formerly White salesman connected with the Pittsburgh branch for the last eight years, has been named manager of the branch, which will be located at 1811 Jefferson avenue, in a building formerly occupied by the Toledo White Motor Sales company, Toledo White truck dealer. The branch will be operated as a unit of the Cleveland district, under A. L. Hayes, Cleveland district manager.

The new branch is the sixty-sixth direct factory branch of the White company..

MARMON DEALERS TO MEET

ST. LOUIS, Dec. 19.—John T. Salisbury of the More Automobile Co., Marmon distributors in the St. Louis district is chairman of a committee of Marmon distributors which is arranging for the seventy-fifth anniversary dealers' convention of the Nordyke & Marmon Co., at Indianapolis, Jan. 4-6. The committee has sent a questionnaire to all Marmon dealers asking them what the Marmon factory can do to aid them in manufacturing policy, advertising, sales helps, etc. The action of the committee is a result of a desire on the part of the Marmon factory to extend to dealers a voice in the determination of policies back of the car they sell.

Gain in California Activity Causes Personnel Changes

Sales Staffs Increase, Dealers Are Added and New Lines Are Represented

SAN FRANCISCO, Dec. 19— Increased activity in all lines of automotive merchandising in central and northern California and Nevada have brought about numerous increases in sales staffs and several changes in lines handled, as well as the taking on of new lines by dealers in San Francisco, Oakland, Berkeley and other cities on and near San Francisco Bay during the first week in December.

The Durant Motor Company of California made two promotions in its San Francisco branch, when Glen Polk, assistant sales-manager was named sales-manager, and H. M. Circle, a salesman, was appointed to fill the position vacated by Polk.

The Pacific Nash Motor Company announces the appointment of M. V. Ringgold to be sales-manager, with headquarters in Oakland.

The Durant Motor Company of California has appointed Charles C. Pratt as sales-manager of the corporation department, with headquarters at the Star and Durant plant in Oakland.

Ritchie C. Field, Inc., has been appointed dealer for the Hupmobile in Berkeley and Piedmont. Mr. Field is president of the firm, with F. A. Sewell in charge of the office and financial departments, and C. S. Olsen in charge of sales, the firm being composed of these three men.

Alfred T. Selman, divisional manager for the Hudson Motor Car Company in Australasia and New Zealand, sailed for Sydney, on board the Oceanic Line's motorship "Sierra," from San Francisco early in December.

LOUISVILLE SALES GOOD

LOUISVILLE, Dec. 19.—Automobile dealers of Louisville report a slowing up of sales in November as compared to October but records show a satisfactory increase in business over the same month last year, according to the monthly report of the Louisville Automobile Dealers' Association. November sales were 341 cars below the October record but 222 cars ahead of November, 1924. As October of this year was a banner month dealers felt no disappointment because of the past month falling behind.

November Greatest Month In History of Hupp Motor

DETROIT, Dec. 19.—November was the largest month in the history of the Hupp Motor Car Corp. in sales volume in dollars and in the number of cars manufactured, O. C. Hutchinson, general sales manager, announced today. These figures were made possible, according to factory officials, by the demand for the Hupmobile eight and six.

In attaining its November mark Mr. Hutchinson said that the sales of cars were three times as great as in November 1924 and 57 per cent higher than October 1925. Although Hupp November sales were the largest for any month for the entire 1925 year, the company carried approximately $7,500,000 worth of cars in unfilled orders over into December.

Mr. Hutchinson further said that the company would continue to be oversold on the new six cylinder car the remainder of the year and that every car it would be possible to build during the entire month had been alloted to dealers and distributors. This demand, it is believed, will necessitate a new production schedule for the current month. It is also probable that the output of both the six and eight for 1926 will be governed almost solely by the productive capacity of the plant.

Overland Shipments Gain 50,600 Cars to December 9

Record Not Only Beats 1924 but Is 3,000 Ahead of Same Period in 1923

TOLEDO, Dec. 19.—With 1925 shipments up to December 9 showing an increase of more than 50,600 cars over the period from January 1 to December 9 of 1924, Willys-Overland is enjoying its greatest sales volume.

Not only has the shipment record to date this year beaten that of 1924, but it also is approximately 3,000 automobiles ahead of the shipping record for the same period of 1923, the best year in the history of Willys-Overland. Production for this period in 1923 totalled 194,364 Overlands and Willys-Knight.

Coincident with the unusual activity marking shipment records at Willys-Overland is the fact that twice during the fall months boat shipments on the Great Lakes established new shipping marks for this type of freight, while several trainloads to such points as Chicago, Decatur and the two southern points Miami and Memphis have further contributed to Willys-Overland's unusual shipment records.

In addition, an extraordinary shipment activity has marked the endurance of the Willys Derby, national sales contest in which more than 10,000 members of Willys-Overland's field organization were entered. This contest closed on November 30, but the factory has noted an urgent Christmas demand among prospective owners and dealers which is reflecting itself in the dearth of cars now on hand.

PLAN TO MAKE WESTCOTT

SPRINGFIELD, O., Dec. 19.—Preparations are being made by James T. Lay of Detroit, and Cleveland men, owners of good will, material and parts of the Westcott Motor Car Co. sold by Receiver J. M. Rehe, to manufacture the Westcott car in the Winton plant in Cleveland, according to announcement made here. The material and parts were moved to Cleveland a short time ago. The new owners of The Westcott Motor Car Co. expect to continue the manufacture of the car and extend the trade. It is understood that they will retain the present name.

NASH DEALERS MEET

PORTLAND, Ore., Dec. 19.—An important conference of Northwest Nash and Ajax dealers was held in Seattle during the past week. It was attended by Charles Wentworth, head of Wentworth & Irwin, Oregon distributors. Dealers from all parts of the Northwest were present at the session which resulted in a determination to carry on an intensive sales campaign during the coming season.

Lupton's Automotive Supervisors Meet



In the center of this group of supervisors for the automotive division of David Lupton's Sons Co., Philadelphia, is E. H. Spears, manager of the division. Reading from left to right the others in the front row are E. H. Mitchell, H. Edgren, D. Gardenier, designing engineer, George Chapman, Detroit, G. O. Moore, N. S. Abbott and W. T. Bruce Top row, R. B. McHale, C. A. Colmesnil, F. W. Aker, W. E. Spencer, F. W. Chapman, C. E. Hughes, Carl Stanley, F. N. Carson and G. R. Egbert.

Texas Business to Enter New Year With Records

First Eleven Months of 1925 Ahead of All 1924 in Sales of New and Used Cars

DALLAS, Tex., Dec. 19.—The automotive business in Texas and parts of adjoining state went into the last month of the year hitting on all six and with the assurance that new records would be established in practically all lines of the trade.

Reports from scores of wholesalers and retailers from many parts of the district were to the effect that the sale of new and used cars for the first 11 months of 1925 exceeded the total sales for the preceding year by a considerable figure. The new car sales in Texas during 1925 probably will be a little more than 200,000 which is some 30,000 more than for 1924.

In estimating the value of the new cars sold in Texas so far this year retailers said the figures would reach $190,000,000 and that those figures would be pushed over the $200,000,000 mark before the first of the year in all probability.

Sale of new and used cars for the last month of the year will probably exceed that of November it was said by wholesalers and retailers. The "Christmas shopping" is now being done and dealers report this line of business is the heaviest in history. Santa Claus will deliver at least 1,200 automobiles of the brand new variety, ranging in price from $600 to $4,800 in Texas.

DENVER CO. INCORPORATES

DENVER, Dec. 19.—The R. R. Hall Cadillac Company, who have handled Cadillac cars in this city under one name or another since 1903, have been incorporated under the name of Hall Cadillac Company. The officers are R. R. Hall, president, Fred S. Andrews, vice-president, Tyson S. Dines, Jr., secretary, and Edna Smith, treasurer. There is no change in the active management except the addition of Fred S. Andrews who has become a stockholder and vice-president.

STRONG BUYS BUICK STORE

OAK PARK, Ill., Dec. 19.—B. W. Strong, son of E. T. Strong, general sales manager of the Buick Motor Company, Flint, Mich., has purchased the entire interest of the Buick Motor Company's retail store at Oak Park, and will take over this business January 1. Mr. Strong, during the last five years has been working in different divisions of the sales department, and for the last two years has been serving as the assistant branch manager of the Buick Motor Company's Flint branch.

MARMON SHIPS TRAINLOAD

INDIANAPOLIS, Dec 19.—A solid trainload of fifty freight cars full of Marmon automobiles, representing the largest shipment of merchandise ever made from Indianapolis, left for Jacksonville, Florida, where the cars will be distributed by drive-aways to fifteen Marmon distributors and dealer points throughout the state. Cars valued at more than half a million dollars were included in the shipment. The size of the shipment is unusual for a car in the Marmon price class, Marmon officials say.

Cadillac's New Sales Manager



H. M. Stephens, new general sales manager of Cadillac Motor Car Co.

Buffalo Dealer Has Novel Used Car Selling System

BUFFALO, N. Y., Dec. 19.—Hoesch & Klinck, Inc., Buffalo Flint distributor, has successfully employed a plan for disposing of used cars which was like this:

The company canvassed the garages of Buffalo and vicinity and enlisted someone at each as a junior salesman. It also included some barber shops and cigar stores. It arranged to keep these auxiliary salesmen informed of the used cars that came into its possession and agreed to pay them liberal commissions on the sale of the automobiles that might be disposed of through their instrumentality.

These junior salesmen were privileged to bring prospects dug up by them to the sales rooms of Hoesch & Klinck Inc., to send them there with a card or a letter or a phone message to indicate whence they came; or to have salesmen from the company call on the prospects. When necessary a car was sent to take the prospect to the salesrooms.

As fast as used cars came into the possession of the company typed descriptions of them, with the price, etc., were sent to the auxiliary salesmen, likewise lists, withdrawing those sold.

New York Dealers Boost Winter Automobile Sales

Nash Shows Displays Similar to Those Recently So Successful in Chicago

NEW YORK, Dec. 19.—Car distributors and dealers in the metropolitan section are making unusual efforts to transform the early winter sales slump into a hump.

Most striking of the methods employed is the "Winter Week" being observed at all Nash salesrooms this week. Repeating the successful campaign carried on in Chicago recently, the Warren-Nash Motor Corp., distributor, published advertising last week which directed attention to the coming winter week and Nash showrooms designed window displays corresponding with the advance advertising. These displays consisted of the words, "Nash Winter Week is Coming," on a background, painted on the plate glass, suggesting a snowstorm.

The week opened when these displays were washed off the plate glass, revealing a Nash car in a winter setting. On the first days of the week full page advertisements, emphasizing the wisdom of buying a new car in December and displaying the specific claims of the Nash to the honor of being the proper purchase, appeared in all the newspapers. These advertisements are being repeated through the week on a smaller scale.

The single idea of the whole campaign is to educate the buying public to the desirability of winter car purchases by emphasis upon the greatly increased comfort of passenger cars.

In their efforts to relieve the seasonal sales slump, dealers and distributors generally are emphasizing the down payment rather than the total price.

MEMPHIS SHIPS TRAINLOAD

MEMPHIS, Dec. 19.—The first trainload of Memphis made cars have been shipped. There have been many solid trainloads received but this was the first one shipped out. The local Ford Motor Company plant built them and they were shipped to Jacksonville, Fla. The train contained 300 automobiles and was made up of fifty cars of automobiles, an engine and caboose.

OVERLAND DEALERS MEET

CHARLOTE, N. C., Dec. 19.—The necessity for consistent sales effort at this season and the importance of emphasizing financing propositions were discussed at a conference here of 70 North and South Carolina dealers in Overland and Willys-Knight motor cars. The meeting was called by C. F. Sullivan, of Charlotte, in charge of sales for this territory, at the request of C. M. LeRoux, manager of the company's Southern branch, at Atlanta, Ga. Mr. LeRoux and C. H. Dickert, Southern branch service manager, addressed the dealers, who were guests of Mr. Sullivan at a banquet

Along Automobile Row

SAN FRANCISCO. — The distributing branch of the Budd Wheel Company in San Francisco has been enlarged to cover double its previous space. Additional shop equipment which has been installed including a new lathe and drill press. New air pressure for the paint shop is also being installed.

PULASKI, Tenn.—Dodge Brothers announces the appointment of H. G. Foster Co. as Dodge dealer at Pulaski, with branch offices at Columbia and Lawrenceburg, Tenn.

ST. LOUIS.—Hudson-Frampton Motor Car Co. has opened a used car branch at 3620 Gravois Avenue. Hudson-Frampton distributes the Hudson and Essex in the St. Louis district.

EVANSVILLE, Ind.—The Phillips-Osborne Motor Company, Studebaker dealer, 418-20 South Fifth Street, is adding a second story addition to the rear section of its establishment, which will provide a large repair shop and result in rearrangement of departments to offer greater space for the used car department.

ROCHESTER, N. Y.—Heinrich Motors, Kissel distributor here, has been appointed associate dealer for Essex and Hudson in this city.

PORT ARTHUR, Ont.—Parker's Garage has secured the Ajax agency for Port Arthur and Fort William and now has these cars on display.

PORTLAND, Ore.—Roy Wilson, connected with the Manley Auto Company, Hupmobile dealer, for four years previous to 1918, is back again in the Manly fold as wholesale representative.

BOSTON.—The Henshaw Motor Company, distributor of Dodge Brothers cars and Graham Brothers trucks in Boston, has just opened another branch, this time for renewed cars exclusively.

MILWAUKEE. — Waltzer & Kern, Chrysler dealer in Milwaukee, is erecting a one-story, 86x126 garage at Prospect avenue and Kenilworth place. H. Schmitt & Sons Inc. is the general contractor.

QUEBEC.—Overland and Willys-Knight are now sold in Quebec by C. L. Plamondon, Rue de la Couronne.

EVANSVILLE, Ind. — McKinney and Toombs, Morganfield, Ky., and John Maxey, Stembal, Ind., have been furnished contracts as Willys-Knight and Overland retail dealers this week. They will be supplied with cars through the Bennighof-Nolan company, local distributor.

BALTIMORE.—The Fidelity Motors Co., Chrysler distributor, has opened a used car department at 1121 Cathedral street. The move not only provides much better space for the used car department but also takes it from the service station at 910 Bolton street.

OTTAWA.—Legare Automobile Supplies Co. Ltd., has opened a salesroom and distributing office for Hudson-Essex in this city, the first of a number which will cover Eastern Ontario.

THE DALLES, Ore.—J. T. Henry Automobile Company has been appointed Overland and Willys-Knight dealers.

QUEBEC.—Quebec Garage has the representation of Rickenbacker and Gray cars.

ROCHESTER, N. Y.—Tremendous increase in both new and used car business has forced the Mortimore Motor Car Company, Nash distributor, to open a new salesroom devoted exclusively to used cars.

CLEVELAND.—The values of used car business done by the Cleveland Packard Company during the first ten months of 1925 aggregated $257,000, according to announcement by C. M. Fisk, president. At the same time Fisk announced the company had extended its sales rooms by the leasing of the storeroom adjoining the salesroom to provide sales and exhibition space for used cars.

EVANSVILLE, Ind.—The North Side Hudson-Essex Company, metropolitan retail dealer, B. L. Bettag, manager, has moved from 1719 Main Street to 712 North Governor Street, and will operate the service department through Lockyear's Garage at the latter address.

BALTIMORE.—Olmstead & Moore, Inc., handling both the Oldsmobile and Jordan lines, have opened a branch at 211 South Highland Avenue, in the Highlandtown section. It is known as the East Baltimore branch and is in charge of E. L. Herbert, formerly with Nattans Motors.

GREENSBORO, N. C.—The Pickard Tire Co. has been organized and incorporated here as an accessory and tire dealer, capital stock of the Pickard company given at $100,000.

EVANSVILLE, Ind.—A. C. Ancona, for several years head bookkeeper for the A. L. Maxwell Company, Lincoln and Ford dealer, has joined the accounting department of the Wabash Valley Motor Company, Hudson and Essex distributor and dealer, as head bookkeeper.

GALESBURG, Ill.—A. L. Mulvany and F. L. Hitchcock have organized the Galesburg-Overland Company and opened their sales and service station at 366 East Simmons Street. Mr. Mulvaney was with the former Overland company here and Mr. Hitchcock comes from Elmwood, where he was dealer.

NANAIMO, B. C.—Sampson Motor Co. has opened a garage and show room on Wallace Street for Essex and Hudson cars.

ROCHESTER, N. Y.—Rochester Auto Parts, Inc., has been appointed distributor for King radio products in this territory. The new distributor has appointed many new dealers in Rochester and vicinity and is building up a strong organization to market the King products.

PORTLAND, Ore.—W. H. Ball, formerly of St. Johns, has joined the sales force of the Oldsmobile Company of Oregon, in Portland.

WOODSTOCK, Ont.—Work has been commenced on the erection of a new show room and garage for the local Chrysler dealer, Samuel Axlerod.

ST. LOUIS.—Frank A. Flint, president of the Flint Motor Car Co., oldest Chevrolet dealer in St. Louis, announced last week that the name of his company had been changed to the Flint Chevrolet Co. to avoid confusion.

EVANSVILLE, Ind.—M. Jacobs, Tell City, has joined the retail sales staff of the Hall-Hagans Chevrolet Company, local dealer.

BOSTON.—Knowlton L. Watson, formerly manager of the used car department of the C. P. Rockwell Company, distributor for Nash and Ajax, has been promoted to the position of sales manager for the Ajax line.

TRAIL, B. C.—Steve Walley has taken the McInnes Garage. Mr. Walley says his new location will enable him to make a better display of Chrysler cars than he has previously been able to do.

ATLANTA.—M. S. Mentzer, for the last five years, manager of the southern branch here for the Studebaker Corporation, has resigned that position, having purchased an interest in the business of the Yarbrough Motor Co., of Atlanta, Studebaker dealers in this territory.

DALLAS, Tex.—John E. Morriss, president of the Dallas Automotive Trades Association and one of the leading Ford and Lincoln dealers in Texas, has been elected a member of the board of directors of the Oak Cliff State Bank and Trust Company.

NORTH VANCOUVER, B. C.—North Shore Garage is the latest addition to automobile row. Star and Durant cars as well as Flint cars and Roadking trucks are controlled locally by this firm.

WAUKEGAN, Ill.—The Biflex Products Company, maker of Biflex cushion bumpers has retained the services of one of the best known metallurgical engineers in the country, Ralph H. Sherry.

EVANSVILLE, Ind. — The Kinchel-Gatsch Tire Company, Miller and Kokomo tire distributor and dealer, has moved from 415 Sycamore Street to 1046 Main Street. The business is under the management of Henry B. Kinchel.

CLEVELAND.—John O. Koepke, long an outstanding figure in the Cleveland automobile field, has acquired the Auburn East Cleveland Company, 14717 Euclid Avenue, according to announcement here by P. R. Ward, president of the Auburn Motor Sales Company.

EVANSVILLE, Ind.—Dudley and Slack, Owensboro, Ky., and Louis F. Tafey, Dawson Springs, Ky., have been signed up as retail United States tire dealers, according to Grandal Smock, manager of the territorial factory branch here.

ST. LOUIS.—George H. Lister of the Willys-Overland branch here has been appointed sales promotion manager to succeed Frank Whyte, recently appointed retail sales manager of the branch, and B. D. Agnew was appointed assistant retail sales manager.

SYRACUSE, N. Y.—George E. McEachron has been appointed dealer for Buicks in this city by the Ross Automobile Corporation which holds the district franchise. McEachron has been handling Rickenbackers and Rollins for some time.

LANSING, Mich.—B. Murray Saunders has joined the advertising department of Olds Motor Works. For the last four years Mr. Saunders has been with the Campbell-Ewald Company agency, both in production work and assisting in account contacting.

SPOKANE, Wash.—The Vowels Motor Company has moved into larger quarters at 920 W. Second Avenue, the rooms space vacated by the used car department of Wells-Chevrolet Company. L. P. and W. F. Vowels, owners, will carry a larger stock of Oldsmobiles and will also continue the rental car service with a line of Hertz cars. Expansion is contemplated next spring when a brick building facing Monroe Street and adjoining to the present quarters will probably be built to give additional space and add a used car salesroom.

VANCOUVER, B. C.—The McLaughlin Motor Car Co., Ltd., has passed out of existence. McLaughlin-Buick distribution and service for the Vancouver district is now controlled by Clark-Parsons Buick Limited. The former district factory branch will be entirely discontinued, but the extensive service facilities and parts supply built up by the branch during the last 18 years will be carried on by the new company. The decision of the General Motors Company to discontinue factory branches and the appointment of A. A. Ross, former manager at Vancouver, to the position of supervisor of General Motors interests in the province of British Columbia gave Clark and Parsons the opportunity to form the new organization.

ATTLEBORO, Mass.—The Frank Mossberg Corporation which succeeds the Frank Mossberg Company, has now completed its reorganization and announces that its assets exceed its current liabilities by over $225,000. L. B. Smith, who has been made vice president in charge of sales, announces that this company will introduce a new line of socket wrench sets with special Chrome Molybdenum Steel Socket. These wrenches will be packed in metal carrying cases designed for both car owner and garage mechanic. The company has many orders on hand Mr. Smith said.

With the Associations

N. Y. Service Men Meet

New York, Dec. 19.—Technical ability, character and personality are the most important qualities required in a service salesman, according to Harry C. Trent, secretary of the Colt-Stewart Co., Chrysler distributor, who spoke before the December meeting of the Automotive Service Association of New York.

Selection of the proper material is the most important step in training. Before placing a man on the floor, Mr. Trent reccommends that he spend a month in the parts department, three weeks in the stockroom and one in the office as this knowledge will be valuable to him in his work. He also said it was a good plan to have each service salesmen spend two days a month in the shop, particulary at the time when new models are being introduced, as this will keep them up-to-date on the technical side of their jobs.

In Mr. Trent's station, the service salesmen dress as any other business man, dusters having been discarded. This change has reacted favorably on both the men and the customers. If it is necessary to get under a car to make a diagnosis, the salesman is authorized to call a mechanic from the shop for the purpose.

The importance of paying service salesmen proper saleries was emphasized by Ralph Benham, Studebaker. In this connection it was brought out that the high earnings of mechanics working on the piece-work compensation plan, was making it increasingly difficult to pay salesmen salaries that would make the work attractive. The value of sending the salesmen to the factory for instruction was also mentioned and Mr. Benham said that he planned to send his entire service sales force during the winter.

It was announced by the board of directors that the association's contract with John R. Eustis as executive and general manager, has been extended five years.

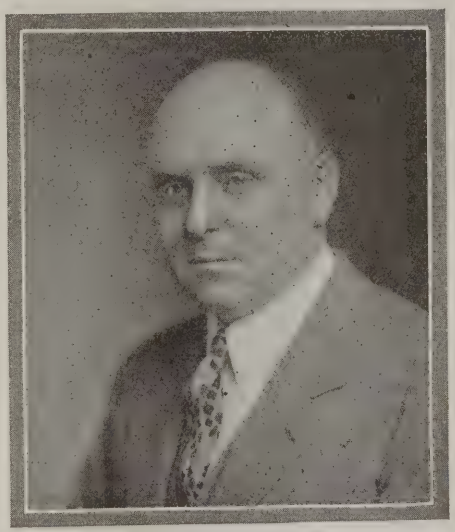
Springfield, Mass., Plans Show

SPRINGFIELD, Mass., Dec. 19.—At the regular meeting of the Springfield Automobile Dealers' Association attended by nearly 50 members it was voted to hold the annual motor show at the Auditorium beginning March 1 next. That is the week preceding the big Boston show. Harry W. Stacey, secretary of the association, who has had charge of the show for the last 10 years will again look after the details assisted by a committee chosen by the president. John F. Shaw, of Northampton, manager of the Hampshire County Used Car Exchange, was a guest at the meeting and gave a talk on the used car situation.

St. Louis Tire Dealers Elect

ST. Louis, Dec. 19.—Jesse G. Johnston, president Johnston Bros. Tire & Service Co., was elected president of the Associated Tire Dealers of St. Louis at a meeting of that body last week at Claridge Hotel. C. V. Quinn was elected first vice president; H. F. Schollmeyer, second vice president; J. Delabar, secretary; A. P. Woehrle, retiring president, treasuer; J. W. Kuemmerle, sergeant- at-arms.

The new board of Directors is composed of A. A. Guenther, H. B. White,



Jesse G. Johnston, President, Associated Tire Dealers of St. Louis.

L. B. Wyner, L. Bowcott, E. L. Meyer, Jr., E. A. Colbeck and E. H. Steinman. It was decided to install the officers at a meeting at Hotel Chase, Jan. 12 when a dinner dance will be given.

Because of the large number of robberies committed against tire men at this season of the year, Arthur G. Jennings, business manager of the association appealed to the Chief of Police for protection. The chief in a letter assured the tire men that he would instruct patrolmen to keep a close watch on their establishments.

Carriers to Organize

SAN FRANCISCO, Dec. 19.—An organization of all the operators of motor stages and motor trucks for hire in the states from the Rocky Mountains to the Pacific probably will be the outcome of work undertaken at the eighth annual convention of the Motor Carriers' Association of California, which has closed its sessions in the Hotel St. Francis here.

The new interstate organization is to be known as the "Western States Association of Stage Operators," and will be primarily for firms and individuals owning and operating motor stages over regular routes on fixed schedules.

Boosters Plan Big Season

BOSTON, Dec. 19.—With meetings scheduled for Portland, Hartford and Providence in addition to the regular events planned for Boston, Automotive Boosters Club, No. 1, is going to have a very busy season. At the first meeting called by Charles M. S. Foster, its new president, he outlined what was hoped to accomplish during the 1925-26 year.

The December meeting will combine business and pleasure in the form of a dinner Dec. 21 at which there will be a Christmas tree from which Santa Claus will distribute presents. This will be followed by an address by men prominent in automotive activities. There will be a ladies night later.

It was voted to hold the Portland meeting during February when the motor show will be there and all the Boosters and dealers will be invited to attend, particularly those in Maine. The April meeting is scheduled for Hartford and the May meeting will be at Providence.

During motor show week in Boston the annual banquet of the association will take place. This is always one of the big events in connection with the Boston motor show. The club will also take part in the meetings to be held next year at Montreal joining New York Boosters, who are coming by boat to this city. While on the water they will have one of their members wedded as a feature of the trip. The entire party will go in a special train from here to Canada.

N. Carolina Plans Convention

WINSTON-SALEM, N. C., Dec. 19.—Directors of the North Carolina Automotive Trade Association, in special session here, decided to hold the annual convention of the association here, March 17-18. Four floors of a hotel here were reserved for delegates, expected to number approximately 300, representing all parts of this state.

Attending the meeting here were Harry Clendenin, of Greensboro, president; Coleman W. Roberts, of Greensboro, secretary; W. L. Toal, of Wadesboro, Henry Maston, John Fitts, and Paul Bennett, of this city. The directors named a local committee on arrangements, composed of Mr. Fitts, Mr. Maston, John Gilmer and K. E. Shore.

According to the tentatively arranged program, the first day's session will be devoted to group meetings, a luncheon and a banquet. Officers will be elected after the banquet. The second day will be given over to a sales congress, which officials of the National Automobile Dealers' Association will conduct, and an "Oriental frolic" in the evening. Approximately 500 dealers, salesmen and office employes are expected to attend the sales congress, it was said by directors of the association.

Coming Motor Events

Automobile Shows

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Buffalo, N. Y.—Jan. 16-23
Buffalo automobile show by Buffalo Automobile Dealers' Association in 174th Regimental Armory, Carlton, C. Proctor, manager, headquarters, Hotel Statler.

Milwaukee—Jan. 16-23
18th Annual Automobile Show, Auditorium.

Cincinnati—Jan. 16-23
Cincinnati Music Hall, Cincinnati Automobile Dealers Association.

Philadelphia—Jan. 16-23
25th Annual Automobile Show at Commercial Museum Under Auspices Phila. Automobile Trade Assn.

Columbus, O.—Jan. 18-23
Show in Motor Hall by Columbus Automobile Dealers Co.

Elmira, N. Y.—Jan. 18-23
16th Annual Show, Elmira Automobile Merchants Assn., Inc., N. Y. State Armory.

Kalamazoo, Mich.—Jan. 19-23
Automobile Show in Armory by Kalamazoo Automobile Trade Association

Baltimore—Jan. 23-30
20th Annual Automobile Show and Second Annual Motor Boat Exhibit, 5th Regiment Armory, Baltimore Automobile Trade Assn., Inc.

Brooklyn—Jan. 23-30
Fifteenth Annual Automobile Show in 23rd Regiment Armory, under auspices of Brooklyn Motor Vehicle Dealers Association.

Detroit—Jan. 23-30
Detroit Auto Show in Convention Hall by Detroit Automobile Dealers Assn.

Cleveland, O.—Jan. 23-30
1926 Automobile Show under auspices of Cleveland Automobile Manufacturers' and Dealers' Association, Herbert Buckman manager, in Public Auditorium.

Jersey City—Jan. 25-30
Jersey City Automobile Show in National Guard Armory.

Rochester, N. Y.—Jan. 25-30
18th Annual Automobile Show, Edgerton Park, Rochester Automobile Dealers Assn.

Williamsport, Pa.—Jan. 25-30
Automobile Show by Williamsport Automobile Dealers Assn.

Scranton, Pa.—Jan. 25-30
Passenger Car Show in Armory, Scranton Motor Trades Assn.

Lowell, Mass.—Jan. 25-Feb. 1
Twelfth Automobile Show in Memorial Auditorium, Automobile Merchants Assn. of Lowell, Inc.

Harrisburg, Pa.—Jan. 30-Feb. 6
Harrisburg Automobile Show under auspices of Harrisburg Motor Dealers' Association.

Washington—Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

Washington—Jan. 30-Feb. 6
Washington Trade Association Show in Auditorium Building.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

San Francisco—Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bldg., manager.

Cumberland, Md.—Feb. 1-6
Automobile Show in New Armory, Automobile Dealers Assn. of Cumberland.

Denver—Feb. 2-6
Anual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Atlantic City, N. J.—Feb. 2-9
Auto Show on Million Dollar Pier by Atlantic City Auto Dealers Assn.

Springfield, Ill.—Feb. 3-6
Seventh Annual Show in State Arsenal by Springfield Auto Dealers Assn.

Providence, R. I.—Feb. 6-13
Providence automobile show under auspices R. I. Automobile Dealers' Association, Chester I. Campbell, manager, 617 Industrial Trust Bldg.

Toledo, O.—Feb. 8-13
Annual show of Toledo Automotive Trades Association in Civic Center Garage, T. J. Cooper, manager, 925 Jefferson Avenue.

Schenectady, N. Y.—Feb. 8-13
Fifth Annual Automobile Show in State Armory by Schenectady Automotive Dealers Assn.

Syracuse, N. Y.—Feb. 8-13
18th Annual Auto Show, State Armory, Syracuse Automobile Dealers Association, Inc.

Kansas City, Mo.—Feb. 12-19
American Royal Bldg.—20th Annual Show, direction of K. C. Motor Car Dealers Association.

Des Moines—Feb. 14-20
17th Annual Automobile Show in Coliseum by Des Moines Automobile Dealers Association.

Indianapolis—Feb. 15-20
Auto Show Bldg.—15th Annual Motor Show, direction Indianapolis Auto Trade Association.

Louisville, Ky.—Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Logan, W. Va.—Feb. 15-20
Logan Automobile Show under auspices of Logan Automobile Dealers' Association.

Great Falls, Mont.—Feb. 16-20
Eleventh Annual Show by Montana Auto Distributors Association.

Hartford, Conn.—Feb. 20-27
Automobile show by Hartford Automobile Dealers' Association in State Armory, Arthur Fifoot, manager, Hotel Bond.

St. Louis—Feb. 20-27
19th Annual Automobile Show, City Market Bldg., St. Louis Automobile Dealers Assn.

Grand Rapids, Mich.—Feb. 22-27
Seventeenth Annual Show by Passenger Car Dealers Association.

Peoria, Ill.—Feb. 22-27
Fifteenth Automobile & Accessories Show, Peoria Automobile Dealers' & Accessories Assn.

Omaha—Feb. 22-27
Twenty-first Annual Automobile Show under auspices Omaha Automobile Trade Association, Inc., in Municipal Auditorium, A. B. Waugh, manager.

Wilmington, Del.—Mar. 1-6
11th Annual Show, Hotel duPont, Wilmington Automobile Trade Assn.

Boston—Mar. 6-13
Boston Automobile Show under auspices of Boston Automobile Dealers' Association, Inc., and Boston Commercial Motor Vehicle Association, Inc., in Mechanics' Building, Chester I. Campbell, manager, 329 Park Square Bldg.

Ft. Worth, Tex.—Mar. 6-14
Show in Auto Building at Southwestern Fat Stock Show and Rodeo by Ft. Worth Automotive Trades Assn.

Conventions

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago—Feb. 1-3
Ninth Annual Convention of National Automobile Dealers Association in La Salle Hotel.

Chicago—Feb. 2, 3
Convention of Automotive Electric Service Association in Congress Hotel.

Springfield, Ill.—Feb. 8, 9
Sixth Annual Meeting of Illinois Automotive Trade Association in the Abraham Lincoln Hotel.

Chicago—Feb. 9-16
American Drivurself Association Annual Convention.

Winston-Salem, N. C.—Mar. 17, 18
Annual Convention of North Carolina Automotive Trade Association.

Galveston, Tex.—May 12-13
Tenth annual convention of Texas Automotive Dealers' Association in Galvez Hotel.

Foreign Shows

Montreal—Jan. 23-30
1926 Motor Show under the auspices of Montreal Automobile Trade Association, Theo Dorian, manager.

London and Birmingham—Feb. 16-26
British Industries Fair of 1926.

Coming Feature Issues of Chilton Class Journal Publications

January 1—National Shows Number—Automobile Trade Journal.

January 7—Motor Age—National Shows Number.

January 14.—Motor World Wholesale—New York Show Report.

February 4—Motor Age—Chicago Show Number.

February 4—Motor World Wholesale—Chicago Show Report.

February 18—Automotive Industries—Statistical Issue.

Profits, Sales and Used Cars Topics of N.A.D.A. in Chicago

Successful Banquet and Meeting Is Held Under Auspices of Metropolitan Tradesmen

CHICAGO, Dec. 19.—Four addresses on subjects of great interest to the automobile industry were given at the sales meeting and banquet held by the National Automobile Dealers' Association under the auspices of the Chicago Automobile Trade Association Tuesday evening in the Congress Hotel here.

The speakers were C. A. Vane, general manager, N. A. D. A., Lynn M. Shaw, assistant general manager, H. D Bullock of San Francisco, and A. R. Kroh, sales promotion adviser, N. A. D. A. Their subjects, respectively, were "The Dealer's Profit Problem," "Departmentizing Sales and Profits," "Analyzing Your Sales Problems," and "The Dealer and the Used Car Problem."

Mr. Kroh set forth that the used car losses in 1924 were 8.2 cents per dollar of used car sales, which was nearly 1 cent less than the 1923 loss. In 1922 the dealers throughout the United States lost $126,000,000 on used cars, while in 1924 this was reduced to $40,000,000, Mr. Kroh said.

The N. A. D. A. has conducted an extensive campaign for the last four years to keep before the industry the necessity for sane and aggressive attention to the used car problem. It has constantly kept a corps of trained experts in the field, studying the situation and every phase promising better results than has developed.

VANDIVERT JOINS DU PONT

WILMINGTON, Del., Dec. 19.—R. M. Vandivert has been appointed advertising and sales promotion manager of the Fabrikoid division of E. I. du Pont de Nemours & Company with headquarters at Newburgh, N. Y. He is widely known in the advertising field, having been formerly connected with the national advertising division of the Hearst newspaper organization, and also having been prominent as an advertising executive for motion picture trade magazines.

DODGE BROS. DEALERS MEET

MILWAUKEE, Wis., Dec. 19.—Dodge Brothers dealers and service men from territory within a 100-mile radius of Milwaukee attended a three-day service school conducted here by A. F. Comeal, factory instructor. The school was held in the service station of the Edwards Motor Co., distributor for this territory. Problems confronting dealers or their service managers, and operators of fleets were brought up for solution and discussion. Information regarding efficient up-to-date service methods and special tools was also given out by the factory instructor.

Hoover Hits Rubber Monopoly

Secretary Says Situation Is Wholly Artificial — Suggests Relief Measures

WASHINGTON, D. C., Dec. 19.—In a letter to Senator Capper, replying to the senator's inquiry as to the activities of combinations and monopolies to fix prices of material imports, Secretary of Commerce Hoover uses the British Stevenson plan as an illustration of his statement that "We are now subject to the full result of monopoly action and we have no machinery of adequate defense."

Secretary Hoover says that "if present prices are maintained against us, the excess sum of $650,000,000 or $700,000,000 which we shall pay is equivalent to more than twice the net earnings for dividends on all our electric power companies."

He points out that dangers to the American rubber manufacturing industry that may come through a collapse in the price are so great that some smaller manufacturers have ceased production in the fear that they could not stand the loss of suddenly diminishing inventory values. He cites the fact that average New York spot crude rubber quotations advanced from 36.7 cents in January to $1.032 in July, though they were lower during the next three months but advanced to $1.095 in November, and that at one time they reached $1.21 per pound.

Commenting on the British claim that a "fair" price was the sole objective of the Stevenson plan, Secretary Hoover says that the price of 30 to 36 cents per pound, quoted by the British committee as fair, was equivalent to an annual average profit of from 15 to 25 per cent.

The secretary asserts that the situation is wholly artificial. Normal world consumption of rubber for 1926 he estimated at 580,000 tons, whereas the potential production, if unrestricted, would probably be 625,000 tons.

"We are, therefore," he says, "not in the midst of a genuine rubber famine but purely an artificial one created by restriction on production for the purpose of advancing prices.

"Our imports for 1925 will be about 860,000,000 pounds and at normal growth our consumption will be 900,000,000 pounds in 1926. At the price declared by the price fixing body as 'fair' to them, our next year's supply would cost us about $324,000,000, but at the present prices of $1.10 per pound it will cost us about $990,000,000 or $660,000,000 in excess of the 'fair' price.

"These increased prices of rubber are a very real thing to every family in the United States. The price over and above the so-called 'fair' price means an increased charge of probably $20 or $30 for each set of tires on a light automobile, and $50 to $70 for each set on a heavy car.

"The measures that we can take of course vary with each combination. I do not wish to favor trade reprisals. Some of the following measures would ultimately afford relief if we had them organized, and all are wholly defensive in nature:

"1—Our bankers can be discouraged from giving American credits to the support of these combinations.

"2—We should initiate a strong systematic campaign for voluntary saving in use in every one of the commodities where these combinations become extortionate.

"3—We should stimulate the manufacture and use of substitutes.

"4—We should stimulate production in countries where the commodities in question are not likely to be subject to such combinations.

"5—We might set up some sort of properly controlled machinery for emergencies which would prevent our many hundred buyers from binding against each other."

Says It Is Mere Gesture

NEW YORK, Dec. 19.—Dispatches from London that the British government has practically scrapped the Stevenson rubber restriction act mean nothing whatever to the American tire manufacturer, dealer or user, according to a statement issued by the General Tire & Rubber Co.

The cable announced that beginning Feb. 1 all restrictions on exportation of crude rubber would be lifted for three months. With the exception of a very small percentage the Stevenson act would have done just that thing anyway.

"With rubber over a dollar a pound it is obvious the British would sell all they could—if they had it. So the answer is, according to rubber experts, that Great Britain is all out of reserve rubber and cannot keep up with the present demand, with restrictions removed. The real rubber supply situation is being uncovered.

"The next 10 per cent release, bringing the theoretical total to 95 per cent of all supplies, would come Feb. 1, and it is with this that the London dispatch deals. Anticipating that release, it looks as if the British were making a diplomatic gesture, trying to placate the Americans who are blaming them, partly for the present shortage and partly for the high price. They magnanimously promise to release an extra 5 per cent of rubber which in all probability does not and will not exist. Rubber next year is likely to be even higher than now."

DURANT PICKS O'BRIEN

NEW YORK, Dec. 19.—Norman O'Brien has been appointed sales manager of the Jacksonville, Fla., wholesale office of Durant Motors, Inc., at 916 Main street, with jurisdiction over wholesale business of Star cars and parts throughout Florida and adjacent Georgia counties.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2.050
3570	5-p	Sp. Sedan	2,100
		"ST. 8"	
3520	5-p	Sp. Phaeton	$1,995
3750	4-p	Coupe	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"6-66"	
2850	4-p	Sp.-Roadster	$1,495
2860	6-p	Touring	1,395
3020	5-p	Brougham	1,595
3070	5-p	Sedan	1,795
3070	-----	Wanderer	1,845
		"8-88"	
3180	3-p	Sp.-Roadster	$1,975
3200	6-p	Touring	1,995
3380	5-p	Brougham	2,250
3450	5-p	Sedan	2,350
3450	-----	Wanderer	2,400
3750	7-p	Sedan	2,550
BUICK		**"Standard"**	
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master"	
		(120 in. W. B.)	
3350	2-p	Roadster	$1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	$1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Brough. Sedan	1,925
3940	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line	
		(132 in. W. B.)	
4040	2-p	Coupe	$3,045
4155	5-p	Sedan	3,195
4240	7-p	Sedan	3,295
4075	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
4115	4-p	Victoria	3,095
		Custom Built	
		(132 in.)	
3920	-----	Roadster	$3,250
		(138 in. W. B.)	
4300	7-p	Touring	$3,250
3960	-----	Phaeton	3,250
4190	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE			
		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"Y"	
3950	7-p	Touring	$2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th C'y Sedan	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	$3,725

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CLEVELAND "31"			
2415	5-p	Touring	$895
2565	5-p	Tour'g DeLuxe	1,025
2520	3-p	Coupe	975
2695	5-p	Sedan	995
		"43"	
2775	5-p	Touring	$1,095
2950	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2890	3-p	Coupe	1,175
3120	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$7,000
4500	4-p	Sp.Touring	6,500
4700	4-p	Coupe	8,000
5000	6-p	Limousine	8,500
DAGMAR			
		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
3590	5-p	Petite Sedan	2,540
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	$1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS			
		"90"	
2650	4-p	M. o' W. Road.	$1,495
2915	4-p	Legionaire T'r.	1,495
2750	5-p	Phaeton	1,395
-----	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
-----	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
3100	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
-----	7-p	Sedan (135 in. W. B.)	-----*
DODGE BROTHERS			
2473	2-p	Roadster	$885
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spl. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spl. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spl. "B" Sed.	1,145
3020	5-p	Sedan "A"	1,195
3107	5-p	Spl. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spl. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	5-p	Phaeton	$6,650
3980	4-p	Sp. Phaeton	†
4115	5-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT			
		A-22	
2300	5-p	Touring	$ 810
2380	5-p	Spec. Touring	930
2450	4-p	Coupe	1,090
2480	4-p	Spec. Coupe	1,160
2650	5-p	Sedan	1,150
2710	5-p	Spec. Sedan	1,280
ELCAR			
		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
-----	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
-----	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165

SHIP. WT.	PASS.	BODY STYLE.	PRICE
ELCAR (Continued)			
-----	7-p	Touring	2,265
3000	3-p	Coupe Road.	2,315
-----	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2185	5-p	Touring	$765
2395	5-p	Coach	795
FLINT			
		"55"	
3325	4-p	Sport Road.	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4d.	1,495
2965	5-p	Brougham	1,575
FORD			
		Without Starter and Dem. Rims	
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
		With Starter and Dem. Rims	
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN			
		"11-A"	
2800	3-p	Sport Road.	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
-----	5-p	Oxford Sedan	3,172
GARDNER			
		"6-A"	
3290	5-p	Brougham	$1,595
3070	5-p	Touring	1,395
3030	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	-----	DeLuxe Sedan	1,895
		"8-A"	
3620	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3350	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3600	5-p	DeLuxe Sedan	2,495
GRAY			
		"O"	
1750	5-p	Touring	$595
1880	3-p	Coupe	825
2020	5-p	Sedan	845
2130	5-p	Royal Sedan	975
HERTZ			
		"D-1"	
3360	5-p	Sedan	$1,795
HUDSON			
		"Super Six"	
3400	7-p	Phaeton	1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE			
		"A"	
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195
JEWETT			
		"New Day"	
-----	5-p	Sedan	$ 995
-----	5-p	Sedan de Luxe	1,095
JORDAN			
		"J"	
-----	4-p	Playboy Road.	$1,695
-----	5-p	Sedan	1,845

SHIP. WT.	PASS.	BODY STYLE.	PRICE
JORDAN (Continued)			
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL			
		"55"	
3130	2-p	Speedster	$1,795
-----	2-p	Sp'dster DeL.	2,085
-----	4-p	Speedster	1,895
-----	4-p	Sp'dster DeL.	2,185
3530	2-p	Enc. Speedster	2,085
-----	4-p	Enc. Speedster	2,185
-----	4-p	Enc. Spd. DeL.	2,685
-----	2-p	Enc. Spd. DeL.	2,585
3190	4-p	Tourster	1,795
-----	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
-----	7-p	Touring	1,685
-----	7-p	Touring DeL.	1,885
3430	4-p	Coupe	2,085
-----	4-p	Coupe DeL.	2,485
3540	5-p	Broug. Sedan	1,995
-----	5-p	Brg. Sed. DeL.	2,485
-----	5-p	Brougham 2d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Ber. Sed. DeL.	3,185
3530	5-p	Victoria	2,185
-----	5-p	Victoria DeL.	2,485
		"75"	
-----	2-p	Speedster	2,195
-----	2-p	Speedster DeL.	2,485
-----	4-p	Speedster	2,295
-----	4-p	Speedster DeL.	2,585
-----	2-p	Enc. Speedster	2,485
-----	2-p	Enc. Spd. DeL.	2,985
-----	4-p	Tourster	2,195
-----	4-p	Enc. Speedster	2,585
-----	4-p	Enc. Spd. DeL.	3,085
-----	4-p	Tourster DeL.	2,385
-----	5-p	Phaeton	1,985
-----	5-p	Phaeton DeL.	2,185
-----	7-p	Touring	2,085
-----	7-p	Touring DeL.	2,285
-----	4-p	Coupe	2,485
-----	4-p	Coupe De Luxe	2,385
-----	5-p	Broug. Sedan	2,395
-----	5-p	Brg. Sed. DeL.	2,985
-----	5-p	Brougham 2d.	2,095
-----	7-p	Sedan De Luxe	3,485
-----	7-p	Berl. Sed. DeL.	3,585
-----	7-p	Victoria	2,585
-----	7-p	Victoria DeL.	2,885
LEXINGTON			
		"Concord"	
2950	5-p	Touring	$1,595
3000	5-p	Touring (Enc.)	1,695
2950	5-p	Spec. Touring	1,795
3200	5-p	Sedan	2,185
3425	5-p	Spec. Sedan	2,445
		"Minute Man"	
3120	2-p	Roadster	2,145
3195	5-p	Touring	2,095
3489	7-p	Touring	2,195
3230	5-p	Lark Touring	2,345
3368	5-p	Cal. Touring	2,495
3395	7-p	Cal. Touring	2,495
3375	7-p	Royal Coach	2,495
3440	5-p	Brougham	2,595
3542	5-p	Sedan	2,895
LINCOLN			
4460	2-p	Roadster	$4,000
4580	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	-----	Sport Touring	4,500
4750	4-p	Coupe	4,600
4885	4-p	Sedan	4,300
4760	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,300
LOCOMOBILE			
		"48"	
5280	4-p	Sportif Tour.	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Dr. Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,785
-----	4-p	Coupe	2,265
3400	5-p	Sedan	2,285
3350	5-p	Brougham	2,285
		"90"	
-----	4-p	Sportif Tour.	5,500
-----	4-p	Roadster	5,900
-----	3-p	Coupe	6,950
-----	5-p	Victoria Sedan	7,300
-----	5-p	Sed. (divided)	7,450
-----	7-p	Limousine	7,500
-----	6-p	Brougham	7,500
-----	7-p	Cabriolet	7,500

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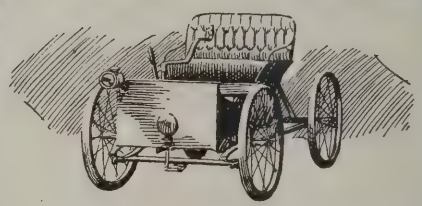
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MOTOR AGE

Vol. XLVIII | Chicago, December 31, 1925 | No. 27

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Summary and Index of Important Events in

This Week's Automotive News

Detailed Stories from* MOTOR AGE *Staff Writers and Special Correspondents Appear in News Section Beginning on Page 32

CHRISTMAS campaigns greatly boost new and used car sales. Factories continue to lessen production with big volume in sight early in 1926. Page 32.

Peoria, Ill., association warns dealers against overstocking. Page 32.

Increased interest is being shown in trade days at national shows. Page 33.

Tire production is expected to set new record in December. Page 33.

Dodge Brothers sales are ahead of all 1924 by December 15. Page 34.

Parts and accessory trade closes the greatest year in its history, Motor and Accessory Manufacturers' Association says. Page 35.

F. B. Stearns Co. will retain its identity although business is purchased by Willys-Overland Co. Page 35.

Dow-Jones Company announces terms of merger between American Car, J. G. Brill, Fageol and Hall-Scott. Page 36.

Oakland Motor Car Co. closes sales year second only to boom period after war. Page 37.

Top production throughout the winter is assured by orders on hand at Cadillac factory. Page 37.

South Dakota Automobile Trades Association holds big annual convention in Aberdeen. Page 43.

Nash business in December expected to total 50 per cent better than same month last year. Page 39.

Conditions in South Africa indicate that 1926 will be prosperous year for automobile men. Page 39.

Louisiana reports sales have been unusually heavy in last three months. Page 36.

Show space allotted to exhibitors at 1926 Cincinnati automobile show. Page 38.

Ford engineers show plans for new dirigible to Coolidge. Page 38.

Demand for cars made in United States shows heavy increase in Mexico. Page 38.

Buffalo, N. Y., dealer uses "dog-eat-dog" system in salesmen's prospects. Page 43.

Next Week's MOTOR AGE—National Shows Issue and Specifications Number

Stretch Rubber to Lower Tire Prices



HERBERT HOOVER
Secretary of Commerce

Department of Commerce Sponsors Unified Campaign on Part of American Automotive Industry to Combat High Prices Maintained by British Rubber Monopoly by Conservation of Tires in Service—Motor Age to Tell How Savings May Be Accomplished

In subsequent issues of MOTOR AGE specific suggestions will be given as to how dealers may cooperate in the rubber conservation campaign and at the same time increase their own business through the sale of repairs, accessories and sundries useful in making tires last longer.

A RUBBER conservation program along the lines suggested in an editorial in the Nov. 26 issue of MOTOR AGE has been undertaken under the leadership of Secretary of Commerce Herbert Hoover by leading business associations representing the various branches of the automotive industry.

It is hoped this conservation campaign will materially reduce the current demand for raw rubber and cause a break in the exorbitantly high prices being maintained by the British interests which practically control the world's supply of raw rubber.

Joined in this campaign are the National Automobile Chamber of Commerce, the Rubber Association of America, the National Automobile Dealers' Association and the American Automobile Association.

The keynote of the campaign is "Stretch Your Rubber." In other words, make your tires last longer. It is estimated by the N. A. C. C. that by proper care tires can be made to deliver 25 per cent more mileage than the average user has been accustomed to get from them.

This means tires must be properly serviced. They must be repaired when it is economical to do so. They must be supplied with the right kind of accessories to maintain them in best condition. Part of the money the users will save in stretching their tires over an increased mileage naturally will be spent for repairs, service and accessories. This will mean good business for the dealer who repairs tires and sells sundries used for the maintenance and protection of tires. At the same time the public and the industry will benefit if by this campaign the price of rubber can be brought down to a reasonable basis.

This unified fight against the British rubber monopoly was decided upon between representatives of the rubber and automobile industries and government officials, led by Secretary of Commerce Hoover, at Washington last week.

As the result of an all-day conference it was decided that automobile manufacturers will immediately launch an advertising campaign to "educate" rubber users to economize all possible in their wear on tires. Representatives of the National Automobile Chamber of Commerce announced that the members of that organization would carry the slogan: "Stretch Your Rubber," in all of their national advertising copy.

This phase of the campaign will be linked up with that of the American Automobile Association, which will immediately issue an appeal to the 18,000,000 motor vehicle users to economize in tires and to take better care of their tires. The public will be told how to save tires, and the 40,000 dealers and agents throughout the country will be called upon by the National Automobile Dealers' Association to further the campaign. The Rubber Association of

(*Continued on page* 34)

November 26, 1925 MOTOR A

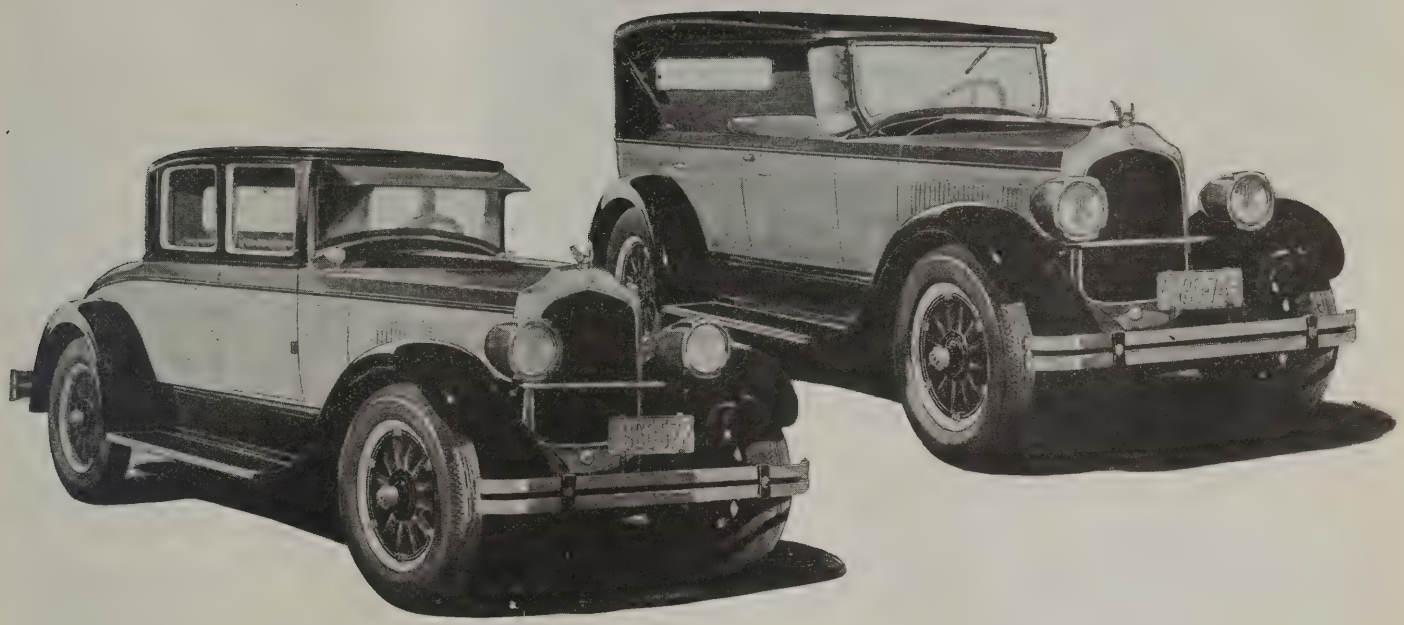
EDITO

Tires in 1926

THE price of crude rubber remains high and the supply of the product is said to be inadequate. The British restriction policy at last has begun to restrict and from present indications the automobile industry will be confronted with a serious situation in regard to tires in 1926. American interests that have set out to grow their own rubber will not get into production on an appreciable scale for some years. Meanwhile it will pay the industry to do all in its power to conserve tires. Casings should not be too quickly discarded. An inexpensive repair frequently will greatly prolong the life of an otherwise good casing. A tube frequently is discarded as leaky when what is needed is a new valve core at a cost of about six cents. New flaps, boots and other accessories can be used to advantage in getting the utmost mileage out of tires. And drivers should be urged to use care in driving over rough roads so as not to unduly damage their tires. The hoarding of tires by consumers is not to be encouraged. It merely serves to increase the apparent shortage of the product and tends to drive prices upward. Conservation of tires will go a long way toward relieving any threatening crisis in the tire supply.

Reproduction of editorial in the Nov. 26 issue of MOTOR AGE urging conservation of tires as a means of combating the rubber restriction policy of British interests controlling the greater part of the supply of crude rubber.

High Speed Characterizes New and More Powerful Chrysler Six



Left: The new 4-passenger Chrysler coupe. The full-crowned fenders used on all models can be plainly seen; right: the 5-passenger phaeton showing the windshield wings which are standard equipment on both open cars. Instead of cowl lights the lights for parking are placed on the body near the rear door entrance.

Chassis Replete With Novel Features To Insure Good Performance at Low Speeds Also. New Body Lines Particularly on Radiator and Hood Give Striking Appearance to Car

By L. S. GILLETTE

WITH the embodying of striking new lines in a wide range of colorful bodies mounted on a low hung 90 h.p. six cylinder car capable of 80 m.p.h., the latest Chrysler "Imperial" —a larger and higher priced car—will make its debut at the National Automobile Shows. Prices will not be announced until this time.

The design of the chassis is conventional and does not depart from the general layout of the present six introduced exactly two years ago. Both these models as well as the four cylinder car will comprise the line.

While the salient feature of the new car is its high speed, it required extensive engine research to combine this factor with good low speed operation and hill climbing power without sacrificing any of these qualities. A new method of counterbalancing and a special type of piston have contributed largely to the unusually high output of the seven bearing 3½ by 5 in.. "L" head engine developing 92 brake hp. at 3000 r.p.m.

Rubber plays an important role in the makeup of the "Imperial" chassis. To secure quietest operation and to minimize chassis lubrication, the springs are carried in shock insulated rubber blocks instead of the conventional shackle bolt method. No metallic contact is formed between the rear supports of the engine and the frame, the greater portion of the engine weight being taken in special rubber mountings, thus minimizing the transmission of engine noises to the frame and body. The usual method of employing rubber hose to complete the hydraulic four-wheel brake system is adopted and follows closely the layout on the smaller six.

Six Body Styles

Six body styles will be offered. A roadster, phaeton and sedan on a 120 in. wheelbase chassis and a four passenger coupe, seven passenger sedan and Berline on a 127 in. wheelbase. Standard tire size for all models is 32 by 6.20 in. mounted on artillery wheels, except for the roadster which has wire wheels as regular equipment. One piece full crowned fenders are a special feature of the new car.

None of the demonstration models being available the day MOTOR AGE visited the factory, the writer was given one of the new cars completed that same morning to drive. After a twenty minute spin to beyond the city limits the Chrysler "Imperial" was put through its paces. From a crawl, the accelerator pedal was pressed to the floor boards—the car attaining better than 70 m.p.h. in a remarkably short distance without any signs of bucking or periods of vibration. On account of its general balance, quietness and positive steering, it was possible to maintain a comfortable touring speed of 50 m.p.h. without any feeling of unsteadiness Railroad crossings were taken between 40 and 45 m.p.h., there being little jolting and no noise from the chassis. The steering was found to be very easy especially on short turns and the braking system all to be desired. In traffic the reserve of power made fast "get-aways" a simple matter and the use of second speed was practically unnecessary.

Much of the rakish appearance which the bodies present must be credited to the radiator and the hood design. As can be seen from the accompanying illustrations, the radiator shell has the general Chrysler appearance although the deep flutes tapering back along the cowl to just below the windshield give the car a totally different aspect. This design blends well with the moulding running from the radiator around the bodies giving a deep belt effect and harmonizing with the low roof lines. On the closed cars, narrow metal panels continued from the rear upper quarter

are employed where the edge of the top turns over to join the upper structure, thus giving smooth lines and a custom built appearance.

All closed bodies which are built by Fisher were developed in the Chrysler shops and follow conventional composite construction embodying steel panels. The interior appointments are unusually complete and have been laid out to provide maximum comfort. On the roadster model the rumble seat concealed in the rear deck may be opened for instant use by the releasing of a spring catch located behind the front seat. The backs of the latter are hinged for greatest comfort and move in unison with the seat cushions. To minimize neglect of the battery, a small Chrysler emblem located in the center of the instrument group flashes when the battery requires the addition of water. It is only necessary to remove a small detachable narrow panel in the floor board in front of the driver's seat to reach the battery filler caps. Bulbs of the two filament type controlled from a rotary switch in the center of the steering wheel, are placed in the center of the E. & J. headlights whose design matches the contour of the radiator. A small jewel in the upper part of the lamp shell indicates to the driver if the bulbs are alight in the dim position. With few exceptions, wherever trade names are referred to, the units have been modified or designed by Chrysler engineers exclusively for the new "Imperial" car.

As already stated, the engine is an "L" head unit of 3½ by 5 in. bore and stroke with an N. A. C. C. h.p. rating of 29.40 and a piston displacement of 288 cu. in. Having a 4.8 compression ratio, 92 b.h.p. is delivered at 3000 r.p.m.

The unit power plant is supported in the frame at four points, the two feet cast on the timing chain cover being bolted to a heavy pressed steel cross member which also carries the radiator. At the rear the engine is mounted on rubber blocks held in place in a metal fitting attached to a steel cross member, the latter completely encircling the clutch housing. This cross member is assembled in place before the engine is set into the frame and is bolted at its ends to gusset plates on the frame. With this type of construction, the rear of the engine is relieved of any frame weaving and also simplifies the removal of the power plant when necessary.

Cylinder block and crankcase of cast iron are cast integral, with the detachable cylinder head of the high turbulence type. The bores are reamed and finished with two honing operations while the inside of the casting is treated with an impervious oil paint to seal all pores. The water passages which are of liberal dimensions may be inspected by the removal of two pressed steel headers on the left side of the engine.

Four-Point Suspension

Radical departure from standard crankshaft design has brought about unusually smooth operation of the seven bearing shaft by the employing of a series of twelve counterweights, two being attached directly opposite each of the throws. These balances have been so compensated as to allow for the weights of the reciprocating parts. With this design the section of crankshaft for each cylinder is claimed to be in perfect balance for that unit. The shaft itself is of 1045 S. A. E. drop forging weighing 108 lb. and carried in bronze back babbitt lined bearings of the following dimensions. The diameter of shaft 2⅝ in., length of journals 1 and 4 1⅞ in., bearings 2, 3, 5, 6, $1\frac{3}{16}$ in., rear bearing 3¼ in. Oil holes are drilled diagonally from main bearing journal to crank pins. In addition to being static and dynamic balanced, a Lanchester vibration dampener is mounted on the forward end of the shaft and combined with the fan pulley. At the other end the balanced grey iron flywheel weighing 50 lb. and of 15⅝ in. outside diameter has the steel starter ring gear shrunk on. Connecting rods of "I" section with a center to center length of 10⅞ in. weigh 46 ozs. each when unassembled. The lower bearing which has the babbitt cast in the rod is of $2\frac{3}{16}$ in. diameter by 1½ in. long. At the upper end the tubular pin of carburized and hardened steel is given a lapped finish and held in the rod by a locked bolt. The dimensions of the pin are 1 in. diameter by 3⅛ in. long. All rods are carefully matched for balance prior to assembly.



Cutaway view showing the rubber shock insulating blocks for supporting the semi-elliptic springs.

Following two years of experiments with various metals and designs, a new type of piston is employed in the "Imperial" engine. The main feature of the piston is that it has all the advantages of the aluminum type combined with the desirable qualities of those of cast iron. The piston itself is aluminum alloy with the piston pin bosses made of the same material and connected with the piston head through webbing. Horizontally the bosses are joined with the body of the piston by an Invar strut. Invar is a steel alloy having a negligible co-efficient of expansion but possessing an unusual degree of toughness.

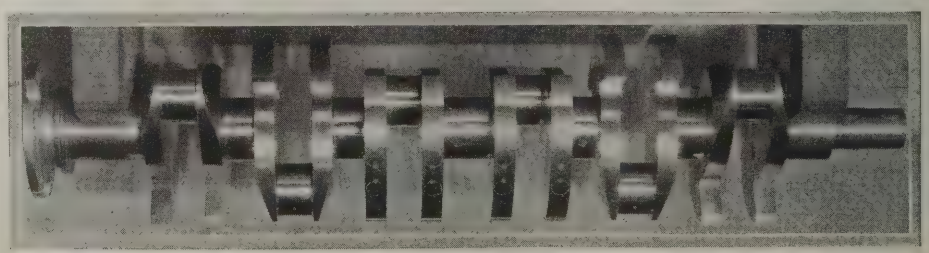
By employing the Invar strut between the piston pin bosses and the shell it is possible to fit the piston in the bores to limits as close as .003 in. to .0035 in. without danger of scoring or seizing. In manufacture, the Invar strut has several lips turned over on each side of its rectangular form. The piston is cast in a mould and the alloy is allowed to flow freely around the edges of the strut already in position so that it is completely secured and locked in place. Weighing 1.24 lb. the piston has a length from the center of the pin hole to the top of 2⅛ in. while the overall length is 4 in. Three rings all above the pin are used, two being of the plain type with the lowest, an oil control design necessitating relief holes drilled in the groove.

Through a conventional triangular drive employing a 1½ in. wide Morse chain of 78 links, the camshaft and accessories are operated. Adjustment for the chain is provided for by swinging the generator located on the right hand side of the engine. The camshaft of 1040 S. A. E. steel is carried in four bearings, the first or number one being of the bronze back babbitt lined type with the others formed in cast iron. Sizes of the bearings from front to rear are:

No. 1 2¼ by 1½ in. length
No. 2 2⅛ by ⅞ in. length
No. 3 $2\frac{3}{32}$ by ⅞ in. length
No. 4 1⅝ by $1\frac{11}{32}$ in. length

Cams of curved flank type operate the two piece mushroom tappets. The latter are held in two clusters of six each and provided with the conventional form of adjustment. While both valves are of the same dimensions they differ in type and material. The exhaust is of the tulip type made of silichrome with the inlet valve in chrome nickel and of the regular mushroom design. Valve port diameters are 1 21/32 in., the stems ⅜ in. diameter, length $6\frac{3}{16}$ in., lift $\frac{5}{16}$ in. and the valve seat angle 45 degrees.

Through helical gears off the camshaft a vertical shaft is driven which operates the ignition distributor at its upper end and the oil pump at the lower extremity. The pump gears formed of a steel driving and a bronze driven gear are carried



The 7-bearing crankshaft employed on the new "Imperial" engine. The two counterweights opposite each throw should be noted.

in a cast iron housing. A large round brass mesh strains the oil in the pressed steel pans before entering the pump. The general arrangement of the pressure oiling system is the same as on the smaller six, oil passing to the main bearings through an oil manifold drilled in the case. A unique feature is the oil return line which feeds back directly into the aluminum housing encircling the strainer. To cleanse the oil of impurities, a Purolator filter is located on the dash and is placed in the direct pressure line of the oiling system.

Camshaft bearings are oiled through a hollow passage in the camshaft while holes drilled through the lower end of the connecting rods to the crankpin allow oil to be forced to the cylinder walls and piston pin when the hole in the crankpin coincides with the orifice in the connecting rod. A separate lead carries oil to the timing chain. Other parts are lubricated by mist. A bayonet type of gage is employed to show the oil level which at the "full" mark indicates a seven quart capacity.

Distributor on Left Side

The distributor located in the center on the left side of the cylinder head is in a very accessible position. It is of the semi-automatic, double breaker type with a counter clockwise direction of rotation. The high tension wires pass through insulated ducts to the ⅞ in. 18 std. A.C. spark plugs. All four electrical units are of Remy make with the battery a 6-8 volt, 160 amp. hrs. Prestolite. Model designation of the various units are:

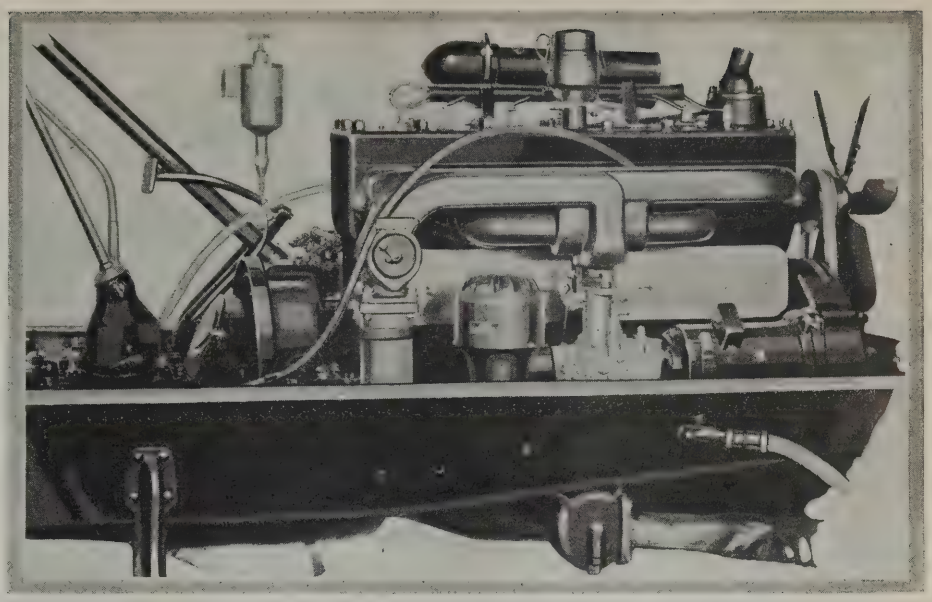
Distributor—732-A
Coil—525-B
Generator—945-B
Starter—732-A

Mounted on the left side of the flywheel housing, the starter can be quickly removed by the loosening of a single nut and stud. Engagement with the 124 tooth ring gear is through a 11 tooth pinion mounted on a sliding gear with an overrunning clutch. The generator is of the third brush type with thermostat control.

Both intake and exhaust manifolds are cast integral and follow the same design as on the smaller six only they are proportionately smaller.

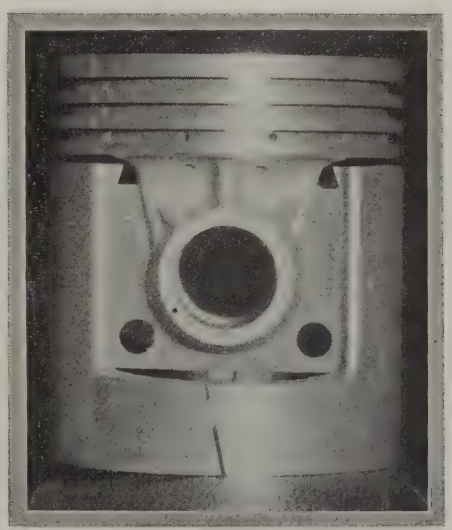
The carburetor, a specially developed Stromberg OX-3, is bolted directly through a top outlet to the intake manifold. Two of the more important developments are the providing of a knurled screw in which are marked eight settings enabling the driver to adjust his carburetor to suit the best driving conditions. The other device is a needle valve which automatically increases the fuel supply when the choke is raised. In addition a fumer or electrical heating device is installed in the bowl of the carburetor to facilitate starting in cold weather.

Water is circulated through the cooling system by a centrifugal pump attached by three bolts to the front of the cylinder block. On the other end of the shaft carrying the impellor is placed a six bladed fan of 16 in. diameter, the latter being carried on double row ball bearings in the same housing as supports the water pump. The entire unit is driven by a "vee" belt off the crankshaft, adjustment being compensated for by a movable flange on the fan pulley.



Right side of the power plant. The by-pass for heatiing the intake manifold when the engine is cold may be seen. The distributor on the top of the block and the air cleaner should be noted.

In many respects the clutch which is of the single, dry plate type follows closely the design employed in the Chrysler four. On both sides of the pressed steel clutch plate is basket weave friction material woven integral with the plate. Knurled nut adjustments are provided with spring locks to govern the pressure applied to the plate through the several coil springs. The radial ball throwout bearing is lubricated by a pressure gun attachment. At the forward end the pilot shaft is carried in a ball bearing in the end of the crankshaft while at the rear the main 1½ in. shaft is supported in a large roller bearing. There is a large inspection cover on the housing.



The new piston employed in the "Imperial" engine. The rectangular piece is made of Invar, a non-expansive steel alloy. This type of construction enables the aluminum alloy piston to be fitted to limits as close as .003 in. without damage to the bores.

Bolted directly to the bell housing, the gearset is of conventional design and provides the following ratios:

Low, 3.20 to 1
2nd, 1.81 to 1
3rd, 1.00 to 1
Rev., 4.06 to 1

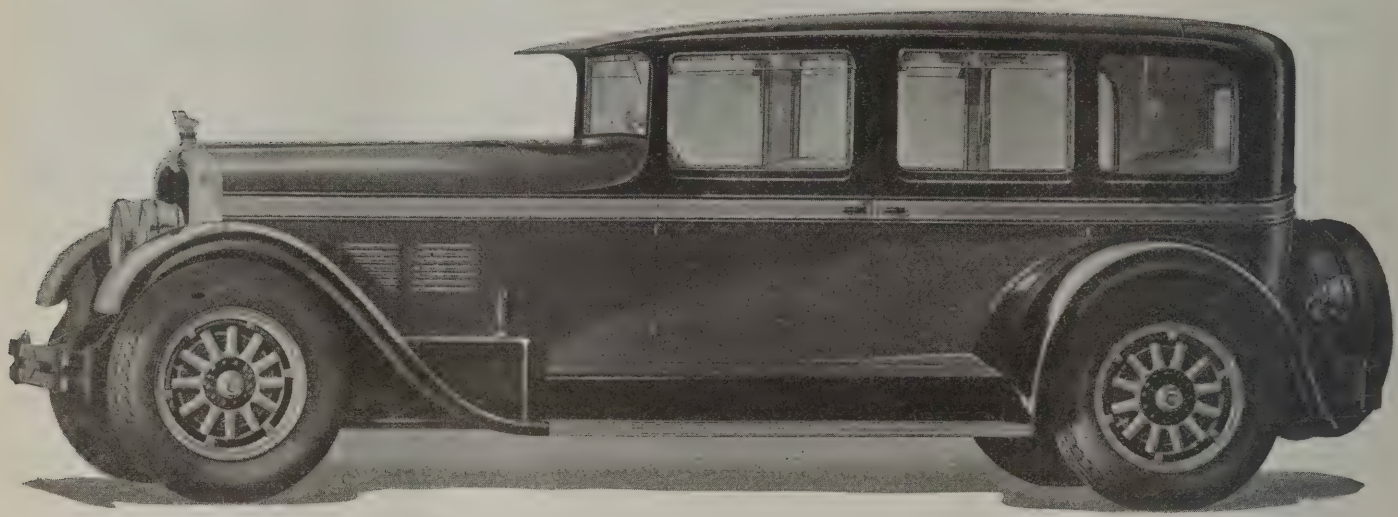
The main shaft is supported at the forward end in a roller bearing and at the rear in a plain ball bearing immediately behind of which is the drive for the speedometer. The counter shaft is stationary with the gear cluster carried on rolled bearings.

All gears are given a burnished finish. The emergency brake operates on a drum behind the gearset and in the lever mechanism is incorporated a compensating spring to prevent over travel of the ratchet and make the lower hard to operate. To give the front compartment a clean appearance, the brake lever protrudes through a conical and self contained opening similar to the gear shift lever. In addition, the rachet release rod passes through the center of the lever and operated through a button, The dimensions of the emergency drum are 8 in. diameter by 2⅛ in. wide giving a braking area of 49 sq. in. Thickness of the lining is 5/32 in. The gearset is specially made for the car by the Detroit gear Co.

At either end of the 2¾ in. diameter tubular propellor shaft is mounted a trunnion type universal joint. Final drive is through the Hotchkiss system. The rear axle specially made by the Timken company is of the semi-floating type and provided with two standard ratios for domestic use 4.27 and 4.63 to 1 and a 4.09 to 1 ratio for the export market. The drive pinion integral with the short shaft

(*Continued on page 23*)

NEW STUTZ REPLETE WITH UNIQUE MECHANICAL FEATURES



New Stutz five-passenger sedan, with double belt and distinctive hood and radiator lines.

By W. L. CARVER

THE coordination of a chassis and a power plant which are replete in unique mechanical developments with a line of bodies low and rakish, but still dignified and comfortable, makes the New Stutz Vertical Eight a most unusual car. No single feature stands out beyond any of the others, but all have been combined to produce well rounded, striking appearance, all-around performance and simplicity of maintenance.

That the make-up of the new Safety chassis is unusual is demonstrated best by a brief resume of some of its features.

The engine is eight-in-line with nine main bearings and an overhead camshaft which is driven by silent chain at the front end. Maximum h.p. is 92.

Rear end drive is through a Timken F. J. worm gear assembly with the worm undermounted.

Brakes which are fitted to all four wheels are the new Timken hydraulic type which require low operating pressure and have almost 360 deg. contact in semi-steel brake drums which are equipped with cooling fins.

Frame height amidship is just over 18 in., producing a floor board height above the ground of a fraction more than 20 in.

All chassis bearings are lubricated periodically from the engine by the Meyers reservoir system.

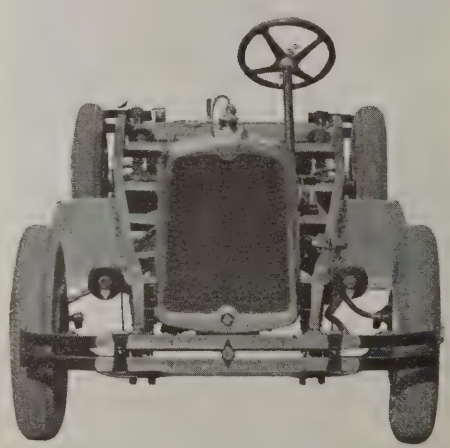
Although the wheelbase is 131 in., the car turns in a 24 ft. radius. Steering is by a Ross cam and lever gear.

Springs are unusually long and flexible and have been designed to coordinate with balloon tires. Front springs are shackled at the front and anchored at the rear.

Frame is 7¾ in. deep and reinforced by heavy tubular cross members and rolled steel flange running boards which bolt directly to outer faces of side members.

Bodies in themselves represent no radical departure from the conventional, but when coordinated with the chassis produce a striking combination. The maximum overall height of the entire line of bodies is 70 in. and a man of ordinary height standing on the curb can see clear over the top. Although the overall height is strikingly low, head room has not been skimped and is as liberal as that of the most conservative body. The seat level when on the road is approximately 30 in. above the pavement, leaving about 39 in. headroom. Liberal leg room is found in both front and rear compartments of all bodies.

Windows and doors are wide and particular attention has been paid to the vision of the driver as well as the passengers. All windows at the sides are fitted with plate glass eaves which provide ventilation without draft and interference with vision.



Front view of chassis of new Stutz.

That the characteristics which have been high-spotted in the foregoing paragraphs are reflected in the performance of the car has been demonstrated by a representative of this publication. Several laps were driven around the Indianapolis track at an average time of two min., which is equivalent to 75 m.p.h. Acceleration from 5 to 25 m.p.h. required 6.5 seconds and from 10 to 40 m.p.h., 10.6 sec. From 20 to 60 m.p.h. required 17 sec. At 60 m.p.h. the car shows a terrific punch and can be taken to 75 m.p.h. like a racing job.

However, this performance was overshadowed by the characteristics of the car on the road. In a half-day's drive in rain over brick pavement, asphalt and gravel, the car was driven at speeds as high as 65 m.p.h. with no feeling of danger. The brakes were applied at speed on the straightaway and in turns with no skid. Short turns in gravel were entered at speeds of better than 50 and the brakes were thrown on hard before the steering wheel was thrown over with no perceptible skid or roll. A winding clay test hill, with maximum grade of 20 per cent, which was extremely muddy, was approached at 10 m.p.h. and negotiated in record time with no feeling of lugging. The combination of smooth liberal engine power, low center of gravity, balance, and sweet brakes is responsible for this performance.

Six Body Types at $2,995

Six body types, all priced at $2,995, are supplied on the new chassis. All models are equipped with shockproof windshields in which wires running transversely about 2½ in. apart are

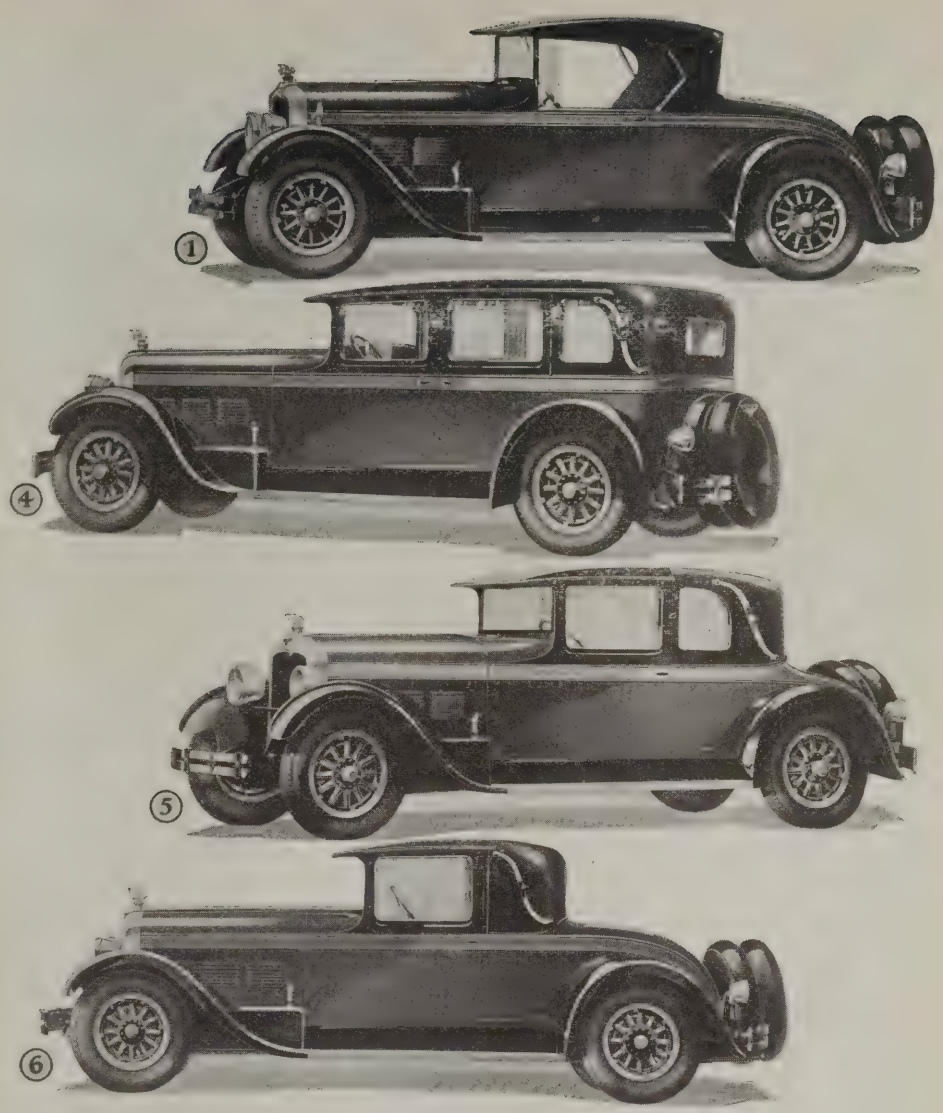
Some Details of New Stutz

Price	$2,995
Wheelbase	131 in.
Cyl. bore and stroke	3 3/16x4½ in.
No. cylinders	8
Piston displacement	287.27 cu. in.
N. A. C. C. h.p. rating	32.52
Compression ratio	4.8 to 1
No. main bearings	9
Tires	32x6.20 in.
Springs (rear)	62x2¼ in.
Springs (front)	38x2¼ in.
Rear axle drive	Worm gear

placed in the glass as it is made. With this construction it is practically impossible to dislodge jagged fragments of any appreciable size, nor can stones or other materials ordinarily encountered on the road pass through the windshield. All bodies are fitted with dual rear vision mirrors and Folberth windshield cleaners. Electric cigar lighters on extension cords are carried on the instrument boards. An auxiliary trouble lamp is clipped back of the instrument board and can be fitted to the cigar lighter socket. A push button switch locks the retracting spring of the lighter cord at will.

Instruments are grouped on an elliptical panel on the dash and are protected by a single glass with interior illumination for night driving. The top of the panel is decorated to correspond with the characteristic radiator. Instruments comprise a Stewart speedometer, a Phinney Walker clock, a Grolan gasoline gage and an engine therometer, ammeter and oil gage, all made by the National Gauge and Equipment Co. The carbureter choke control and push button ignition switch are installed symmetrically with the instrument panel. Upholstery in the open cars is hand buffed leather dyed to harmonize with the body finishing scheme. Closed cars which are fitted with smoking and vanity sets are upholstered in Laidlaw No. 1390 cloth with Chase mohair optional at increased price. Here again the interior color scheme harmonizes with the exterior finish.

Steering wheels in all models are 18 in. dia., and both rim and spider are made of solid walnut. In addition to the usual short levers for ignition and carbureter control and the horn button, another longer lever at the head of the steering column controls the lighting circuit, being connected through the interior of the column to a switch box which is located on the steering gear housing. Several positions on this switch provide proper lighting for all conditions. Nickel plated Brown headlamps provide long and short driving beams and parking lights. At the rear a combination tail, stop and reverse lamp harmonizes with the headlamps. Gear and handbrake levers are long and convenient to the wheel and a hinged strap type of accelerator pedal is used.



Four of the six new Stutz body styles. Fig. 1 is the two-passenger speedster; Fig. 4 the five-passenger brougham; Fig. 5 the four-passenger victoria with offset driver's seat and auxiliary folding seat; Fig. 6 the two-passenger coupe with rumble seat and adjustable rear window. Road clearance is 8 in. on all models.

Nickel plated shells are fitted to the Fedders radiators and the cap, which also is nickel plated, carries a distinctive emblem. Double bar nickel bumpers are used at the front and bumperettes at the rear. These do not require the usual mounting brackets, as provisions for their direct mounting have been made at the spring horns. At the rear a pressed steel tire carrier with screw and lock adjustment for the reception of the tire is carried by substantial brackets.

General appearance is rounded out by artillery type wheels finished in natural wood. Visors are integral with both open and closed tops, being extensions in either case. Roof lines are curved slightly over the top to harmonize with the low, flowing lines. All bodies are finished with a double belt as shown. The beads are lacquered black with a red hair-line stripe. Pyroxylin enamel finish is used over the entire body, while black bituminous enamel is used on fenders, splash guards and running gear. Superstructures of all closed bodies are finished in black pyroxylin enamel.

Description of Bodies

Bodies with their color schemes and special equipment are listed as follows:

Two-Passenger Speedster. Fitted with rumble seat for two passengers and golf bag compartment. Top including integral visor with natural wood bows and nickel fittings folds back and top boot is regular equipment. The rear curtain can be taken out entirely and top can be detached easily. Windshield frame is nickel plated and carries windshield wings. In addition to the rear view mirror on the windshield, a circular mirror is mounted on the left fender. Sea fog grey and ocean blue form one two-tone combination, another is light chicle drab and copra drab, while the third is light sage green and dark sage green.

Four-passenger speedster. General specifications are the same as those for

the preceding car and the same color schemes are used. Of course no rumble seat and golf bag compartment go with the two seater job. An added bit of standard equipment is a rear compartment cover or storm apron which attaches by means of snap fasteners.

Five-pasenger sedan, and Brougham. The general make-up of these two bodies is much alike, the exception being the leather rear quarter top irons and D-shaped windows in the brougham which replace the standard rear quarter window in the sedan. Equipment which is otherwise standard includes smoking and vanity sets and cord robe hanger. Two-tone color combinations are Bambalina blue and Algerian blue in one case and the combination of Plymouth and Buckingham gray for the other.

Victoria coupe. A four-passenger body with the conventional individual driver's seat and auxiliary seat which folds under the instrument board. There is room in the rear deck for golf clubs on the left side. Top has leather rear quarters, ornamental top irons and D-shaped rear windows.

Two-passenger coupe. Has a single cross seat which is wide enough to accommodate three people comfortably. Rear quarters are leather fitted with top irons and no window. A rumble seat finished in black leather accommodates two extra passengers and the rear window lowers to afford communication with the interior of the body.

Following are the color schemes in which the two last named body models can be obtained:

Kensington grey, light and Wellington grey, dark.

Palmetto green, light and Tarragon green, dark.

Chicle drab, light and Copra drab, dark.

Green, light and green, dark.

Cobalt blue, light and dark blue.

Sage green, light and sage green, dark.

Wire wheels are optional equipment on all models at an additional cost. All windshields are one piece and can be swung forward for additional ventilation although cowl ventilators are standard equipment.

Worm Gear Is Undermounted

Before entering the detailed description of the mechanical units it will be well to refer to Fig. 7 which illustrates the manner in which all of the units have been coordinated to produce the striking low appearance with more than liberal head room. Three major factors are responsible for this combination. The first is the worm drive axle which with the undermounted worm drops the rear end of the propeller shaft 5¼ in. below its location with the ordinary bevel drive axle. Furthermore the distance from the center of the axle shafts to the top of the worm gear housing is 4$\frac{13}{16}$ in., which is about 2 in. less than that of a bevel drive axle of the same capacity. This difference plus the characteristic shape of the two axle housings allows the rear seat to be lowered at least three in. below the ordinary relationship.

With the lower propeller shaft, a straight line drive in the loaded position drops all of the elements of the transmission line below the usual relationship to the wheel centers. This fact with a special gear box cover which reduces the height of that assembly by 1¼ in. has permitted the frame and floor board lines to be dropped well below the minimum height established by the usual arrangement. It will be noted that the bell housing is accommodated by the space below the inclined toe boards in the front compartment.

In order to take full advantage of these possibilities the frame is built with a double drop. The amidship section from the dash to a point just ahead of the rear seat pedestal is 18 in. above the ground in the loaded position. The frame has a long inclined drop of between 4½ and 5 in. in the section between the front axle and the dash while the kick-up at the rear axle is more than 7 in.

92 Horsepower Maximum

As illustrated by Fig. 8, 92 h.p. is the maximum developed by the engine at 3,200 r.p.m. Cylinder bore is 3$\frac{3}{16}$ in. and the stroke is 4½ in. Maximum torque is approximately 193 lbs. ft. at 1,400 r.p.m. With eight cylinders of these dimensions, the displacement is 287.27 cu. in. and the N. A. C. C. rating is 32.52 h.p. The compression ratio is 4.8 to 1.

Monobloc construction is used for the cylinders and these with the upper half of the crankcase are a single iron casting. Added rigidity is secured by parting the crankcase well below the centerline of the crankshaft with a liberal flange all the way around the joint. In addition to these provisions, the seven intermediate main bearings are carried in T-flanged bulkheads which contribute materially to the lateral and vertical rigidity of the unit. The bell housing is cast integrally with the cylinder block.

Main bearings of the crankshaft are 2½ in. dia. from end to end, and are carried in shimless interchangeable bronze back babbitt bushings of the full contact type.

Effective length of main bearings is as follows:

Front	3$\frac{17}{32}$ in.
Center	1$\frac{11}{16}$ in. including fillets
Rear	2⅝ in. including fillets
Intermediate	1$\frac{3}{16}$ in. including fillets

The dia. of the connecting rod bearing is 2⅜ in. while the length is 1⅜ in. Oval cheeks are used at each crank throw and the entire shaft is machined all over. The crank arrangement is 2-4-2 so that the two throws at each end constitute one four cylinder crank and the middle four form another four cylinder crank. This arrangement eliminates any unbalanced couple. Due to its form the shaft is in inherent dynamic and static balance. Crankshaft material is S. A. E. 1045 steel.

Main bearing caps are cast iron. The front and rear are retained by four $\frac{7}{16}$ in. dia. studs while two ½ in. studs are used at the center cap and two $\frac{7}{16}$ in. dia. studs are used at the six intermediate caps. All of these studs are 3½ nickel steel alloy. The rear cap construction includes the oil seal for the crankcase compartment with a slinger well and drain.

Connecting rods are duralumin alloy and are 9¼ in. long between centers. S. A. E. No. 10 white metal is cast centrifugally into the lower end on a tin bond. Bearing caps are retained by two $\frac{7}{16}$ in. dia. chrome nickel steel bolts. The complete rod assembly weighs just over 30 oz. and the shank is H-section. In the upper end of the rod a bushing of S. A. E. No. 62 bronze is press fitted. The effective dia. and length are ⅞ and 1⅜ in. respectively.

No screw retainer is used at the piston pin which floats in both rod and piston. Bearing in the bronze bushing at the head of the rod and the two cast iron surfaces in the piston is distributed equally and Tobin bronze plugs are inserted in the pin ends to permit floating without scoring the cylinders. Pins are made of S. A. E. 1020 steel, case-hardened, ground and lapped. The piston bearings are reamed and the bronze bushing in the rod is fly-cut.

Pistons are cast iron of a high steel mixture and are somewhat unusual, as the pin bearing is located midway in the bearing portion of the skirt, the three-ring band being only an auxiliary portion which serves the purpose of sealing the cylinder. Piston walls are full cylindrical and 3/64 in. thick with an eccentric ground clearance at the pin ends. Perfect circle rings of ⅛ in. width are fitted in all three grooves and the excess oil which collects at the lower ring is delivered to the pin bearing by two parallel shallow grooves milled vertically at each end of the eccentric clearance area at the pin ends. Pistons

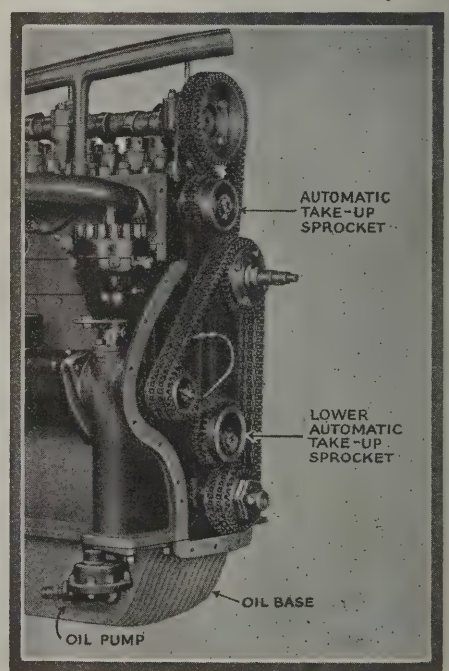


Fig. 10. Arrangement of chain drive for overhead camshaft in new Stutz engine.

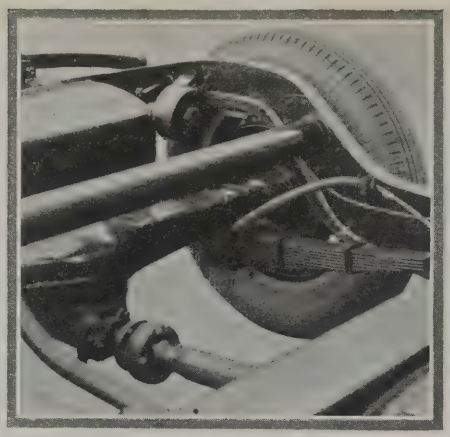
are ground flat over the top. The weight of a complete piston and rod assembly is 59 oz.

Cooling Fins on Crankcase Pan

The interior of the engine viewed with the crankcase pan removed, as illustrated by Fig. 9, is remarkably clean, as only the crankshaft and reciprocating assemblies are contained in this portion of the engine. Cast aluminum is used for the crankcase pan which is 5 in. deep, with 14 longitudinal cooling fins cast on the bottom exterior. Splash bars are cast in, and the sump is formed by bolted-in sheet metal plates. A tubular screen of .014 bronze wire, 20 mesh, protects the pump intake. The balance of the lubricating system will be described later. As the sump is 5 in. deep and is bolted to the lower crankcase flange which is located 2¼ in. below the crank center, the total depth of the crankcase is 7¼ in.

One of the most novel features of the new engine is the silent chain drive to the overhead camshaft. Two Link-Belt silent chains are used, both of ⅜ in. pitch. The lower chain, which also drives the accessories shaft, is 1½ in. wide, while the upper chain is 1⅜ in. wide. Thirty teeth are cut in the sprocket which is attached at the front end of the crankshaft. From this sprocket, the chain passes over a Link-Belt patent adjustable idler having 25 teeth and then around a 25 tooth sprocket on the front end of the accessory shaft which is located at the right side of the engine. Finally the chain passes over the 36 tooth front sprocket of the transfer shaft and thence back to the crankshaft sprocket.

In the upper train, the drive starts at the 27 tooth rear sprocket of the transfer assembly and the chain passes over another automatic tightener having 27 teeth and then around a 45 tooth sprocket on the front of the camshaft and then back to the transfer sprocket. With this arrangement all shafts when viewed from the front run in a clockwise direction and the drive to the camshaft is transmitted through the two vertical sections of the chains with the idlers located on what would otherwise be the slack side. All sprockets are hardened



Stutz rear axle showing worm gear housing and mounting of springs below axle.

as are the various components of the chain assemblies. Each of these chains is stretched and then bench tested for alignment and silence before leaving the Indianapolis plant of the Link-Belt Co. Links instead of being simply the product of a stamping operation are first blanked and then shaved to true contour. All of the sprockets are produced in the same plant.

How Idlers Take Up Slack

Spiral springs take up the slack at the idler sprockets and a locking device adjusts the position of the eccentrically mounted idlers to each stage of chain wear, thus preventing any possibility of chain slap. Idlers as well as the transfer assembly are carried on heavy studs which are fixed in either the crankcase or cylinder head. The transfer assembly is lubricated by high pressure from the main oil line and the bearing combination is phosphor bronze on hardened steel. A flange shaft which bolts on the front of the transfer assembly drives the six bladed 16½ in. dia. fan through a friction clutch.

Analysis of the front end drive reveals that only the crankshaft and camshaft run at speeds which are integral multiples or possibly harmonic. The accessory shaft is driven at 5/6 crankshaft speed while the transfer assembly rotates at 11/5 crankshaft speed. This arrangement eliminates any chance of harmonic periods of vibration. It is stated that the combination of a heavy, well supported crankshaft, silent chain drive with the cushioning or absorbing effect of the idlers and the varying speeds of the front end, has nullified the question of torsional vibration. No period was found upon careful check on the track at any speed from 5 to 75 m.p.h.

Four bolts secure the camshaft sprocket to a flange at the front of the camshaft. These bolts are spaced at equal angles and therefore in combination with the 45 teeth allow very close adjustment of the angular relationship of the cam to the crankshaft. In fact this sprocket is removed when the valves are to be ground and re-assembly is not governed by marks on the sprockets but by setting the camshaft for dead center position of the crankshaft. Auxiliary covers at the front of the cylinder head and cover facilitate this work and keep the time of the service operation down.

Five phosphor bronze pedestals provide the supports and bearings for the camshaft. The dia. at the front bearing is 2⅜ in. and length 1$\frac{9}{16}$ in. while the dia. and length at the other four are 1½ in. and 1¼ in. respectively. Bearings are situated between each group of two cylinders. The barrel dia. of the camshaft is 1½ in. and the shaft is rifle drilled from end to end and then the ends are plugged. S. A. E. 1015 steel of a special forging quality is carburized and hardened at the bearing and cam surfaces. Radial oil holes are drilled at each camshaft bearing, the oil intake being at the front pedestal and the outlet to the rectifier at the rear pedestal.

Cams Automatically Lubricated

As illustrated by fig. 11 each cam is fitted with a special lubricating device which eliminates the possibility of stoppage when small metering holes are used. At the heel of each cam a hole is tapped into the interior drilled oil passage. Into this tapped hole, a small special bronze fitting is threaded and staked. This bronze fitting carries a bronze pin which is .004 in. smaller in dia. than the hole in which it operates. Due to the combination of centrifugal force and the oil pressure within the shaft, this pin is held in the outer posi-

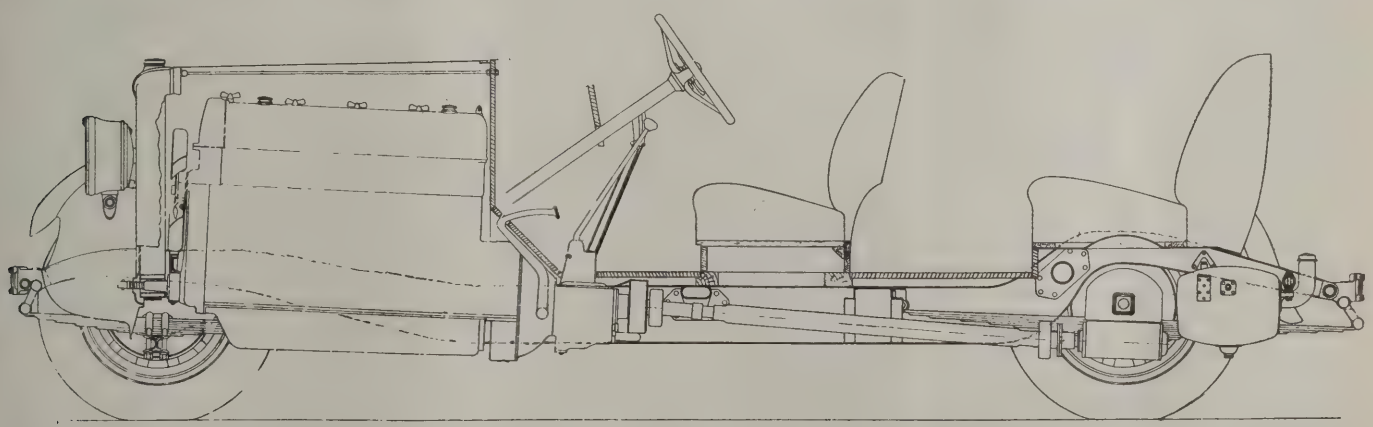


Fig. 7. Side elevation line drawing of new Stutz chassis illustrating advantages of coordinating worm drive axle, straight line drive and double drop frame.

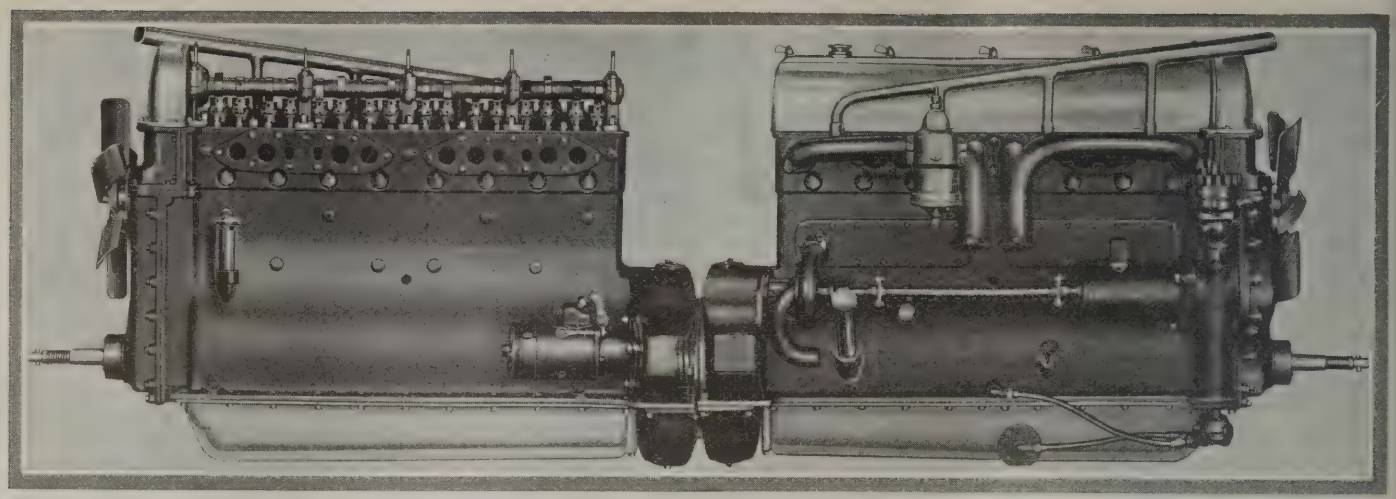


Fig. 12 (left). Left side of Stutz engine showing general overhead arrangement and porting.
Fig. 13 (right). Right side of engine with valve housing cover in place.

tion except when it is forced inwardly as the heel of the cam passes over the valve lifter nut. The reciprocating action which is set up is self cleaning and the desired amount of oil is carried out in the joint between the pin and the fitting. A small cross pin in the inner end retains the metering pin when in the outward position.

Due to the metered supply of lubricant which is supplied to the wiping surface of the valve operating nut no perceptible noise is set up at this point, although the clearances are unusually large. The clearance at the intake valves is .032 in. while the exhaust clearance is .028 in. Little or no noise is produced at fairly high speeds even when the cylinder head cover is removed. Intake and exhaust cams have the same contour and are ground from the same master cam, the lift being $\frac{11}{32}$ in., and the valve timing is approximately conventional.

Ignition Is Dual

Cast iron is used for the cylinder head which is unusually deep. The cylindrical combustion space which is somewhat larger than the cylinder bore is machined in the lower face of the head and 16 valves are set in a row on the longitudinal centerline of the engine. Valves are ported individually with eight intake openings on the left side and eight exhaust openings on the right side. Four small auxiliary exhaust ports which connect with those of cylinders 2, 3, 6 and 7 come out at the left side of the head to provide heat for the intake manifold. As ignition is dual, metric spark plug holes are tapped at an angle near the base.

As illustrated by fig. 11, the clear dia. of the valve ports is $1\frac{7}{16}$ in. and the angle of the valve seat is 45 deg. Valve heads have a modified tulip shape and the stem dia. is $\frac{3}{8}$ in., the material being chrome silicon alloy. Valve stems are centered in pressed-in cast iron guides, and the upper end, which is threaded to S. A. E. $\frac{3}{8}$ in. 24 pitch to receive the valve operating nut and piston, is guided by the latter unit in a cast iron sleeve that is piloted and bolted to the upper face of the head.

As illustrated, the valve stem nut is relieved on the outer dia. while the piston is ground to $1\frac{1}{2}$ in. dia. and has a length of $\frac{7}{8}$ in., which provides adequate bearing surface to withstand the side thrust of the cams. Eight cross holes are drilled in the barrels of both parts to provide means for valve clearance adjustment. Also one side of the guide is cut out to provide access to the holes in the valve piston. With this arrangement, two short rods of about $\frac{3}{16}$ in. dia. constitute the tool equipment for valve adjustment. The oil which is distributed by the camshaft over the top of the nut supplies lubrication. Much of this is skimmed off by the bevel end at the top of the upper guide and the remainder passes down the bearing surfaces at the large dia., which keeps it off the valve stems. The seat for the valve stem guide is a milled trough running almost the full length of the head. Drains back to the crankcase are provided at each end so that only fog reaches the valve stems. Valve springs are of liberal length and exert a pressure of 40 lbs. when the valve is closed and 90 lbs. in the open position.

The general appearance of the overhead layout is illustrated by fig. 12, and the aluminum valve housing cover is shown in place in fig. 13. Two vents are placed in the top of the cover which is secured by five wing nuts and studs. The auxiliary covers at the front end also are shown by fig. 13.

Dual Manifolding System

Fig. 12 also shows the porting on the intake side of the engine with the four auxiliary exhaust passages. A Swan dual manifold and a $1\frac{1}{4}$ in. Zenith duplex-SV5D carbureter are used here. In this arrangement the center group of four cylinders which are equivalent to one four cylinder engine are supplied by the inner half of the carbureter and the inner portion of the swan manifold. Similarily, the pairs of two cylinders at each end of the block which are equivalent to another four cylinder engine are supplied by the outer half of the carbureter and a separate manifold arrangement. No connection between the two manifolds occurs at any point. In the carbureter a single float chamber is used but beyond that point the effect is that of two individual carbureters except that both butterfly valves are on a single stem.

Heat is applied at a throat just below the branch sections of the manifold. At low speeds the exhaust surges back and forth through the heating chamber around the throat while the great volume of exhaust gas at high speeds and the rapidity of sequence of exhaust valve opening tend to create a dead end at the heating chamber. Therefore more heat is delivered at low than at high throttle openings.

Oil Pump Is Accessible

Fig. 13 illustrates the installation of the balance of the auxiliaries at the right side of the engine. As shown, the exhaust manifolds for the front and rear sets of four cylinders are separate and have individual exhaust pipes extending down to the junction with the horizontal pipe which connects with the A. C. muffler. The junction of the three pipes is in a cast fitting having a detachable lower cover for the purposes of engine tuning. This arrangement eliminates the exhaust surging which occurs when a single exhaust manifold is used on an eight-in-a-row engine. The rear exhaust manifold carries a Wall rectifier which distills the impurities out of the crankcase lubricant. This rectifier, the invention of Col. Guy Wall, draws its supply from the low pressure line at the rear end of the camshaft and discharges the rectified oil to the sump. Volatile vapors and steam are returned to the intake manifold, while carbon and dirt are separated out of the hot oil by a much finer filter than can be used with cold oil.

A vertical tubular extension in the wall of the crankcase which is just back of the timing gear cover flange provides the location for the oil pump and distributer head. It will be noted that every auxiliary unit on the entire engine

has an external, easily accessible location and that any one unit can be removed by withdrawing two or three nuts or bolts without disturbing any other.

Two contact arms and a four-lobed cam are used in a Delco No. 5296 distributer which is controlled by both manual and automatic advance. Eight high tension wires are carried in a two-piece pressed steel manifold of gradually decreasing section at each side of the block. The coil is Delco No. 2191. No fuses are used at any place in the electric system, as a circuit breaker is installed on the dash. Three-bolted flange mounting is used for the Delco No. 333 generator.

Relatively wide gears are used in the oil pump to assure liberal oil supply at all speeds. Oil is drawn from the tubular screen inside the engine pan by an external copper tube line and is delivered by a similar line to a connection located in plane with center bearing just above the lower crankcase flange. From this point the oil passes through an inclined drill hole upward to another large hole which is drilled the full length of the block. Drilled holes connect this passage with each of the main bearings and drilled holes from all but the front and rear bearings connect with the connecting rod throws, two holes communicating with the center main bearing. Cylinder wall lubrication is by splash from the crank throws.

Stainless Steel Water Pump

Supply to the camshaft is delivered by a hole drilled vertically through the cylinder block and head and indexing with a hole in the front camshaft bearing pedestal. Small drilled outlets from this vertical passage supply oil to the idler, intermediate and accessory shafts. Camshaft lubrication already has been described. The surplus oil which leaves the rear end of this shaft passes down through the rear bearing pedestal and out to the chassis lubricating by-pass and the rectifier. The oil pressure regulator is shown just below the water pump propeller shaft in Fig. 13 and the oil filler and bayonet gage are close by.

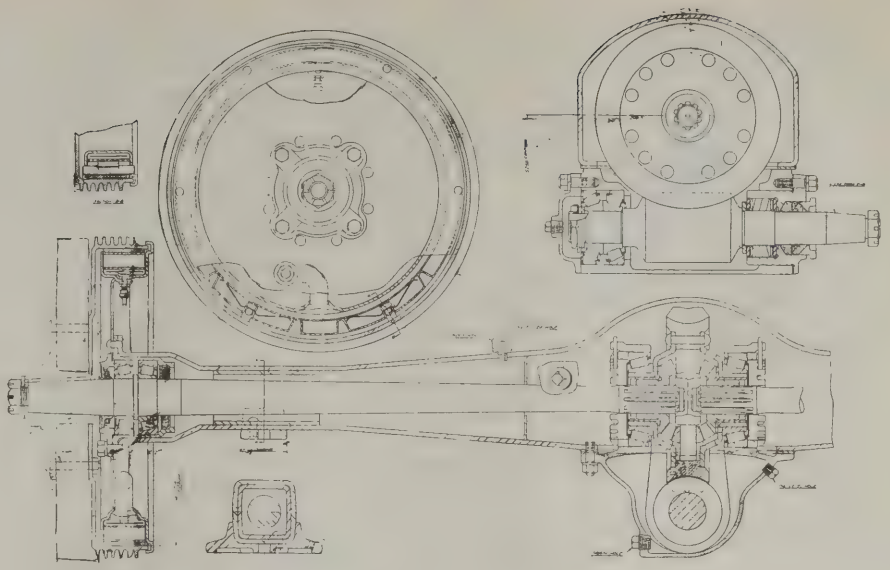


Fig. 14. Cross section of Stutz worm driven axle and new hydraulic brakes.

From the rear of the generator shaft a balanced propeller shaft and universal joints drive the water pump shaft which is stainless steel with a single knurled packing gland for manual take-up, no wrench or other tools being required. The pump is carried on the bell housing symmetrically with the starting motor. A long steel tube and two hose connections connect the pump intake with the bottom tank of the Fedders radiator while a short hose connection leads to the rear of two cover plates which are bolted to the side of the water jacket.

A flange at the rear end of the crankshaft carries a semi-steel flywheel of $12\frac{3}{16}$ in. rim dia. Hardened steel is used for the starter gear which is shrunk over the flywheel and has 117 teeth, 8-10 pitch and $\frac{1}{16}$ in. width of face. Within the flywheel is a 11 in. dia. Borg and Beck push type clutch which drives the clutch shaft through ten splines with a 205 annular pilot bearing. The throwout bearing is a graphite bronze shoe which contacts with the polished cast iron throwout ring on the clutch.

Design of the gear case is largely conventional, although through the use of a pressed steel shifting gate assembly, the height of the cover has been reduced 1¼ in. below anything made previously by the Detroit Gear and Machine Co. The upper shaft assembly is mounted on annular ball bearings while the pilot bearing and lower bearings are Hyatt rollers.

The hand or parking brake is mounted on the tail shaft of the gear set and controlled by a direct connected face cam. Diameter of the brake drum is 6½ in. and the width of the anti-friction lined brake band is 2¼ in.

Oiltight Mechanics universal joints are fitted to each end of the alloy steel tubular propeller shaft which is in line with the worm shaft and power plant when the car is loaded normally.

Features of Rear Axle

Two striking features are incorporated in the new rear axle. The first is the adoption of the worm drive and the second, the use of low pressure hydraulic brakes which use anti-freeze solution and develop almost complete peripheral contact. The worm drive axle was attempted by a few American cars about twelve years ago and discarded. However the tooth form of the new worm represents a vast departure from the worms of that day. In the present axle, a spiral Timken tooth form has replaced the involute form which was first introduced.

As illustrated by Fig. 14, the one piece malleable worm and gear carrier is the only cast part on the entire axle not counting the brake drums. The worm gear is special bronze and the worm is hardened alloy steel ground and polished. This assembly is fully reversible and reductions of 4¾, 5 and 5¼ to 1 are available for cars of various weight and speed characteristics.

At the rear of the worm shaft, two Timken bearings are placed back to back in a capped enclosure to take all of thrust in either direction and a portion of the radial load. At the front, a high

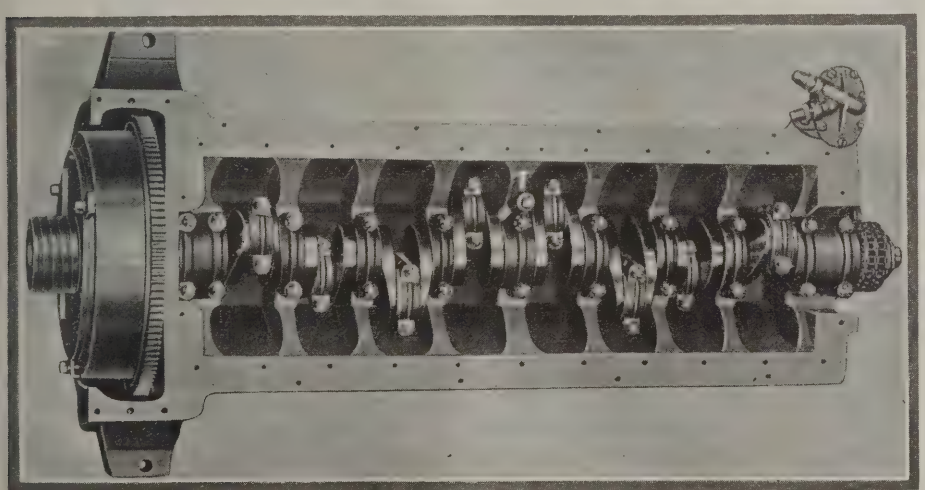


Fig. 9. Interior of crankcase which contains only crankshaft and reciprocating assemblies. Also shows clutch and oil pump.

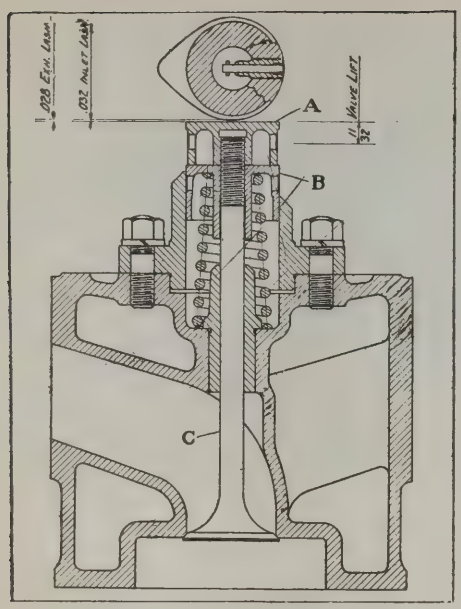


Fig. 11. Cross section through Stutz valve passage show operating assembly and oil metering device in heel of cam.

duty Hyatt bearing carries the balance of the radial load and is located just back of a stuffing gland.

Pressed steel is used for the one piece axle housing which has a substantially square section, being fitted with welded-in lubricant dams near the differential and reinforcing sections inside of the spring pads.

At the outer end of the axle shaft, two Timken taper roller bearings are opposed at each side of a turned flange and carried in a riveted-in carrier which is closed by a bolted cap, thus relieving the differential of all side thrust loads. Packing glands are placed at both sides of the wheel bearings. Stamped steel brake carriers are secured to the axle housing by the same rivets as secure the wheel bearing enclosure. Twelve-spoke heavy artillery type wheels are mounted on a taper at the outer end of the axle shaft. Tires all around are six ply 32x6.20 in., mounted on 4½ in. Firestone rims.

Brakes of Unusual Construction

A channel shaped brake holder of pressed steel is welded to the flanged carrier. An inner flange projects out and over the inner end of the brake drum to afford complete enclosure. Beginning at this point, the braking system is a striking departure from any existing practice. A heavy rubber tube resembling a small dia. inner tube is carried in the bottom of the channel and is equipped with an integrally formed length of heavy rubber hose which includes a molded elbow. This hose connection with its elbow passes through a hole at the bottom of the brake holder and connects with the copper tube braking line on the chassis. At the top of the holder another hole is formed through which a bleeder valve passes. This valve resembles an ordinary tire valve in appearance and also is moulded with the tube.

Outside of the tube are placed six sectional shoes of pressed steel as shown by Fig. 14. Each of these comprises an inner circular shoe which contacts with the expansion tube and an outer corrugated strip which is welded on to form the circular base for the brake liners which are attached by copper rivets. Six pins of ⅜ in. dia. retain the shoes in their proper radial location and in conjunction with the flat springs shown, retract the shoes to the inner position when the brakes are released.

Brake construction is identical for all four wheels with the exception of a slight difference in carriers at the front and rear wheels. Connected with the brake pedal is a piston of about 3 in. in dia. Contrary to the usual custom, this piston does not operate directly in a close fitting cylinder with the usual ring or gland equipment. In this case the piston is carried in a cylindrical guide which serves that purpose only and the rear head of the piston bears against a closed rubber bag which is contained in a chamber to the rear of the guide cylinder. Here again the outlet elbow which connects with a combination filler, shut-off and overflow valve is molded integrally with the master rubber bag.

Brake System Completely Closed

Thus the entire brake operating system is a closed system, as the connection at the master bag joins the tubular system which connects with the four brakes. No piston and cylinder joints occur anywhere and the system requires but one filling of anti-freeze solution, following which air is bled at the valves on the expansion tubes. Maximum pressure developed in the system is about 40 lbs., and equalization takes place between not only the four wheels but all of the 24 segmental shoes.

The front axle is the usual I-section forged steel with a relatively deep drop at the center to accommodate over mounted springs, each of which is secured by two U-clips. The axle sections outside incline upward to the king bolt bosses at a sharp angle which is of value in absorbing front wheel braking strains. Reversed Elliot construction is used and the king pin is secured in the boss on the axle. Bronze bushings of $\frac{13}{16}$ in. inside dia. which are pressed in the ends of the yoked knuckles bear on the king pins while the vertical load is carried on a ball thrust bearing. Brass screwed caps close the king pin ends and lubrication is provided by a Myers wick-feed reservoir. King pins are inclined outward at 6 deg. to produce practically center point steering in conjunction with a 2½ deg. camber at the wheels.

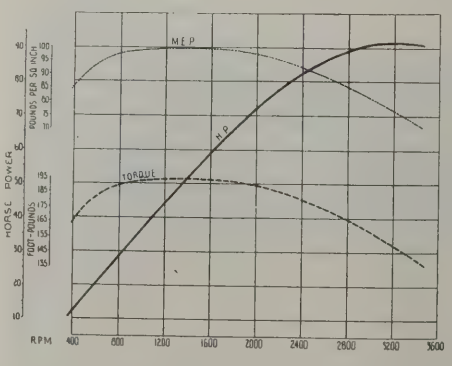


Fig. 8. Power curve of new Stutz engine. Maximum of 92 h.p. is obtained at 3,200 r.p.m.

Hardened steel ball studs are used for the steering system and the ball seats are Timken type which provide practically 90 per cent contact. No cushion spring is used back of the ball seats but shims determine the relationship and and a light spring is provided to prevent the rattle which would otherwise accompany the required mechanical clearance. The cross tube is one-piece tubular construction with hardened steel inserts in the expanded ends. The middle portion of the tube is utilized as an oil reservoir of large capacity and wicks convey the oil to the ball joints. With the drag link, a Ross cam and lever gear completes the steering system.

Five tubular and two channel cross members insure unusual rigidity of the frame.

Front spring horns are joined by a 1½ in. dia. tubular member, while two 1¾ in. dia. tubes connect the rear horns. Just ahead of the rear axle, another tubular member of 3¼ in. dia. has welded flanges which are riveted into the bottoms of the side channels. Another tubular member of the same dia. and with similar flanges is arched and flattened at the center to clear the propeller shaft just back of the transmission brake. A rolled steel channel member carries the radiator and front engine support and is bolted in to permit removal when the engine is to be lifted out of the chassis.

The rear springs are undermounted on the axle in a rigid fastening and are located inside of the frame side members. Brackets including Myers reservoirs are riveted on the back of the heavy intermediate cross channel and the spring eyes all around are bronze bushed. Shackles at an angle of nearly 45 deg. are placed at the rear ends of the rear springs and here again reservoirs are cast in the spring horns. Rear springs are 62 in. long and 2¼ in. wide and are made of chrome vanadium steel, the number of leaves varying from 10 to 14.

Front springs are made of the same material and have the same width as those at the rear, the length being 38 in. The number of leaves varies from 10 to 13 depending upon the type of body.

The drop at the front end of the frame is concealed by box shaped dust pans and a splash guard is fitted to the front cross channel. Watson Stabilators are fitted as standard equipment all around with those at the rear attached inside of the side members. The battery is located under the left end of the front seat with the tool box on the right side. A Prest-O-Lite battery of 160 amp. hrs. is standard equipment.

BILL FIXIT STORY No. 14

PREVIOUS installments in this series by A. H. Packer were published March 19, April 2, April 16, May 7, May 21, June 18, July 30, August 13, September 3, September 24, October 22 and December 10, 1925.

SYNOPSIS: Bill Fixit's electrical trouble shooting men start on a trip in a Speedway car. They stop at various places along the way and in a mining community are robbed of all their money. This necessitates getting a job with the local electrician, to whom they give some helpful information gained in working in Bill Fixit's garage. Directional radio is used by government agents in locating a gang of crooks and the boys' money is recovered. The trip is continued and the night after leaving the mining town they stop with Barney Oldfield Smith, an amateur race driver and help him with a magneto job, where a new condenser is needed. The condenser is obtained from Bill Fixit's electrical station, but in the meantime Valvy discovers an old radio set, and the Red Head engineers a trouble shooting job on the set and restores it to its original usefulness. After recovering from the excitement of getting the radio set to working they settle down on magnetos again and give Barney some good pointers.

Overhauling the *Magneto*

The Red Head Brings Out Some More Points That Are Sometimes Overlooked in Working on a Repair Job

By A. H. PACKER

"SOMETHIN'S gotter be done," roared the Burley One, leader of the gang, as followed by his three road workers he stamped into the superintendent's office.

The superintendent received them in his usual suave manner. "What can I do for you, gentlemen?" he asked.

"Somethin's gotter be done," the Burley One repeated. "These contraptions we gotter use gettin' snow off the roads are too hard to start. With no starters and on a cold morning when a young blizzard has blocked the roads, the farmers want action. Your job's no better than ours next election, if we can't give a little service."

"But what can I do?" said the superintendent, beginning to get a little hot under the collar. We've tried all the garage men around here. They have all taken a shot at the magnetos to the tune of a hundred dollars or so, and look at them now. No better than before."

"I tell you what," said a little fellow standing by the door. "I drove by the Smith farm this morning, and that young nut that drives around in a speed buggy all the time has hung out a sign which says he is taking electrical jobs on tractors and automobiles. Perhaps he could fix up our road machinery so it would start easier."

The Burley One laughed long and loud, but the superintendent considered the idea. "It might do no harm to try him," he said. We have done everything else. Perhaps from fooling around he has learned something useful. You never can tell."

The phone rang that morning while Barney, the Red Head and Valvy were practicing a line plunge through an ample stack of buckwheat cakes, Valvy leading the attack, but ably assisted by his interference. Barney answered the bell's insistent ring and came back beaming. "The first job," he said, "and a big one. The engines in the road clearing equipment that the county uses start hard and it's up to us to fix 'em," and then the joy gradually died from his face as he began to realize that he hadn't the faintest idea how to start.

"Sure," said Red. "Impulse couplings 'll fix 'em up most likely."

"Yeh, impulse couplings, that's what I thought," alibied Barney as he came back to the pancake job. "We can order 'em from Bill and in a day or two we can tackle the work. But before another job comes in that stumps—I mean before you fellows go away I want you to show me some more about magnetos. The other day we talked about taking 'em apart but we didn't go far enough to cover all details of the job."

When breakfast was over the Red Head sent a wire to Bill for the impulse couplings they would need and then got out his diagrams and test sheets to give Barney some more help on magneto overhauling.

"The last time we were talking about testing we considered a simple way of testing the armature of a magneto. Now we will consider the circuits we need (Fig. 1) for testing a coil such as we find in Dixie magnetos.

"When the Dixie magnets are laid to one side or removed entirely, the coil is made accessible and can be taken off to be tested, the condenser being also removed at the same time. As in a battery coil, it is necessary to send current through the primary and provide a place for the spark to jump. A gap is easily constructed as shown with a short piece of stiff wire. The coil terminal shown going to battery is the one usually grounded. The interrupter used for this test is shown as having its own interrupter which will need a condenser.

"This condenser can be the regular one from the magneto or a condenser from some battery ignition system. If any other magneto is ever encountered which has a detachable coil it could be tested in similar fashion after first testing to locate the primary and secondary circuits.

Testing the High Tension Insulation

"In the high tension magneto an armature or a coil has generated in it the high voltage which produces a spark

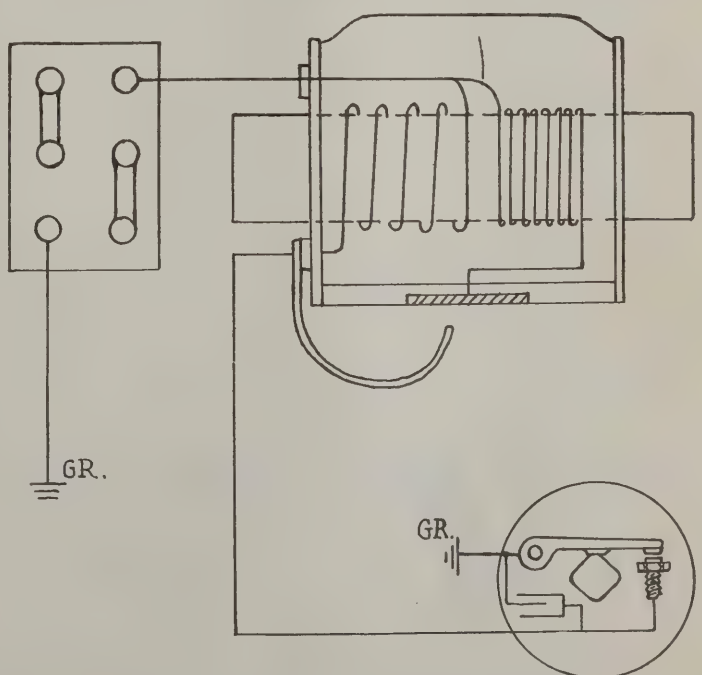


Fig. 1. Testing Dixie coil with battery current.

at the plug, but this high voltage can accomplish nothing if at any point the insulation is defective. With a good armature, there may be no spark available if the high tension brush holder is punctured, or if the same thing happens to the high tension pencil or the distributer.

"It is accordingly wise to test these parts while the magneto is apart, and if no special equipment is available, the old standby, a Ford coil, can be pressed into service, with a twelve volt battery used if necessary and strong spring tension on the points to get a very high voltage spark. The Ford coil," continued Red, "can be used as shown in this sketch of Bill's (Fig. 2) where he shows a six volt battery. One terminal of the battery connects to the lower coil terminal and the other through a switch to the upper terminal at the side.

"It's a good idea to use a safety gap between the high tension terminal at the side of the coil and one of the other terminals and then if this is made adjustable the high tension test voltage can be varied. In the sketch (Fig. 2) a high tension distributer brush holder is shown being tested. With the safety gap set at one half inch sparks should jump in this gap while the loop is moved over the high tension surface. If there is a crack at any place it will be shown by a heavy spark jumping through which will stop the sparks at the safety gap. At the end of the distributer brush holder and at the brush, sparks will, of course, jump, but they should not jump anywhere else."

"Looks as if we've figured on everything that can be done to the pieces," said Barney. "What tricks do you have up your sleeve when it comes to putting the machines together?"

"Oh, several," said Red. "We first grease the bearings with hard oil. Vaseline is often used but is a little too soft and melts out when the engine heat warms up the magneto. Aside from that I think that timing the interrupter with the armature is the first important detail in assembling the magneto.

"Men in the small shops to which Bill Fixit sells parts often write to us that they have repaired a magneto, every part tests O. K. and yet the spark is weak. The chances are that the points open when the alternating current is not at its maximum. The right point is usually obtained when the armature or inductor as the case may be, is just leaving the pole tip.

"A way of checking this in Dixie magnetos is shown in this sketch (Fig. 3) where a buzzer and some dry cells are shown in series with the coil and interrupter circuits. When the interrupter points touch, the buzzer lets you know about it. The shaft of the magneto is then turned in the normal direction until the buzzer stops and at this instant the gage should just slip in between the inductor and the pole piece.

"If the setting is not right it can be changed by loosening the screws shown in this other sketch (Fig. 4). With these screws loosened the relation of interrupter to inductor may be varied until the proper setting is obtained (Fig. 3), after which the screws can be tightened.

"In the armature type magnetos it is usually not possible to change the relation of interrupter to armature, for a keyway is usually milled in the armature shaft into which a projection on the interrupter fits. The roughneck mechanic usually gets things wrong if at all possible, though," said Red, "for I have seen interrupters forced on with the key not in the keyway, with the result that the interrupter would wobble around and the points would open at the wrong time.

"The right way is to put the interrupter in place and turn it slowly, until you feel the key drop into the keyway. Then put the interrupter screw in place and tighten it. The relation of armature to pole piece when the contacts separate will be approximately as shown in this sketch

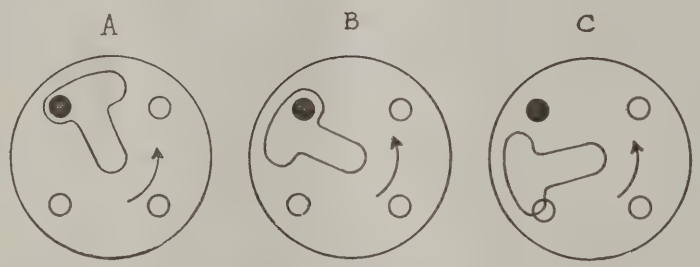


Fig. 6. Checking distributer setting. "A" correct for advance. "B" correct for retard. "C" wrong.

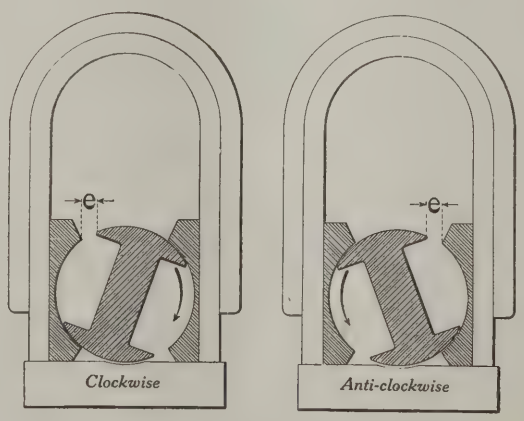


Fig. 5. Position the armature should be in when the interrupter contacts separate.

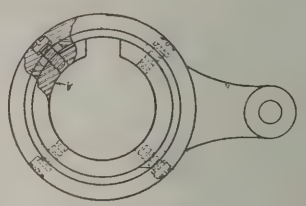


Fig. 4. Clamp screws which are loosened to change interrupter to inductor timing.

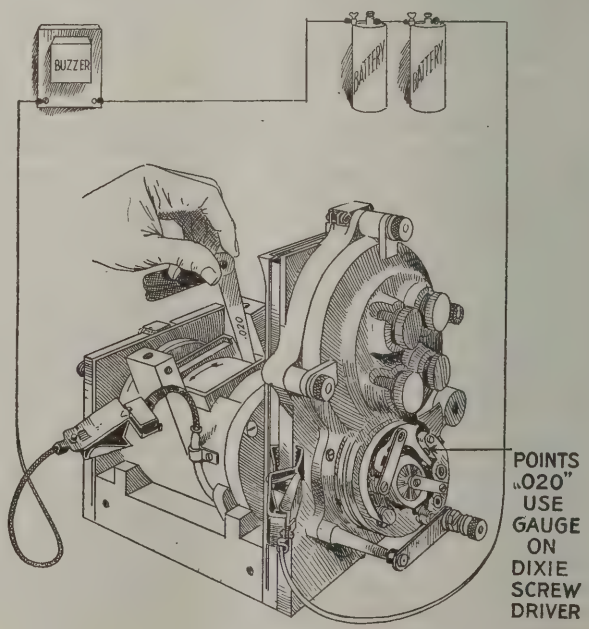


Fig. 3. Checking position of inductors with reference to interrupter.

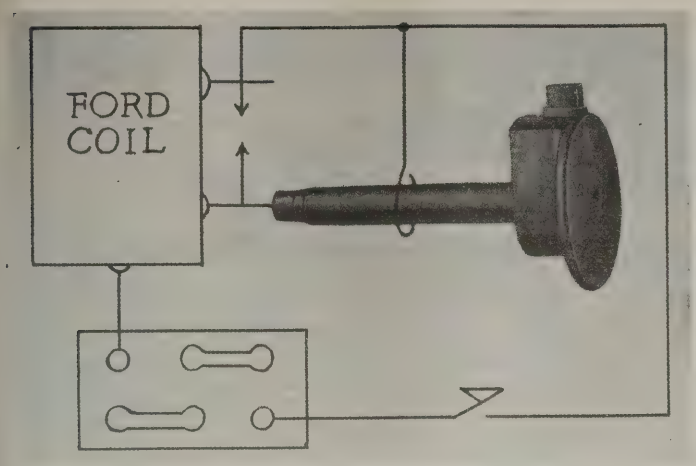


Fig. 2. High tension insulation test, using a Ford coil.

(Fig. 5) where at the left a clockwise magneto is shown, while at the right is an anti-clockwise magneto.

"With the conventional magneto this distance marked "e" will vary as the spark is advanced and retarded, the spark intensity accordingly varying somewhat in the different positions of the spark advance lever. This is the reason that the spark is sometimes advanced to crank an engine, although it is done at the risk of having the engine kick back, for the magnetos are usually so built that the advance or normal running position gets the hottest spark. With impulse couplings such as we intend to install on the big snow sweepers, there is no danger of this occurring and no trouble getting started.

"When we put the magneto together it is necessary to check up the distributer to see that it is properly timed with the interrupter. After the end brackets are on it is often impossible to change the timing so it has to be checked as soon as the end brackets are put in place and while they are held there by hand or with one or two screws, temporarily used.

"It is dangerous to depend on marks on the gears for they may be in the wrong place, perhaps put there by repairmen not thoroughly acquainted with the tricks of the trade that the electrician should know. This sketch (Fig. 6) shows how the distributer brush should check up under various circumstances.

"At 'A' we have conditions as they should be when the interrupter points just begin to separate with the advance lever in the advance position. The distributer segment has just slid under the brush connected with one of the spark plugs and is just making a full contact with it. When the spark is retarded it occurs later and the distributer will have rotated farther as shown at 'B.' The distributer brush and segment are still making contact although a little more rotation will separate them.

"If the condition at 'B' exists when the interrupter contacts separate, with the spark lever in the *advance* position, then in the retard position the segment would be all the way out from under the brush as shown at 'C.' Under these circumstances we would not only fail to get the spark at the **proper plug,** but the timing would be so far out that the spark would go to the wrong plug.

"A magneto timed this way would not start in the retard position for it would continually fire in the wrong cylinder. It could be started in the advance position if it could be cranked without kicking back but when the spark was retarded it would pop in the carbureter and quit. That shows how important it is to get the distributer timed right.

NOTE: The subject of magneto overhauling will be concluded in the next Bill Fixit story. It will include two methods of remagnetizing the magnets.

Chrysler Brings Out More Powerful Six

(Continued from Page 12)

is carried in a straddle type of mounting two taper roller bearings being employed on the shaft proper and a parallel roller bearing in the overhung support. Timken taper roller bearings are used to support the four pinion differential while the outer ends of the axle shafts are carried likewise. The shafts made of 3240 S. A. E. chrome nickel steel are 1¾ in. diameter at the wheel end and 1⅜ in. at the ten splined ends.

Similar in construction to the smaller six, the front axle is tubular being designed for great torsional strength. Yokes and spring pads are forged, the latter being machined in place on the heavy wall 2½ in. diameter tubing.

The steering unit is a specially made cam and lever Ross gear employing a radial thrust ball bearing at either end of the cam. The steering wheel is of walnut including the spokes and has a 17 in. diameter.

Springs of the semi-elliptic style made of chrome vanadium steel are employed all round, those on the front axle being 41½ in. long and overslung while those on the rear are underslung and 58 in. long. All springs are 2¼ in. wide. Spring covers holding a sufficient quantity of lubricant for several months are also provided all around.

Except for slight modifications and improvements, the design of the hydraulic four wheel braking system is the same as that employed on the smaller six, being of the external contracting type. The drums which have the same dimensions front and rear are 14⅜ in. diameter by 2 3/16 in. wide. With a brake lining 1¾ in. wide, the total braking area is 249 sq. in. Lining thickness is 5/32 in. The master cylinder is placed on the transmission case in the conventional method and the wheel operating cylinders are the same size on both axles.

The frame employs pressed steel side channels 7 in. deep by 2½ in. wide and made of 5/32 in. stock. Between the front and rear spring hangers, 2 in. diameter tubular torsional members are employed. There are also three pressed steel cross members, the forward one carrying the weight of the engine being 5½ in. wide with the center one 4¼ in. wide and the rear member 4½ in. wide.

Standard tire equipment is 32 by 6.20 in. straight side Seiberlings mounted on 12 spoke special Kelsey wheels having 4½ in. rims.

Both open models are built by Chrysler and all bodies are given a pyroxylin base finish. The phaeton is painted above the black bead in a mallard green and the lower part is crane gray. The upholstery is of genuine brown leather with black binding to give a two-tone effect.

Above the maroon beading the roadster model is finished in sheraton gray with the lower part silver gray and the spokes of the wire wheels to match the upper part. Colonial grain upholstery in the French pleat style is used for the cushions on both the front and rumble seats, the latter being fitted with a self locking type of arm rests. Both the top and windshield are easily detachable, the natural wood end top bow fitting into nickel plated thimbles.

Both the 5 and 7 passenger sedans have the same interior fittings except the larger model has auxiliary seats. Both cars have a black upper structure with the 5 passenger model using a cactus gray finish below the beading and a pueblo gray employed on the larger car. Upholstery is in broadcloth with striped material on seat backs, cushions and side arm rests.

The berline has the same specifications except for the curved glass partition which drops down into back of front seat. A dictaphone is also provided. The front compartment is trimmed in long grain black leather. On the coupe the upper

(Continued on page 34)

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ^ ELECTRICAL ^ FLAT RATES
SHOP ^ LEGAL ^ PAINT & TRIM ^ ACCOUNTING

A Click in the Clutch

Q—We have a 1924 Big Six Studebaker in our shop which with the motor running with clutch disengaged at a speed of 200 to 300 r.p.m. has a sharp dull click. When running about 500 r.p.m. it is not noticeable. This noise sounds like a valve tappet, but we have set tappets as close as possible. Would you think that a little play in the timing gears would cause this noise.—Frahm Brothers Garage, Manning, Iowa.

From your letter it seems that you are not sure as to the location of the noise. If it really is in the clutch it is possible that the three toggle levers which operate against the clutch shifter bearing do not touch at the same time. Possibly two of them are operating the clutch and the third one is loose and makes this clicking or rattling sound. If the noise is stopped by operating the clutch pedal and then is produced by pushing the clutch pedal down again, it would seem to prove that the trouble really is in the clutch. The clutch is properly adjusted as follows:

The clutch pedal should be adjusted so that the clearance between the under side of the clutch pedal pad and the toe board is five inches. This can be adjusted by loosening the clamp screw and the adjusting screw at the lower end of the pedal arm and moving the arm until the clearance is correct. Then tighten the two screws.

If this adjustment brings the pedal arm closer than ⅛ inch to the under side of the toe board, it is too close and should be readjusted to give this clearance. Then loosen the nuts holding the pedal pad in the upper end of the pedal arm and screw the pedal pad in or out until there is 5 inches clearance between the pad and the toe board. Be sure to tighten the lock nuts after adjusting.

The clutch toggle levers are correctly adjusted when from one-half to one inch movement of the clutch pedal is required to bring the clutch shifter bearing into contact with the toggle levers, all three toggle levers touching the shifter bearing at the same time.

To make the correct adjustment press down the clutch pedal and place a block or piece of metal ⅛ of an inch thick behind the shifter bearing housing at point "A."

Then, one at a time, loosen the toggle lever adjusting screw lock nuts and turn the adjusting screws in or out until the levers are all just in contact with the shifter bearing. Be sure to tighten the lock nuts and remove the block from behind the shifter bearing housing.

If the trouble is not in the clutch then you might try running the engine slowly and holding a screwdriver against the valve stems or against the valve tappets, one at a time to see if this affects the condition. You might also try adjusting the valve tappets absolutely tight one at a time to see if this makes a difference in the noise. This would produce a continuous pressure on the camshaft at different places and would temporarily eliminate noise due to a loose camshaft bearing. It might also temporarily eliminate noise due to a worn valve tappet.

WHITE VALVE TIMING

Q.—A few weeks ago you showed the valve timing of a 16 valve Pierce-Arrow truck engine also a 16 valve White touring car engine. We would like to have the valve timing of the White 1917 touring car engine.—Bennett Motor Co., Silver City, N. M.

In 1917 there were three engines used. The 16 valve engine known as model G. M. had the exhaust close 10 deg. after top dead center while the intake opened on top dead center. Model G. E. C. had the exhaust close on top dead center and the intake open 5 deg. after top dead center. Model G. K. has the exhaust close 5 deg. after top dead center and the intake open 10 deg. after top dead center.

The Readers' Clearing House

THIS department is conducted to assist dealers and maintenance station executives in the solution of their problems.

All questions are answered direct by letter, so the name and address should be given in full. This saves waiting for the answer to be published, which sometimes occurs several weeks late, depending upon the space available.

Readers' names will not be published with articles, if a request to this effect is received with the letter.

Inquiries not of general interest will be answered by personal letter only. Emergency questions will be replied to by letter or telegram.

Also state whether a permanent file of MOTOR AGE is kept, for many times inquiries of an identical nature have been made and these are answered by reference to previous issues.

Addresses of business firms will not be published in this department but will be supplied by letter.

Technical questions answered by B. M. Ikert and A. H. Packer; Legal, by Wellington Gustin; Paint, by G. King Franklin; Architectural, by Tom Wilder; Tires, by a Practical Tire Man; General Business questions, by MOTOR AGE organization in conference.

Timing Chain Noisy

Q—We are having trouble with timing chain slap on a 1922 Chandler. We removed the generator chain and still found that the slap existed. This could be eliminated however, by holding a hammer handle on the slack side of the chain which goes from the crankshaft to the camshaft.—George R. Tufts, 14227 W. Frian Street, Van Nuys, Calif.

On the 1922 Chandler there is no adjustment to the chain and when wear has taken place it is necessary to remove a link or half link and then when more wear takes place it is necessary to install a new chain. We understand that you have installed new chains and still have trouble. A chain is considered to have the right tension when you can squeeze the two sides together and reduce the distance from one side of the chain to the other side by one half inch.

If the chain is still too loose after new ones have been installed, it is possible that the center to center distance between crankshaft and camshaft has been reduced by excessive wear in the main bearings. There is, of course, always some tendency to produce timing chain slap due to the fact that the camshaft first jumps ahead or tries to and then holds back as various cams receive the thrust from the valve springs. This has caused one maker of motor cars to install a camshaft brake to eliminate this back and forth rocking tendency.

Another possibility is that looseness in the camshaft bearings or valve tappets contributes toward this condition. The main bearings are of the replacable type, but unless new main bearings would increase the center to center chain distance considerably, this would probably have but little effect.

TIMED WRONG AND ENGINE POUNDS

Q—We have a 1924 Chandler on which the timing chain has slipped a few teeth and we are unable to get the valves set right. This is a Pikes Peak motor and when you accelerate, the motor pounds like the bearings are loose. Advise what to do to get the valves timed right.—E. O. Gerken, 3254 Glenwood Avenue, Toledo, Ohio.

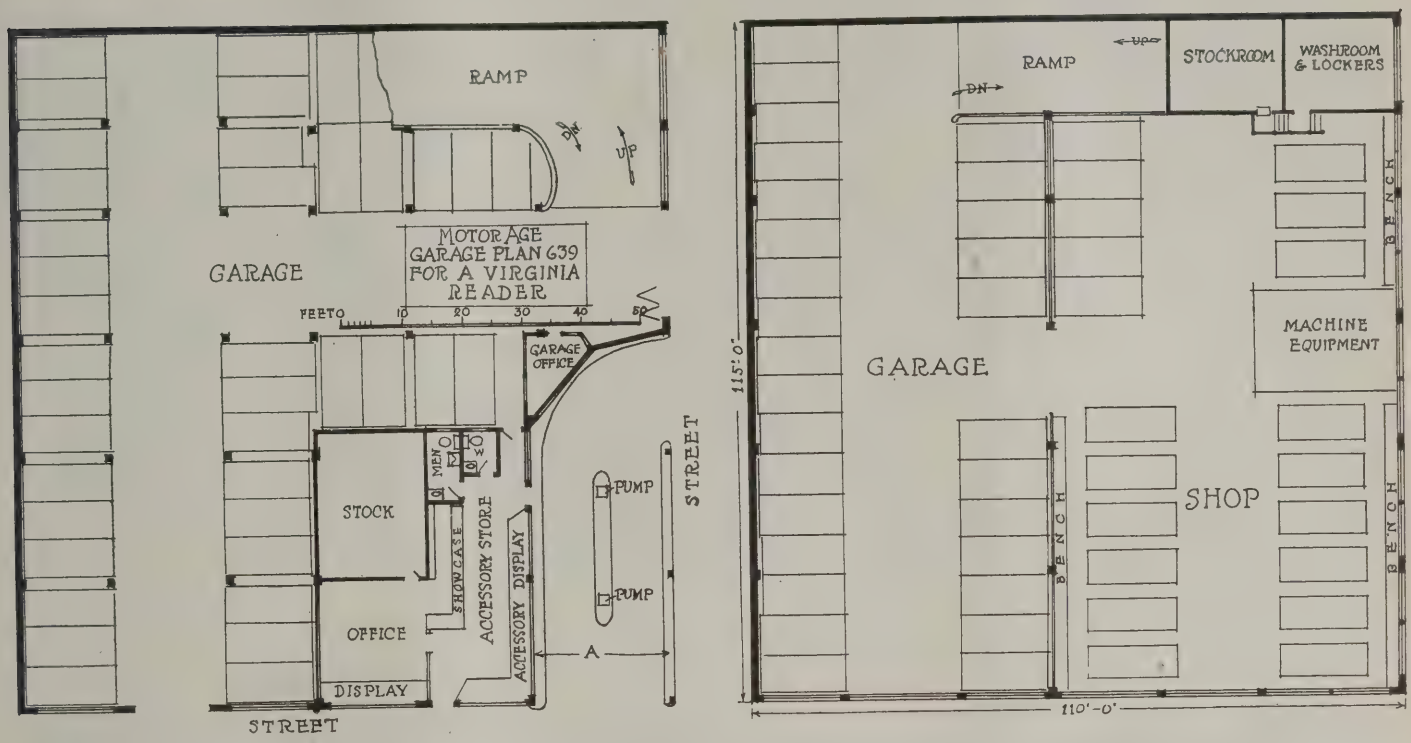
The timing on this motor is conventional and the exhaust valve should close when the piston is on top dead center or has barely started down again. We do not believe that improper valve timing would cause pounding such as you describe, although this might be possible if the ignition is improperly timed and the spark occurs too soon. We would recommend checking up the main bearings after the timing has been corrected, assuming that this does not eliminate the difficulty.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

Two Story Concrete Building with Ramp



The big problem in a building of this kind is to locate the ramp where it can be approached and left without impossibly short turns or too much waste of storage space.

Q.—I am contemplating building a combination two story concrete garage, service station and gas station with ramp (no elevator) to second floor on a piece of land the size as shown below, 110 by 115 ft.—Virginia Reader.

We would ask readers of this department to read the above letter as an example of what not to do when asking help. There is only one chance in a hundred that we have given him what he wants simply because he is so stingy with his information and we would not publish the plan except that it might help someone else.—Editor.

You have given us so little information about the nature of the business you intend to handle in this new building, that we have been obliged to use our imagination to a great extent. Perhaps if we have not laid it out according to the purposes for which you intend to use it, it will still be somewhat subject to changes without material alteration of the construction. The 50 ft. wide garage section with the entrance on both streets and the ramp from first to second floor might be permanent while the space devoted to the accessory sales, filling station and shop could be made smaller or larger as the conditions might demand.

The filling station is as narrow as could be well used and it would be advisable to leave more space making the dimension A four or five feet greater than it is. You will note that the second floor will have to be carried on columns, but that the second floor itself will be column free with the exception of the row through the center which forms a division between the two sections. The roof should be supported on trusses and supplied with some skylights, especially for the shop.

The stock room and shop toilet are located above the ramp and are elevated above the second floor level to give headroom for cars on the ramp.

LEGAL QUESTIONS ANSWERED

By WELLINGTON GUSTIN

of the Chicago Bar

MAY SELL AFTER JUDGMENT

Q.—We have in our possession a car left for repairs on March 5, 1924. They refused to pay the repair bill and storage or to permit me to sell it for these charges. I have letters in which they gave me authority to repair the car and in which they wanted to compromise on the storage bill. Now I cannot get them to answer my letters. Please give me the Alabama laws in regard to this case and what to do to get my money.—Fred Marthaler, Leighton, Ala.

Retaining possession of the car under claim of lien does not prohibit your bringing suit and reducing your claim to judgment, then selling the car under the judgment. It appears that this would be more effective under the circumstances, since you have no statutory lien in your state covering the garage man. The common law lien under which you may retain possession does not permit you to sell the property. But you may sell after judgment.

WRITING IS BEST EVIDENCE

Q.—Have you an available draft or form for a contract which two or more partners would sign, obligating each to the other, their creditors and the public they would serve as a partnership, without incorporation? Could you send me something to give me an idea as how to draw up such a contract?

A partnership agreement need not be in writing, though the writing is best evidence of what the parties have agreed to. No formality is needed, but a concise statement of your interest and responsibility to each other, length of agreement, division of profits, losses, and purposes are the essential elements.

The READERS CLEARING HOUSE — Defeating Old Man Wear and Tear

Engine Balancer Must Be Properly Timed

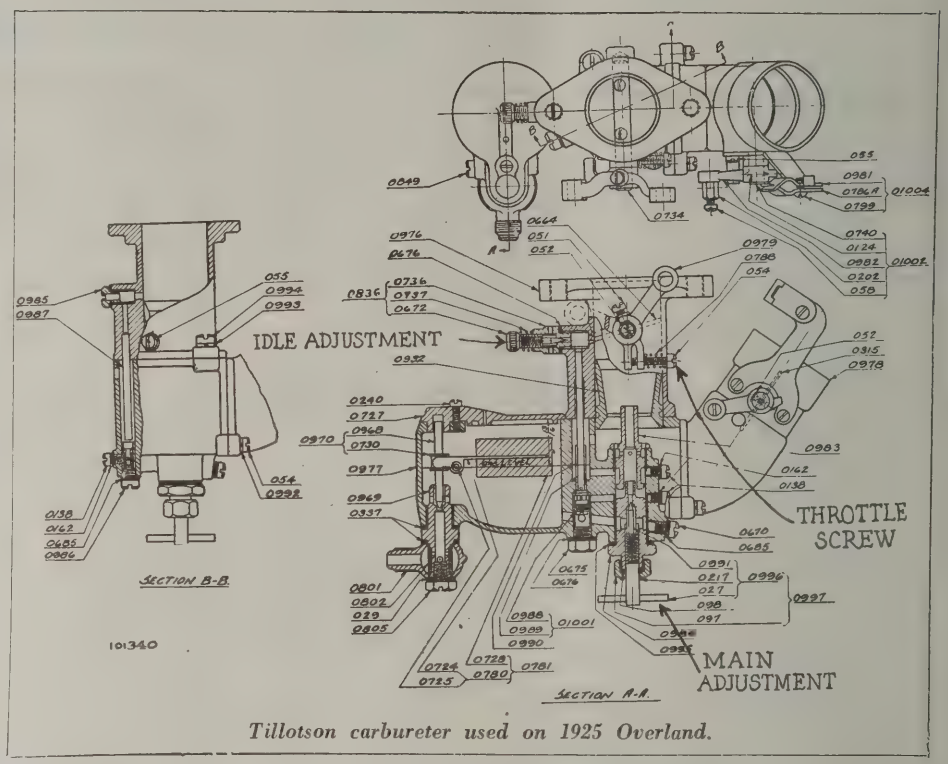
Q.—Supply information about a Stearns Knight balancer on a 4 cylinder 1925 car. We had one of these cars burn out the No. 3 connecting rod bearing and we fitted a new one but the car developed a knock as soon as the engine was started. It looks as if something is loose or running out of true and it seems as if it knocks twice in each revolution. We found the center main bearing on wrong, the oil hole being on the wrong side so that the bearing did not get oil.

The balancer is used on Willys Knight cars and not on Stearns Knight cars so we assume that you were working on a Willys Knight. The balancer consists of two cylinders which rotate in opposite directions at twice crankshaft speed, being geared to each other and to the crankshaft. The cylinders have holes drilled lengthwise in them and they are correctly installed when the holes are up and accordingly the heavy portion down with the crankshaft verticle, that is, the piston on dead center.

It does not matter whether the No. 2 and No. 3 pistons are up or down just so it is the dead center position when the teeth are meshed. If assembled in one position, it will be found that the heavy portion of each cylinder is again down when the crank has been turned one half revolution which gives the other dead center position.

Q.—Explain adjustment of the Tillotson carbureter on a 1925 6 cylinder Overland. —Geo. Podlosck, 214 So. 9th St., Reading, Pa.

Sectional views of this carbureter are shown giving the idle adjustment, the main adjustment and the throttle screw position. This instrument has two adjustments—the by-pass adjustment for idle and low speeds, and the needle adjusting screw for medium and high speeds. Knurled screw No. 0672 governs the idle; turning clockwise makes it richer, counterclockwise leaner. The approximate setting is one turn open. The throttle lever screw No. 054 should be adjusted at same time to give required engine speed; turning clockwise increases engine speed. The man flow of fuel is governed by plug 0984 and needle valve 0996. Turning to the left opens the adjustment and increases the flow of fuel. The approximate setting is two turns open. Before adjusting carbureter, spark plugs, ignition system and valves should be in good order and gasoline line and strainers free and clean.



Tillotson carbureter used on 1925 Overland.

RUNNING EXHAUST THROUGH A HALF INCH TUBE

Q—Could you give me the name of some firm that could furnish copper tubing, also connections as used for oil lines in a crankcase? At what engine speed would a ½ in. copper tube carry to the exhaust of a Buick 6 without danger of bursting the tube?—Vernon Hoblet, Willshire, Ohio.

The names of several concerns are being given by letter. You do not say what you wish to use the copper tube for. We assume that you are making up a hot spot device of some sort using exhaust gas for heating it. You could not run all of the exhaust gas from any car through a ½ in. copper tube and still have the engine operate properly. The size would be so small and the back pressure so great that the engine would not work right. We do not believe, however, that it would burst the tube for pressure is not sufficient. To operate a device of this sort you should tap into the exhaust manifold or exhaust pipe and put a scoop on the inside so that a portion of the exhaust gas will be carried out and go through your copper tubing. This is done on certain hot spot devices which are used to improve carburation.

The Radiator Does the Charleston

Q—We are having a great deal of trouble lately with a car equipped with an eight in line engine. The trouble has to do with the shimmying of the radiator. We feel this is due to the very long hood and suggested putting two braces running from the radiator back to the dash but the customer objected.—M. D. Leasure, 418 Laurel Blvd., New Castle, Pa.

This condition seems to be due to the combined results of balloon tires, three point suspension and extra long engine and hood. It can be overcome by steadying the radiator or the engine. In some cars cross rods are now being used, one running from the left side of the radiator to the right side of the dash and the other from the right side of the radiator to the left side of the dash. The two rods are then clamped together at the center where they cross. This overcomes the effect dut does not get at the cause. Another method is to steady the engine with respect to the frame which in effect gives four point suspension instead of three point. On one make of car, however, this has been tried out over rough roads and seems to prove perfectly satisfactory giving very steady operation where before a considerable amount of shimmying was experienced.

We understand that the factory which makes the car to which you referred in your letter can now supply brackets for steadying the front of the engine to the cross member of the frame. Referring again to different methods of steadying the radiator, we might point out that on one car a heavy channel iron extends from the dash to the radiator.

Q—On a 6 cylinder Auburn we are troubled with a clicking sound in the clutch, which is only heard when the car is running slow in high gear and when idling. It sounds like four light taps every revolution of the clutch.

It is possible that this is due to the contact of the clutch throwout fork with the lugs which operate the clutch throwout bearing. If the two arms of the fork do not strike at exactly the same time it may cause this clicking noise. We understand this may be remedied by using a file and filing off the arm which touches first so that both will touch at the same time.

Clearing Up Electrical Troubles

EDITED BY A. H. PACKER

The READERS CLEARING HOUSE

Charging Batteries With the Farm Lighting Plant

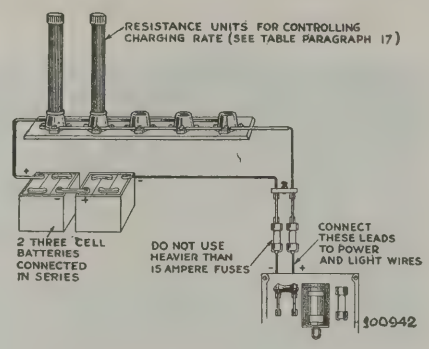
Q.—I am a subscriber to your magazine and note that you help those who write you for advice. I have a Delco farm lighting plant, 32 volts D.C. 850 watts. Now, I want you to tell me the correct way of charging storage batteries as used on automobiles with this plant. At times I have occasion to charge only one battery and again I may want to charge several. Please tell me how to wire the charging wires in order to charge only one battery and several. How many batteries can I charge on this plant at once.

At present I have 250 watt lamp connected in series with the battery to be charged and this gives a charging rate of about 7 or 8 amps. But should I want to charge more batteries will not the charging rate be lowered. Now, after you have told me how to charge several batteries at once, tell me this, Will the voltage affect the charging in any way? That is, if more than one battery is charged, will the voltage drop too low? And, on the other hand, if I charge only one battery will not the voltage be too high, the plant being 32 volts.

I have been told that it is better to have several lamps on the line, but will not this drop the voltage too low? Any service you can render me will be more than appreciated and in answering, please write to me direct and include a drawing of just how such an arrangement should be wired. Is there an instrument of any kind that can be had that is suitable for controlling the charging rate and is connected in the circuit doing the charging? —Curtis A. Johnson, Johnson Service Station, Hochheim, Texas.

We are showing two illustrations, one of which gives the wiring diagram and the other is a chart showing approximately the amount of charging current when various numbers of resistance units are used. These are resistance units supplied by any authorized Delco farm lighting representative. You can of course, use lamps in place of the resistance units if you wish. You can also cut the wire between the battery and the switch and connect a Ford ammeter or any other ammeter in the circuit to see how much current is flowing. Then merely add more lamps or bigger lamps to increase the current. The more batteries you connect the less current you will have while the more lamps or resistance you put in parallel as shown in the diagram the more current you will have.

It is apparently out of the question to charge more than five, six volt batteries at a time, for this gives 30 volts and the voltage of the charging current is only 32. Even under these circumstances it might be necessary to run the plant while charging in order to get adequate current.



Connecting batteries for charging from a 32 volt system.

Cells to be Charged														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Resistance Units to be Used														
1	1	1	2	2	2	3	3	3	4	4	4	4	4	4
Approximate Charging Rate - Engine Running														
5.25	5.5	5	8.5	7.5	7	9.5	8.5	7.5	8.5	7.5	6.25	5	4	3
Approximate Charging Rate from Delco-Light Battery														
4.5	4.25	4	7	6.5	6	8	7	6	7	5.5	4.5	3	2	1

100944

Approximate chargiing current obtained with charging resistances.

Turn on Lights When Installing Battery

Q.—I have a National Highway six automobile, 1917 model with Westinghouse starting and lighting device on same. I bought this car second hand, with battery in, and drove it 6,000 miles without battery being touched. At that time the battery went down and would not charge up, so I bought a new battery and put it in the car myself, with negative end grounded on frame and positive end connected in line to lights and starter. Upon starting the motor, the ammeter registered discharge; and upon stopping the motor and turning on lights it showed charge.

I then tested the battery to see if the terminals were marked wrong and they were O.K., according to the salt water solution. I then tested out the old battery and found, according to the salt water solution, it had been connected up with the positive end on the ground and the negative end on the line. I therefore reversed the wires in my ammeter to register properly and have driven 16,000 miles since and everything is still O.K.

Now, I am told by some that this battery condition could not have existed as I state. What would take place in this case with the battery turned around as I state the old one was. This is a single wire circuit. Would the generator be affected in a case like this? I am advised generators of some makes would be ruined under these conditions. After putting in the new battery, the ammeter showed from three to five amperes more charge than the old battery did—A. M. Ikenberry, 1002 N. Penn Ave., Mason City, Iowa.

Ordinarily it does not make any difference which end of the battery is grounded. The wiring diagram for the 1917, 6 cylinder National car shows the postive grounded. It also shows the generator as being of a type which included a voltage regulator. Some of these regulators were made with two silver contacts at the regulator side. Others were made with one silver and one Tungsten contact and with these it was necessary to have the current go in a certain direction across the points. Consequently if your generator had a regulator of this type with one Tungsten and one silver point and you reversed the battery it would theoretically oxidize the Tungsten contacts and make the generator stop charging after running about one half hour. As you mention no trouble due to the generator failing we assume that the regulator must have had two silver contacts.

Aside from this condition there is practically no possibility of trouble and if you close the cutout points by hand after the battery is installed it will automatically magnetize the generator in the proper direction. When you first connected up the battery it was really being charged although the ammeter said discharge. Your reversal of the ammeter wires was one way of correcting the condition. The other way would have been to reverse the battery.

As a precaution it is always advisable to turn on the lights and make sure that the ammeter shows discharge whenever a battery is installed. The difference in the charging rate when the new battery was put in was doubtless due to a difference in the voltage and the fact that the voltage regulator would thereby permit a different current to flow.

HOME MADE RECTIFIER NOT SO GOOD

Q.—At one time in MOTOR AGE I saw a description of a lead-aluminum chemical rectifier and I wish you could give this information again as I would like to make one to charge batteries.—Harry B. Brown, Box 115, Eldon, Iowa.

We are giving you some recommendations by separate letter. In general we do not believe it advisable to try to make this kind of rectifier as it is very inefficient. It also requires about as much current as would be used with a good efficient rectifier in charging eight or ten batteries. In addition it is necessary to have glass jars, lead plates, aluminum plates, and other items and by the time these are purchased and a lot of time has been spent in assembling the outfit you would find it would cost considerable and would then not be satisfactory.

The article in question however was published in the August 22nd, 1918, issue of MOTOR AGE and other references may have appeared since then. If only one battery is to be charged at a time it is well to get a good commercial rectifier.

Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Flat Rate For That "Mysterious" Case of Trouble

ALMOST always in circles where flat rate is discussed someone brings up an objection that flat rate does not take care of the job that is hard to diagnose and for which there is no definite labor operation or cost listed on the flat rate schedules.

For example, recently a man who operates a repair shop said that he could not get "sold" on flat rate because it was not applicable to so many jobs that came into his place of business.

As in almost every other line of endeavor there is always the proverbial exception to the rule. And so, no matter how well organized a shop's flat rate system may be there always will be some job popping up for which the flat rate book has made no provision. But this is no reason why the flat rate system as a whole should be chucked into the waste basket as not having sufficient coverage.

If any flat rate system were 100 per cent perfect, we should have no further need for service managers. When the infrequent job not listed in the flat rate schedules comes up, someone in the organization must be qualified to analyze the conditions and establish a price accordingly.

Often the objections raised to the establishment of flat rate prices for repairs are caused by another factor and that is improper trouble shooting. Certainly it is not the customer's fault if a shop spends a day locating a certain trouble that requires but a few minutes to remedy, once it is found. We frankly admit that sometimes a case of trouble arises that has everyone in the shop guessing and which oftentimes takes a long time to "lick."



THINGS THAT HELP FLAT RATE

So many of the flat rate operations require less than an hour to perform and in order to handle such jobs very quickly many of the larger service stations have installed "quick service yards." Thus the customer does not have to drive into the building, there is no tie-up of cars and in general the service is good all around. Of course weather conditions have something to do with the proper functioning of such a "yard."

In a shop one time a customer said that his car ran all right but that the engine overheated. Everything seemed all right so far as lubrication, cooling, carburetion, valve timing, ignition, etc. where concerned. The mechanics checked all these things, advanced the ignition slightly, made sure there was the proper amount of water in the system, etc. and sent the customer out saying it was their belief things would be all right.

But the customer came back in a short time with the radiator water boiling hot and another council was held. Surely a strange case one would say, when everything seemed right. But there is always the one reason behind such engine behavior and this trouble was finally solved by the service manager taking the car out on the road after the engine and cooling water had been allowed to get quite cold in the shop.

When the first symptoms of overheating became apparent he stopped the car, got out and raised the hood. Then he saw. It was a hose connection closed up by suction from the water pump. Someone had put in a piece of light rubber hose which under certain conditions simply closed up and thus shut off the water circulation. The installation of the proper thickness hose cured the trouble.

It took a long time to find this source of trouble and yet the flat rate operation of replacing a hose connection amounted to only 50 cents. Certainly nobody would think of charging a customer $10 or more for installing a hose connection. And after all, the repair or service operation, flat rate operation, if you please, was listed in the shop's schedule. The job looked mysterious and as though it was not on the books, but it was there as "Replace One Hose Connection.....50 cents."

MOTOR AGE'S FLAT RATE FORUM

No. 46

FLAT RATES FOR FORD MISCELLANEOUS ENGINE OPERATIONS

Manufacturer's Official Designation		Charge
17	Repair cylinder head bolts stripped—one or two	$4.00
18	Repair cylinder head bolts stripped under dash, loosen body and move back	8.00
19	Clean out feed pipe	4.00
20	Replace cylinder head gasket	1.25
21	Replace all three hose connections	1.25
22	Replace one hose connection only	.75
23	Replace crankshaft starting pin, or pulley	1.75
24	Tighten motor to frame	2.50
24a	Tighten or replace front crank case bearing cap	1.50
25	Clean crankcase or install gasket under lower cover	1.50
26	Replace manifold carbureter or bolt or repair leak in manifold	2.00
27	Install new butterfly spring	2.00
28	Overhaul carbureter—Kingston and Holley	2.50
29	Adjust carbureter	Free
30	Replace commutator wire loom	.75
31	Replace commutator case, brush or roller	.75
31a	Clean commutator	Free
32	Replace commutator pull rod joint	.75

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

Bailhe Accelerator

AN accelerator which does not require an additional foot support is being made by the Bailhe Manufacturing Company, Fort Wayne, Ind. The Bailhe Accelerator employs a rocking ball point and a 3 in. rubber pad, and it is designed to provide two ranges of speed, a loafing and a sporting range with a resting point between. The manufacturers claim that perfect control of the fuel supply is obtained even over rough roads. It is being introduced for Ford cars but it is adaptable to other cars as well.



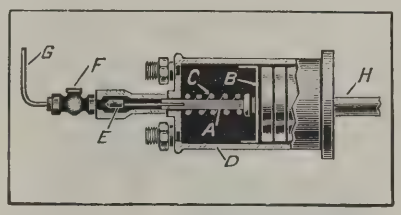
Bailhe Accelerator.

Presto Cigar Lighter Display

Metal Specialties Manufacturing Company, Chicago, offers the trade an attractive display stand on which are mounted three Presto Cigar Lighters and other items. The display contains: One No. 330 Combination 3 in 1 lighter, one No. 210 Ratchet type lighter, one No. 250 Universal Mounting type lighter, one No. 340 Bracket for No. 320 2 in 1 and two No. 245 Ash Receivers. The total retail price of these items is $17.25 and they are priced to the dealer, with the display stand, at $10 f. o. b., Chicago. The stand measures 12 inches wide 11 high and five deep and is finished in red, white and green.



Jiffy Battery Service showing manner of carrying Jiffy Automatic Filler and Jiffy Battery Hydrometer. To the left is the Automatic Battery Filler designed for self-service.



Self-filling Master Cylinder.

Presto Hose Clamp

THE Presto Hose Clamp is a novel accessory manufactured by the Cooper Clamp Company, 737 Park Ave., Brooklyn, N. Y. The Presto Hose Clamp differs from the conventional type in that it is made in two pieces and one clamp will fit several different diameters. This is accomplished by having a series of hooks on one of the pieces which will fit into a corresponding slot on the other piece. All diameters met in automobile practice are taken care of by three clamps. List price $10 per 100.

Battery Service Equipment

AMONG the offers of battery service equipment are four products of the Mapel Engineering Co., St. Louis, Mo. This company's Automatic Battery Filler is primarily for self-service by the owner in water storage batteries. A nozzle is furnished which fits any standard screw top catsup bottle as a container. This is priced at $1. Mapel Engineering also makes the Jiffy Automatic Filler for watering storage batteries. It has its own container and operates with a collapsible rubber bulb. The company recommends it for giving a maximum amount of accurate service and the price is $1.50. The Jiffy Battery Hydrometer is said to withdraw the proper amount of solution from the battery and prevent overfilling with the consequent inoperation of the hydrometer float. The instrument can be raised without danger of leakage and the actual gravity noted at a glance. Price $1.25. Mapel's Jiffy Battery Service, for large service users comprises, a half gallon hard rubber container and a handle for carrying outfit. It provides for carrying the Jiffy Automatic Filler and the Jiffy Battery Hydrometer and sells for $5.

Additional Descriptions Will Be Found on Next Page

Self-Filling Master Cylinder

THE Mattingly Self-Filling Master Cylinder for all hydraulic brakes automatically keeps the brakes fully charged with fluid, thus eliminating the necessity of pumping additional fluid into the brakes. If any of the fluid is lost by evaporation or leaks this device automatically replaces it from the supply tank. Installation is quickly accomplished. The Self-Filling Master Cylinder is priced at $10 and made by the Mattingly Automatic Valve Co., St. Louis, Mo.



Presto Hose Clamps.

Adjustable Tank and Radiator Cap

THE Automotive Specialty Corp., 47 W. 63rd Street, New York, is manufacturing the Tasco adjustable gasoline tank and radiator cap, which is made of nickel plated brass. The cap has a hinged lid and is attached by tightening a screw, no bushings or adapters are necessary. The size is adjustable and two sizes fit all cars. It is packed in individual boxes, 12 to the carton, which is of the display type. Price, 50 cents each.

Bodyguard Transmission Lining

BODYGUARD Transmission Lining, a product of the Atlas Asbestos Co., North Wales, Pa., fits all Fords, including 1926 models. The lining is made from cabled or cord yarn on a plan which is declared to give the lining particular ruggedness and durability. Besides carrying an unusual number of yarn strands the lining is six plies in thickness. Packed in sets with rivets. List for models prior to 1926 is $2.50 per set. List for 1926 models is $2.80 per set.

THE MARKET'S NEW OFFERINGS

Accessories—Equipment—Supplies

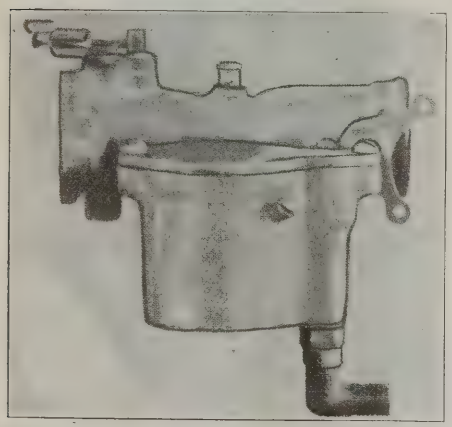
(Continued from page 29)

Bear Battery Protector

PREVENTION of battery terminal corrosion is said to be assured by use of Bear Battery Protector, a preparation put up in tube form by the Bear Manufacturing Co., Rock Island, Ill. Each tube holds enough for several applications, one application often being enough to last a year or more. A special solution in powder form to clean batteries is furnished with each tube. Tubes retail at 50 cents each.

Model "C" Haling Carbureter

EASY starting, smooth performance at low speeds, economy in fuel consumption, full power on hills and a powerful and smooth pick-up are claimed for the Model "C" Haling Carbureter. This device is made by the Haling Carbureter Factory, Rochester, Minn. Model "C" is a double jet carbureter. It is said the carbureter never needs adjusting and that the mileage per gallon varies little whether the car is driven 25 or 35 m.p.h. or more.



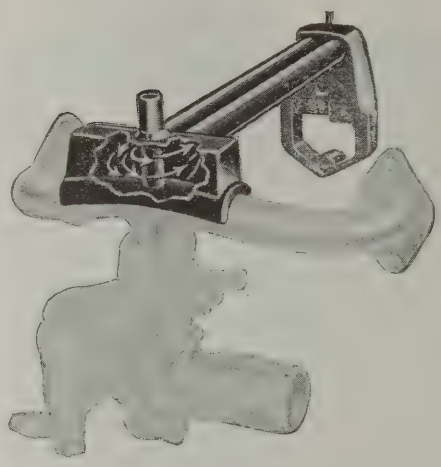
Model "C" Haling Carbureter.

"Adpasco" De Luxe Polishing Cotton

ADPASCO De Luxe Mercerized Polishing Cotton is a new product to be used anywhere on automobiles, for absorbing oil, grease, etc. and for polishing any bright part of the vehicle. The manufacturers say the cotton is free from lint, dust and like objects found in waste and will not scratch the finest surface. The Advance Packing and Supply Co., 808 Washington boul., Chicago, is the producer.

Stop Light Switch

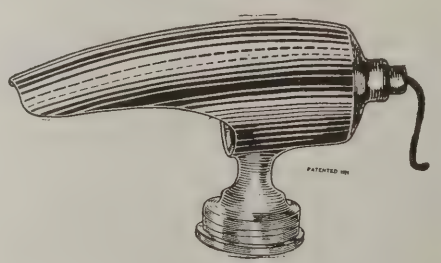
WITTEK Manufacturing Company, 2532 S. Kedzie ave., Chicago, offers a Stop Light Switch which is easy to install and which is said by the producers to give unfailing service. It is for Fords and fastens on the transmission cover. Packed in display boxes of 12. List price, each, 40 cents.



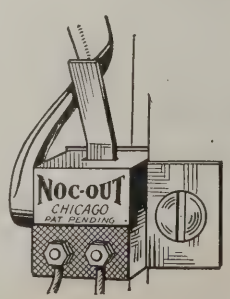
Hot Spot for Chevrolet.

Red Arrow Foot Accelerator

THE Arrow Manufacturing Co., Kokomo, Ind., announces that its product, the Red Arrow Foot Accelerator for Fords is adaptable to the new model Ford cars without change. A specially designed connection, which has always been used on the device, provides the same easy installation as on older models and is not affected by the changes in Ford carburetor controls. This connection consists of a swivel post and adjusting link, which joins the auxiliary rod to the hand throttle arm on the left side of the motor. The auxiliary rod passes through the swivel post, which is free to turn, thus assuring a smooth, even action in foot throttling. The adjusting link provides a wide range of adjustment and prevents all lost motion. The list price of the Red Arrow Foot Accelerator is $1.50, west of Rockies $1.75.



Ideal Rode Lite.



Wittek Stoplight Switch for Fords.

Hot Spot for Model K Chevrolet

SUMMER performance in winter weather is promised by the Dunn Manufacturing Co., Clarinda, Iowa, through use of the Dunn Hot Spot for Model K Chevrolet. It is said the Hot Spot will render effective service in averting prolonged choking during the warming up period and eliminating bucking and backfiring. A control damper permits applying any degree of heat desired or shutting off the heat entirely for summer driving. Price each $4.50

Dash Gasoline Gage

MODEL G Gasoline Gage, produced by the Grolan Manufacturing Company, Dayton, Ohio, is a new mechanically operated instrument board gage which may be easily installed in the tank opening on most cars which do not carry a device of this kind as original equipment. It is said to give efficient service and in all respects answer the needs of the car owner.



Grolan Dash Gasoline Gage.

Ideal Rode Lite

E. H. FINCH COMPANY, INC., 1476 Broadway, New York, is producing the "Ideal Rode Lite," which the makers claim materially reduces the annoyance and danger of night driving, by giving full illumination of the roadway without blinding the drivers of approaching cars. The list price is $10, which includes ten feet of armored cable and a switch for mounting on the instrument board.

When properly mounted on the left mud guard, the manufacturers say no portion of the light's reflector will be visible to anyone approaching it and the driver will be given a clear view of roadway from the left hand wheel track to the right hand curb for approximately 100 feet.

EDITORIAL

A Crumb of Comfort

ANNOUNCEMENT from Washington that the new tax rate on motor vehicles would cover cars in stock when the expected downward revision goes into effect in March or April will reflect an influence, no doubt on the winter stocking programs of automobile dealers. On the face of reports dealers who stock ahead of the spring selling season will be given advantage of any reduction in the rates made by congress.

Contrary to apprehensions felt by many dealers the dealer will not be obliged to absorb the difference between the two rates on cars contracted for in his heaviest buying period. The dealer who saw a bugaboo in the tax situation now can breathe easier although under any circumstances it would be to his interest to stock amply anyhow in January and February for the buying demand of months immediately later. Regardless of who must stand the difference between the old and new rates the dealer must have an assured supply of cars for the spring trade.

It is still apparent that a cheaper supply of raw rubber will not be cooked up by Great Britain. Here's to the success of American chefs.

Here Are Your Prospects

BUSINESS institutions in all parts of the country were very liberal this year in provisions for salary bonus distribution among employes. The close of the year records numerous instances of exceptional profit-sharing apportionments in which a host of workers and executives are beneficiaries. We have heard of not a few instances wherein Christmas or year-end bonuses ran into the hundreds of dollars.

This widespread generosity on the part of large employing organizations has a bearing on possibilities in automotive merchandising apart from the indication of prosperous conditions.

It means many income earners will have fattened pocketbooks, holding surplus money to be invested or spent in a wide variety of manners—and it consequently points out for the automotive merchant a potential buying field which he might cultivate profitably within the next few weeks.

One of the first secrets of successful selling is first to locate those who are capable of buying the merchant's products. No doubt there are many persons in this long list of Christmas bonus and profit sharing plan recipients who right now are looking for a place to put the money thus acquired where it will produce the highest possible degree of satisfaction. So, why not an automobile? It is the business of the dealer and the salesman to give them the idea. It would be a good plan for the dealer to find out what companies in his territory are making special distributions and then go ofter the proposition systematically.

And another seasonal selling thought. The end of the year witnesses many changes in positions in business life and many promotions that carry increased salaries. It also is a time when numbers of organizations pay dividends and in instances especially husky dividends. In hunting for new sales leads let's watch closely for the fellow with newly acquired capital. He is looking for a good place to invest or spend. The man without funds will not buy but the man with money is always eligible for consideration in a selling enterprise.

One operation which usually is followed by good health is co-operation.

Going After the "Half Sold"

A CAMPAIGN to increase the sale of winter necessities in automotive equipment is being conducted by the North Carolina Automotive Trade Association. This is a campaign which can serve both to stimulate pre-holiday sales and business after the holidays on through the cold weather season.

In this movement the North Carolina organization is a jump ahead of many of the local trade associations, yet it offers a suggestion to other groups of tradesmen as to one effective means of developing a better market for those items which the car owner should buy and which he is more likely to buy in season than at any other time.

There is no argument as to the relative value of the seasonal drive and there is no argument against efforts to "sell" the public on something generally accepted as logical.

Repeated reminders are necessary to convert the "half sold" prospect into a "fully sold" prospect, to convert "believers" into actual buyers. There is a difference between admitting a fact and buying on the strength of your convictions.

Car owners know there are winter necessities they should have and they are ripe to buy if the thought is kept constantly before them.

The trade needs more of these local cooperative movements.

"Championship Stuff" has been the 1925 slogan. Let "Championship Stuff" be an actuality in 1926.

Christmas Boosts Automotive Sales

Stocks on Hand Promise No Trouble for Dealers

Early 1926 Expected to Witness Good Business If General Prosperity Continues

NEW YORK, Dec. 30.—Moderately increased sales of new and used cars and a spurt in the sales of accessories and special equipment marked the holiday season for the automobile industry. It was an unusually successful Christmas period, being helped by the low prices of the popular closed cars and a spirited merchandising campaign by distributors and dealers.

Nearly all the motor car factories are operating on reduced schedules or are closed for inventory and plant changes. During January production will be stepped up gradually. Dealers are entering the New Year with somewhat larger stocks than they held at the corresponding time a year ago, but the supply should give no trouble if sales during the early part of 1926 are on the level confidently expected by the factory executives.

There seems to be no reason to fear an early slump in the automotive market so long as general prosperity continues. The motor cars ought to find buyers. The only adverse factor that is given any serious consideration at this time is the possibility of higher prices as a result of increased cost of tires as original equipment. But the advance, if made at all, will be almost if not quite compensated by the tax reduction contemplated in the new revenue bill.

One company last week announced price cuts and two advanced. The large producers, however, for the most part are keeping their price plans for the early part of the year very much to themselves. There will be considerable maneuvering for position between now and the closing of the New York automobile show, as competitive considerations are playing as large a part in the establishment of price lists as are the economic factors.

A campaign for economy in the use of tires has been launced by the industry with a view, ultimately, of bringing down the cost of crude rubber, but it is realized that this will be a slow process at best.

REGISTRATIONS INCREASE

EVANSVILLE, Ind., Dec. 31.—Passenger car registrations in Vanderburgh county for the official year of 1925 ending December 15, totaled 17,463, according to the report of the local branch of the secretary of state's license bureau. The total marks a gain of 1,500 passenger car registrations over the year of 1924, it was said. Motor truck registrations are at about the same level as in 1924. A total of 2,638 motor truck licenses were issued in 1925.

CLEVELAND REVISES PRICES

Cleveland, O., Dec. 28.—An upward price revision has been announced by the Cleveland Automobile Co., on two models of the "31" chassis and two models on the "43" chassis. The three-passenger coupe on the "31" chassis has been increased $60, the sedan on the same type has been increased $90, the coupe and sport touring on the "43" chassis each are increased $50 under the new price scale.

HAYNES SALE PLANNED

INDIANAPOLIS, Dec. 26.—Arrangements for the liquidation of the balance of the property of the Haynes Automobile of Kokomo were made here by a contract drawn between the Fletcher Savings and Trust Company of this city as trustee for the bondholders of the Haynes plant and the Carle Machinery Company of Detroit which will handle the details of disposition of the assets and machinery of the plant. The remaining assets include the six major buildings of the Haynes plant, 40 houses in Kokomo, a farm of about 40 acres and the machinery and equipment of the plant. The value is estimated at about $500,000.

CHANDLER-CLEVELAND MERGE

CLEVELAND, O., Dec. 31.—A charter for the merger of the Chandler-Cleveland automobile companies of this city has been filed with the department of state of Delaware. The corporation provided is to have 350,000 shares of preferred stock and 1,000,000 of common stock of no par value. Stockholders of the two companies are to have until January 15 to exchange their common stock for preference stock of the combined companies. An offering of preference stock also will be made by bankers, the proceeds of which will be used to retire the present preference stock of the Cleveland Automobile Co.

Rickenbacker Announces Upward Price Revisions

Detroit, Dec. 28.—Upward price revisions on both six and eight cylinder models and the addition of new coupe-sedan to both lines, are announced by the Rickenbacker Motor Co. The new price schedules follow:

Six

	Old	New
Phaeton	$1,495	$1,750
Brougham	1,595	1,895
Coupe-Roadster	1,695	1,920
Sedan	1,795	2,095
De Luxe Coupe	1,995	1,995
Coupe-Sedan	.....	1,695

Eight

	Old	New
Phaeton	$1,995	$2,150
Brougham	1,995	2,295
Roadster	1,995	2,195
Coupe-Roadster	2,095	2,320
Sedan	2,195	2,495
De Luxe Coupe	2,320	2,395
Coupe-Sedan	.....	2,095

Peoria Association Warns Trade Against Overstocking

Resolution Also Opposes Recourse Financing and "Cramming" By Makers

CHICAGO, Dec. 26.—Resolutions opposing recourse financing and declaring that the manufacturers are again overstocking their dealers were adopted at a recent meeting of the Peoria Automotive Association and broadcast to dealers' associations generally. Among the statements made were:

The experienced and business-like automobile dealers look with growing alarm on the factory policy of insisting on the dealer endorsement in any form on retail time paper.

Any difference in the cost to the purchaser of endorsed paper and non-recouse paper must be paid by the dealer either in money or work. There is no practical difference in the long run between endorsement with recourse and paper with repurchase agreement. The same amount of expense and work is necessary to keep the customer paying. The local banker is becoming wary of loans to heavy endorsers.

The cash buyer helps to pay the cost of time financing where the finance company is subsidized by the manufacturer.

Local, state and national dealers' organizations should immediately recognize that the large producers of motor cars are again resorting to cramming cars on dealers in excess of any reasonable stock. With the production capacity of six million cars for 1926 and a potential market for three and a half million the dealers must promptly recognize the dangers before them.

An automobile carried in stock for three months must always be sold at a loss, as even in the best regulated agencies the net profits do not usually exceed 5 per cent and this is completely absorbed by three months' storage and financing.

N. Y. TRUCK MEN MEET

NEW YORK, Dec. 31.—At the annual meeting of the Motor Truck Association of America, Inc., held at Cafe Boulevard, officers and directors were elected, finances discussed and the association's opposition to the gasoline tax and compulsory automobile insurance reasserted.

Officers elected are: President, Joseph Husson, Eleto Co.; first vice-president, Hermann Irion, Steinway & Co.; second vice-president, Charles M. Geiger, Peter Doelger Co.; third vice-president, Thomas R. Freebody, Louis K. Liggett Co.; secretary, C. M. Billings, Vacuum Oil Co.; treasurer, Nat Mallouf, Mallouf Haulage & Maintenance Co.; directors for three years, Henry K. Jaburg, H. R. Schmadeke, Commonwealth Fuel Co., E. Ward, Franklin Simon Co. and Herman J. Harms.

Increased Interest Being Shown in Trade Days

Distribution of Tickets Begins Immediately After Christmas for Both Displays

NEW YORK, Dec. 26.—All signs point to increasing interest in the trade days at the National Automobile Show in Grand Central Palace Jan. 9-16. Thousands of acceptances have been received to the invitation for makers of cars and accessories, jobbers, garage owners, body builders, fleet users and others connected with the industry to attend the show on Monday and Tuesday from 10 a. m. to 1 p. m.

The S. A. E. is making special plans to have as many of its members as possible attend on the trade days because of their educational value in addition to the opportunity they will offer to make valuable comparisons and to be prepared to do business most expeditiously in their various lines through the year.

That accessory manufacturers realize the value of the trade days is shown by the steadily increasing list of exhibitors both at the New York and Chicago shows.

Tickets for the trade days will be distributed immediately after Christmas. A separate ticket will be required for each session—a pink and blue for the New York and white and red for the Chicago trade days.

More than 400 dealers have already applied to S. A. Miles, show manager, for supplies of the show poster, which uses the figure of the Winged Mercury grasping a wheel in a small cut-out printed in yellow and black. The poster is in the form of a hangar and is being distributed by Metropolitan dealers.

For the first time in the history of the national show in Grand Central Palace two separate entrances will be provided to relieve congestion. The new entrance on Park avenue will be a time saver from all the hotels except the Commodore, for all the West Side and for taxicab users.

ENGINEERS DISCUSS HONING

DETROIT, Dec. 26.—The meeting of the Detroit Section of the Society of Automotive Engineers drew an attendance exceeding 200 automotive men, the great majority of whom were production executives. The subject under discussion was cylinder finishing with particular reference to the question of lapping and honing as compared to the older grinding method.

Production men from Chrysler Motor Corp., Wilson Bros. Foundry and Machine Co., Continental Motors Corp. presented short papers as did representatives of Oakland, Dodge, Lincoln, Jewett, Hupp, White and Buick. In general, the consensus was that honing offers a great saving in production time and a superior finish providing the preliminary operations are of sufficient accuracy. In fact every speaker emphasized the need for careful boring and reaming prior to the honing operations.

Motor Car Output in U. S. and Canada

WASHINGTON, Dec. 31.—Following tables show the production of automobiles, both passenger cars and trucks, for the first 11 months of 1925, compared with the full year, 1924, as announced by the Department of Commerce for the United States and Canada:

Total Cars and Trucks

	1925	1924
Jan.	241,062	324,567
Feb.	287,213	367,370
Mar.	377,252	393,489
Apr.	439,125	384,353
May	426,016	331,638
June	447,860	254,146
July	400,361	260,935
Aug.	259,581	283,879
Sept.	332,781	295,480
Oct.	452,392	293,356
Nov.	376,251	232,248
Total 11 months	3,995,029	3,430,467
Dec.		209,631

The following table shows car and truck production in 1925 in United States and Canada:

	Cars	Trucks
Jan.	212,921	28,141
Feb.	252,803	34,410
Mar.	332,154	45,098
Apr.	391,302	47,823
May	382,714	43,303
June	364,806	38,054
July	358,554	41,817
Aug.	221,831	37,750
Sept.	272,425	60,368
Oct.	406,572	45,823
Nov.	336,358	39,893

FORD SETS NEW RECORD

DETROIT, Dec. 26.—The sale of Ford passenger cars and trucks for November 1925 marked the best November sales record in the history of the Ford organization. Figures released by the company show that 146,788 passenger cars and trucks were sold during the past month, an increase of approximately 25,000 over November 1924. The enrollments under the Ford weekly plan also showed a marked gain over the same period of last year. For the month 31,425 purchasers of Ford products were enrolled under the weekly payment plan. This is twice as many as for November 1924.

Western Electric Supply Department Incorporated

NEW YORK, Dec. 26.—Western Electric Co. has set apart its electrical supply from its telephone manufacturing business and incorporated the former under the name of Graybar Electric Co., a contraction of the firm name of Gray & Barton under which the supply business came into existence in 1869. Physical separation of the two departments was carried out in 1923 with the opening of general supply department offices here and the advent of the Graybar concern involves compartively few changes. Albert Lincoln Salt is president, Frank A. Ketcham, executive vice-president, Leo M. Dunn, vice-president in charge of merchandising and accounting, George E. Cullinan, vice-president in charge of sales, Elmer J. Shepard, treasurer, and N. R. Frame, secretary.

Tire Production Expected To Set December Record

High Cost of Crude Rubber Cannot Hold Back Output Longer, Officials Believe

AKRON, Dec. 31.—Indications are that automobile tire production this month will surpass that of any previous December. Present schedules of the tire factories are well ahead of the same month last year.

The Akron plants started increasing their production last month, following a slight slump in October. Even then sales were comparatively large, but it was desired, if possible, to conserve the dwindling supply of crude rubber in an effort to bring down the price. The policy of eliminating "spring dating" on tire shipments was designed for this purpose.

High cost of crude rubber is no longer a factor in the industry, as far as production is concerned. The manufacturers are convinced that dollar rubber and possibly higher is here to stay, and they have ceased worrying over the price. It has been demonstrated that the market cannot be depressed by any artificial means.

Moreover the demand for tire and other finished rubber goods for immediate delivery has continued heavy, so that production has been abnormally high in the last quarter of the year.

Practically all the rubber companies are preparing for a banner year in 1926, by building additions and making improvements to their plants. Nearly $5,000,000 is being spent this year in expansion programs.

N. A. P. A. ELECTS OFFICERS

DETROIT, Dec. 26.—Election of officers and discussion of policies for the coming year marked the convention of the National Automotive Parts Association held here Monday and Tuesday of this week. The board of directors was re-elected.

In addition to formulating policies, members of the association went into a one-day session with manufacturers whose lines they represent. This was for the purpose of discussing prospects for 1926.

Officers elected were: George W. Yeoman, chairman of the board, H. G. Root, president, Automotive Parts Corp. of Ohio, W. W. Martin, vice-president, Superior Motor Parts Company of Pittsburgh, L. B. Fijux, secretary and treasurer, Automotive Parts Corp. of Michigan.

In addition to the above officers, the following men compose the board of directors: A. F. Baxter, Standard Motor Parts Company, Buffalo, R. W. Boozer, Central Motor Parts Company, Indianapolis, Estel Scott, General Auto Parts, Kansas City, Mo., C. C. Colyer, Motor Sales, Los Angeles.

Dodge Brothers Sales Ahead Of 1924 by December 15

Price Reduction to Be Announced Soon Expected to Range from $50 to $200

NEW YORK, Dec. 31.—Although no official statement can be obtained it is reported that the Dodge Brothers price reductions to be announced Jan. 7 as retroactive to Dec. 15 will range from $50 to $200. Robert C. Graham, newly appointed vice-president and sales manager of Dodge Bros, Inc., reports that the announcement has brought telegrams from dealers everywhere.

Dodge Brothers shipments for the first eleven months of 1925 were 242,614 against 211,669 in the same period last year, an increase of 14.6 per cent. Sales to Dec. 15 this year have exceeded the entire year 1924 by 16,973, establishing a new high record for the company.

Increased production this year is accounted for by export, bus, truck and commercial car as well as passenger car business. According to an official report, 1,466,023 cars had been produced previous to Dec. 1 and since the completion of the first Dodge Brothers car eleven years ago it is said that 90 per cent are still in service.

Financed wholly out of surplus earnings Dodge Brothers will have completed early in 1926, plant additions costing about $8,000,000 increasing output capacity by about 50 per cent to meet the greater demand at home and abroad. Over 20 per cent of production is said to consist in commercial cars, trucks, buses and chassis, and the recent acquisition of a majority interest in Graham Bros. fortifies the position in the commercial car field.

Last of N.A.D.A. Congresses Is Held in Indianapolis

INDIANAPOLIS, Dec. 26.—The ninety-seventh and last of the sales conferences of the National Automobile Dealers' Association flying squadron was held in Indianapolis with more than 600 dealers and salesmen and other of the automobile trade in attendance. It was the largest automobile sales meeting ever held in Indianapolis and its success was due largely to the promotion of the Indianapolis Automobile Trade Association officers and John B. Orman, manager, who was responsible for getting out the crowd that came here from all parts of the state.

The meeting was conducted by Lynn M. Shaw, assistant general manager for the N. A. D. A. who was introduced by Vice-President J. S. McFarland, president of the Indianapolis trade body and president of the Lathrop-McFarland Co., distributor of Oldsmobile. Both H. D. Bullock, market analyst of the N. A. D. A., and H. K. Kroh made strong talks after Shaw's address.

Stretch Rubber for Economy

(*Continued from page* 10)

America will attack the monopoly from the production and manufacturing end, thus creating a 100 per cent front of manufacturers and users, against the monopoly. Representatives of the industry, who attended the conference in Secretary Hoover's office, included: Alfred Reeves, manager of the National Automobile Chamber of Commerce; H. H. Rice, and Pyke Johnson, of the same organization; W. O. Rutherford, president of the Rubber Association of America; Paul L. Palmerton, chief of the Rubber Division, U. S. Department of Commerce; Harvey S. Firestone, president of the Firestone Tire & Rubber Company; Ernest Smith, general manager of the American Automobile Association, and the heads of several other tire manufacturing companies.

Simultaneously with the industry's attack on the rubber monopoly a resolution was introduced in Congress providing for a sweeping investigation of the British monopoly on crude rubber, which has resulted in rubber speculation and an increase of from 35 to $1.10 per pound.

As a result of the increase automobile users are paying from $30 to $70 a year more than is necessary, for their tires, it was charged on the floor of the House by Congressman Tilson, House floor leader, and author of the investigation resolution.

The N. A. C. C. has already inaugurated a campaign for the conservation of rubber through the more careful use of tires in service.

The Chamber points out that while every automobile manufacturer is endeavoring to lower costs in order to supply his product at the lowest possible price, the whole automotive industry is threatened with increased costs unless there is a decreased demand for crude rubber to offset the high prices created by the British Stevenson restriction plan, despite the fact that there is no real shortage of crude.

The conservation campaign is a direct result of Secretary Hoover's warning that "we are now subject to the full result of monopoly action." Among his five recommendations for ultimate relief against the "trade war being made upon us" he included a strong systematic campaign for conservation.

Following a conference between Alfred Reeves, general manager of the N. A. C. C., and Secretary Hoover and by instruction from the recent meeting of the Chamber directors, President Clifton appointed a committee consisting of Alvan Macauley, Packard, chairman; H. M. Jewett, Paige, and H. H. Rice, General Motors. This committee now recommends:

That the Chamber enlist the support of the 2,000,000 automobile dealers, salesmen, garagemen, professional chauffeurs and repair parts men as well as owners of the 18,000,000 motor vehicles in the United States in a campaign for better use of tires by taking the following steps:

1. Ask the cooperation of all organized units of the automotive industry and users.

2. Ask car users to obtain the greatest possible mileage from their tires by maintaining proper air pressure; by making repairs promptly; by using brakes carefully; and by rounding corners at slow speed. If the 18,000,000 motor vehicles in the country were so used it is estimated that at least 25 per cent would be added to tire mileage.

3. Ask manufacturers to include in their advertising some statement calling attention to the need for better use of tires, such as those contained in a sheet attached to the announcement. Some of the largest manufacturers have already agreed to this.

"The British restriction plan," says the Chamber, "arbitrarily limits the amount of crude rubber that can be shipped by planters out of the British East Indies. While it is now ruled that 100 per cent of 'standard production' may be shipped after Feb. 1, this is based on 'standard production in 1920,' and is not at all the rubber which could be available without restriction.

"The United States uses 70 per cent of the world's crude rubber. If a fair price is 36 cents per pound the present prices, hovering around $1, will, according to Secretary Hoover, cost the American public $660,000,000 this year or an excess charge over a fair price of from $20 to $30 per set for each light automobile and from $50 to $60 per set for each heavy car."

The latest British estimate says that British rubber companies have increased their profits this year by about $250,000,000 and that the bulk represented America's purchases, estimated to have exceeded $500,000,000 in the last twelve months.

Chrysler Has New Six

(*Continued from page* 23)

structure and belt moulding are in black with a silver gray finish employed below the bead.

Heaters are fitted in all closed models while the aluminum binding together with felt around the pedals and controls keeps out draughts. Standard equipment includes: double automatic windshield cleaner, twin mirrors attached to one piece Fisher windshield, 90 mile speedometer, radiometer, electric cigar lighter, clock. Instruments are arranged in three groups on the walnut finish instrument panel. The indirect lighting system is used.

McDUFFEE IS ADVANCED

INDIANAPOLIS, Dec. 26.—Joseph H. McDuffee has been advanced to the position of general sales manager of the Prest-O-Lite Co., it was announced here this week by Robert J. Hoffman, vice-president of the company. McDuffee is well known to the industry as a former official of the Cole and of the Elgin.

Parts and Accessory Trade Closes Its Greatest Year

First Quarter of 1926 Expected 25 Per Cent Ahead of Last Three Months of 1925

NEW YORK, Dec. 31.—The automotive parts and accessory business is closing the biggest year in its history and will enter 1926 with excellent prospects, according to the Motor and Accessory Manufacturers' Association.

A large group of representative members, analyzing sales expectations for the first quarter of next year, anticipated a volume in that period exceeding the current quarter by approximately 25 per cent and the first quarter of 1925 by upwards of 30 per cent.

These companies reported shipments for the month of November at 140 per cent of the January level as compared with 188 per cent for October and 158 per cent for September. November business exceeded February and March as well as January but fell behind all other months of the year up to date.

Manufacturers in all divisions of the industry reported anticipated gains in business in the coming quarter over the first and current quarters of 1925. Anticipated gradual increase in car and truck production as the new year gets under way, the original equipment makers looked for a steady but not steep increase in business in the early part of 1926. Makers of products sold to the trade looked for larger increases in view of the tremendous gain this year in car and truck registrations.

Jobbers throughout the United States and Canada reported November business generally less than October but materially ahead of November a year ago. Increased use of closed cars has materially improved automotive jobbers' business for the late fall months.

MILWAUKEE TRADES MEET

MILWAUKEE, Wis., Dec. 26.—An attendance estimated at 500 greeted the appearance of nationally known figures in the automobile industry at the sales conference held at the Pfister hotel here Dec. 16, sponsored by the Milwaukee Automotive Dealers' Association. The conference featured a discussion on the building and developing of sales plans, and training of salesmen on a scientific basis, led by noted authorities on the subjects.

NEW LOCOMBILE DEALERS

BRIDGEPORT, CONN., Dec. 26.—Locomobile Company of America, Inc., announces the appointment of the following as direct dealers to handle the Junior Eight:

Byrne Locomobile Company of Lake Wales, Lake Wales, Fla., H. W. F. Motor Sales Co., Peoria, Ill., Ralph N. Baker, Springfield, Ill., Locomobile Company of Norwalk, Norwalk, Conn., Locomobile Co. of Fresno, Fresno, Cal., B. E. Northland, Santa Ana, Cal., H. C. Field, Brawley, Cal.

Horses Are Scarce In Oakland

OAKLAND, CAL., Dec. 26.—Horses are so scarce in California that no one will furnish a team of them to this city of 250,000 inhabitants. Bids on two 1,600-pound draft horses were asked by the street department three weeks ago. The department wanted the horses to haul plows and scrapers. Not a single bid was received. The municipal purchasing agent was then authorized to buy the horses in the open market, but when he went to the said o.m., there was not a draft horse to be had. Mayor John L. Davie has now instructed the purchasing agent to organize an expedition into the San Ramon and Livermore valleys, and further, even back into the high Sierras, if necessary, where horses are said still to be in existence.

ZONE SALESMEN MEET

ATLANTA, Dec. 26.—Chevrolet salesmen in the ten zones which comprise the southeastern division met recently for their annual conference in Atlanta, and each one of the ten zone representatives was awarded a special bonus of $100 for exceeding his 1925 sales quota. The increases over last year's volume ranged from 28 per cent to as high as 236 per cent, every zone showing a substantial gain. L. C. Costley, sales manager for the Atlanta branch, presided at the meeting.

FLINT PROMOTES KAUFFELT

DALLAS, Tex., Dec. 26.—L. M. Kauffelt, district manager for the Flint Motor Company with headquarters at Dallas, has been made regional manager for the company with headquarters at Kansas City. His new territory will cover Iowa, Nebraska, Illinois, Kansas, Missouri, Oklahoma, Texas and New Mexico. R. Roscoe Shumate, assistant sales manager of the Dallas branch has been named manager of the Dallas branch.

Willys Export Corp. Will Take Foreign Federal Sales

TOLEDO, Dec. 26.—Announcement was made here today that the John N. Willys Export Corporation would take over export sales for Federal trucks. The agreement goes into effect January 1.

Under the new arrangements, The John N. Willys Export Corporation will handle all sales of Federal trucks in the export territories. The agreement means that the export division of the Federal Motor Truck Company will be eliminated.

Ward Mohun, export manager for the Federal company, will joint the export corporation forces, it also was announced. He will assume his duties January 1 and will in all probability be given the position of manager of truck sales.

Stearns Will Keep Identity After Merger with Willys

Overland Head Says Car Will Still Be Marketed Under Same Name and Built as at Present

CLEVELAND, O., Dec. 26.—The F. B. Stearns Co., pioneer automobile manufacturer of this city will not lose its identity by the purchase of the plant by the Willys-Overland Co., of Toledo.

John N. Willys, of Toledo, president of the purchasing company so informed Cleveland men interested in the future of the local plant. While en route to Cleveland after the purchase was announced here, Mr. Willys stated that the Stearns car would be operated entirely independent of the Willys-Overland plant.

The Stearns plant will be operated here on even a greater scale than in the past, under plans formulated for pushing the sale of the cars.

George W. Brooker, president of the Stearns Co., said that the manufacture of Stearns-Knight cars would be continued and efforts made to increase sales.

For the last 10 years Willys has controlled the manufacture of Knight engines. The Knight type engine has been a part of the Stearns business for many years. Acquisition of the Stearns plant means that there will be only two makes of passenger cars equipped with Knight engines that are manufactured in the United States.

GOTFREDSON HAS SALESROOM

CLEVELAND, Dec. 26.—Generally excellent increases in sales recently have made necessary the leasing of a new large down-town salesroom by the Gotfredson corporation, truck division, according to announcement here today by A. B. Miller, sales manager.

NEW GARDNER DEALERS

ST. LOUIS, Dec. 26.—New dealers added by the Gardner Motor Co., include the following:

James J. Sullivan, Jr., Los Angeles, Brawley Motors Co., Brawley, Cal., Diversey-Kimball Garage, Chicago, East Side Motor Sales, Chicago, Gudmundson & Schumm Motor Sales, Chicago, Johnstown-Chandler Co., Johnstown, Pa., M. E. Rose, Eureka, Cal., The Stone Motors Co., Inc., Schenectady, N. Y., J. P. Mosier, St. Francois, Mo., Austin Park Garage & Motor Sales, Chicago., West Side Auto Repairs, Philadelphia, Gardner-New York Corp., New York City, Schlensker Auto Co., Evansville, Ind.

CHRYSLER DEALERS MEET

CINCINNATI, O., Dec. 26.—Formal opening of the new home of the Chrysler car at the Gilbert Avenue and Court Street plant of the Robert Sloan Company took place recently and a get-together session of Chrysler dealers in the Cincinnati territory was held by Mr. Sloan in the afternoon and in the evening a dinner was given at the Business Men's Club. Among the guests at the dinner was J. W. Fields, vice-president and sales manager of the Chrysler Motor Corporation, Detroit

Louisiana Reports Heavy Sales in Last 3 Months

Winter Expected to Be a Record Breaker and That Business Will Continue Good

NEW ORLEANS, Dec. 26.—Louisiana is well up among the the states reporting heavy automobile sales during the past three months. Indications are that the high wave of business will continue into the spring months, usually the best in the year from the dealers' point of view. The pleasing volume of business is attributed by dealers in New Orleans to the fact that conditions throughout Louisiana and Mississippi are sound, to the absence of unemployment and to the plentiful supply of money in the hands of prospective buyers.

New Orleans dealers feel confident that this winter will be a record-breaker in sales and that business will continue at its high crest into the spring months. In anticipation of this increased business, several distributors have already arranged for larger stocks of cars than ever carried in New Orleans before.

This year, more than ever before, dealers assert, the automobile played a bigger part in "Christmas giving." Many dealers arranged attractive terms and advertised their cars as suitable Christmas gifts.

During the year, the closed car continued to win in favor throughout this section of the South. Another favorable indication is that many families are provided with at least two cars. "I have been traveling around the city," one New Orleans dealer said, "and I find that two-car garages are as common as one-car garages were two or three years ago. And whereas the one-car garage was an added feature then, it is emphatically standard now. Just ask the real estate man what chance there is for him to sell a home which is not equipped to house an automobile, or, in the better districts, two automobiles."

OVERLAND DEALERS MEET

SAN ANTONIO, Tex., Dec. 26.—Willys-Knight and Overland dealers from the southwest and most parts of central Texas attended a sales congress at the Gunter Hotel this week. J. P. LeNoir, sales manager for the San Antonio Overland Company, distributor for Willys-Knight and Overlands in this district, was in charge of the conference. E. E. Young of Austin, president of the Austin Automotive Trades Association and Willys-Knight and Overland dealer at Austin, was the chief speaker for the occasion. Some 50 dealers were at the conference.

STREET NAMED BENDIX

SOUTH BEND, Ind., Dec. 26.—The City council of South Bend recently passed a resolution changing the name of North Anthony Street to Bendix Drive, as an appreciation for the increased industrial activity brought to the city by the Bendix Brake Company. The plant is now turning out 2,000 sets of brakes a day, according to the officials, and this production will be stepped up as rapidly as the various new plant units are completed.

CHEVROLET DEALERS MEET

SAN ANTONIO, Tex., Dec. 26.—Some 50 Chevrolet salesmen of the San Antonio territory attended a sales conference here this week at which J. E. Grim, advertising manager, and R. K. White, sales promotion manager of the Chevrolet Motor Company, were the chief speakers. Mr. Grimm said the company would spend $6,500,000 for advertising in 1926 and declared the salesmen could cash in on the company advertising by going after business. The company men will hold conferences in all the large cities of Texas before returning north.

NEW HUDSON DEALERS

WASHINGTON, Dec. 26.—Two new Hudson and Essex dealers have been announced here: The I. C. Barber Motor Company, Fourteenth and Irving Streets, Northwest, and the Moses Motor Company, with show rooms at Connecticut Avenue and R Streets.

Moto Meter Co. Holds Its Eighth Annual Convention

NEW YORK, Dec. 26.—The eighth annual sales convention of the Moto Meter Company, Inc., which was held at the factory offices, Long Island City, was attended by the five district managers, the entire road organization and upwards of 100 from the factory. Sales policies for 1926, advertising schedules and general policies constituted most of the program.

The company has just completed the biggest year in its history, manufacturing approximately 2,000,000 Moto Meters. The plan for 1926 is to go 1,000,000 in sales beyond 1925.

The improved Moto Meter line for next year carries refinements in two models —the de luxe and standard models. Both of these models have gold-finished dials, with script letters. There is also a new retaining ring with the laurel design. Prices remain the same as last year.

DEALER FETES EMPLOYES

EVANSVILLE, Ind., Dec. 26.—All departments of the Wabash Valley Motor Company, Eighth and Walnut Streets, Hudson and Essex distributor and dealer, were represented at the regular monthly employes' "get together" meeting Friday night, in the company's salesroom. Talks on automotive sales and service problems were made by Carl Maxwell, president; and C. S. McKamy, secretary-treasurer. Sixty employes were present. The Christmas season was observed with a social hour of music and refreshments.

Dow-Jones Announces Terms Of Fageol-Hall-Brill Merger

American Car & Foundry Co. Will Have Control of New Firm When Deal Is Completed

SAN FRANCISCO, Dec. 26.—Negotiations between the American Car and Foundry Company, J. G. Brill & Co., and the Fageol Companies of California and Ohio, have progressed so far in the voting by the stockholders of the Fageol Company of California on the proposed merger, that announcement is made through the Dow-Jones Company that the combination will be consummated. This statement, however, adds:

"Official announcement of the consummation of the plan is looked for within a few weeks."

This is taken by automotive interests here as indicating that the voting by the Fageol stockholders has been slow, and probably is not yet completed, though it is generally believed that the two-thirds majority necessary for the consummation of the merger will be obtained. The Dow-Jones statement continues:

"New J. G. Brill Company stocks—'when issued'—are being quoted in the street at 55 for class 'A' and 30 for class 'B.' This would be equivalent to 140 for J. G. Brill present common, and 110 for present preferred on the basis of proposed terms, which, while no public announcement has been made, are understood to be two shares of class 'A' and one share of class 'B' in the new corporation (i. e., the merger) for one share of the present Brill common; and two shares of class 'A' in the new corporation for one share of the present preferred. In outline, the plan, it is understood, will provide as follows:

"Class 'A' would be eventually retired, giving American Car and Foundry control in class 'B.' Class 'A' stock is to stand at $50 par, being non-voting, and callable at $60. Class 'B' common is to be of no par value. Class 'A' stock is to be underwritten at $55, and dividends of $4 a year on 'A' and $2 on 'B' are in prospect.

"The two Fageol Motors—California and Ohio—and the Hall-Scott Motors of New York and California, having been acquired, the merger will be complete with the acquisition of Brill, with the American Car and Foundry holding the controlling interest in Brill."

TIME PAYMENTS ON REPAIRS

CLEVELAND, Dec. 26.—Stimulation of general reconditioning of owners' cars and of garage repair business generally is expected as a result of the introduction by the Superior Boulevard Garage company, Cleveland, of the time payment plan on repair work. The payment plan is similar to that in use in sales of cars on a deferred payment plan. Automotive interests look for the general adoption of the plan here.

Top Cadillac Production Is Assured Throughout Winter

Company Enters December With 3,000 Surplus Orders — Sells 15,000 in Five Months

DETROIT, Dec. 31.—August, September, October and November shipments by the Cadillac Motor Car company were double those of the corresponding months of 1924, according to a statement just issued. At the end of November, Cadillac records revealed 3,000 unfilled orders, which is an unusual situation for this time of the year. This, with the current rate of incoming orders, assures capacity output throughout the winter.

In these figures, Cadillac records one of the most remarkable gains of any of the motor companies. In no twelve-month period have so many producers of high-grade cars placed on the market more popular models at reduced prices.

Popularity of this new line is shown in the statement that in the last five months of 1925 the company sold 15,000 cars—only 2,100 less than during the entire fiscal year from August, 1924, to August, 1925.

October shipments were 3,200. November shows a similar figure, and December shipments will total 3,000. So great is the current demand that the usual December shutdown for inventory will be postponed.

While Cadillac unit production figures are not impressive as compared with volume production such as that of Ford and Chevrolet, they become decidedly so when converted into dollars. The 100 per cent increase in output means a tremendous increase in the amount invested in new Cadillac cars by the buying public. While officials of the company are unwilling to state a dollar volume of Cadillac sales, it is understood that $100,000,000 is a conservative figure.

PHILADELPHIA PLANS SHOW

PHILADELPHIA, Dec. 26.—There will be at least 39 exhibitors displaying from 45 to 50 different makes of cars at the twenty-fifth annual automobile show of the Philadelphia Automobile Trade Association, to be held in the Commercial Museum, January 16-23. An important innovation will be a model shop and garage, fully equipped, to be conducted and managed by the accessory exhibitors, who will take the entire space for this feature that was used last year for all the accessory exhibits, in the room in the rear of the car display. Provision has been made for 62 accessory displays, in addition.

DUGGAN SUCCEEDS KERBY

TORONTO, Dec. 26.—P. J. Duggan has succeeded R. D. Kerby as sales manager of Durant Motors of Canada, Ltd., Leaside, Ont. Mr. Kerby was recently appointed assistant general manager.

Cleveland to Use No More Horses

CLEVELAND, Dec. 26.—Motor trucks have now replaced the last horse-drawn vehicles in the service of the city of Cleveland, according to announcement here by Howell L. Wright, city utilities director.

Two teams of work horses which for years hauled "trouble" wagons of the light and water divisions of Wright's department have been granted a permanent vacation at the city farm.

Two new White trucks have been thrown into service to replace the horse-drawn vehicles, making a total of 206 Whites in the city's truck fleet.

Dealer Gives Premiums in Sale of New Motor Cars

DALLAS, Tex., Dec. 26.—The Dallas Rickenbacker Company is offering some special inducements to move new cars during the next few days. The Dallas dealers declare the people have never got over the desire to get something for nothing since the days when "a pair of socks was given with each pair of shoes bought, or a pair of suspenders with each pair of pants." They say the people like the idea of having "something thrown in" when any purchase is made.

Hence the Dallas Rickenbacker company has been offering $42 worth of extra equipment, 50 gallons of gasoline, a gallon of oil, a saving of $100 on the price of the car, free inspection for one year, service guarantee of 90 days and free driving lessons to any member of the family.

The result of these "free things" was as desired. They caused the prospective buyers to make a decision. Several new Rickenbackers were moved out and others are to be delivered in the near future on the same basis. There was no hike in the regular price of Rickenbacker to make room for the "trimmings thrown in." It was just like the old buggy dealer giving a whip, a can of axle grease and a laprobe free with each buggy sold.

BIFLEX ENLARGES PLANT

WAUKEGAN, Ill., Dec. 26.—The Biflex Products Company, maker of Biflex cushion bumpers, is adding another unit to its plant. The new building will provide 15,000 additional square feet. It will be a one-story structure and modern throughout. A new switch track accommodating four freight cars at one time will run parallel to the building. This additional factory space is made necessary by increased output, and in order to relieve the Halladay plant at Decatur, Ill., of some of the manufacturing burden.

Oakland Closes Second Best Sales Year in Its History

Production and Business in 1925 Approximately 26 Per Cent Over 1924

PONTIAC, Mich., Dec. 31.—In the year soon to close the Oakland Motor Car company will have enjoyed the second greatest sales year in its history, being exceeded only by the boom year following the late war.

The production and sales this year are approximately 26 per cent greater than during 1924. Sales of the new Oakland Six have broken monthly records since the car was introduced toward the last of July. During the last five months of the year, more than 60 per cent of the total year's production and sales were made.

In Detroit, Chicago, Cleveland, Pittsburgh and other cities throughout the country, the Oakland Six enjoyed the greatest fall business in its history. During the month of October, all previous monthly records for production and sales were shattered.

Production schedules had to be revised a month after the new Oakland Six was announced and daily output was increased very rapidly until 375 cars a day were being turned out late in the fall, which was the maximum capacity.

When production capacity had been reached, $750,000 was spent for more equipment to permit a daily production of 500 Oakland Six cars, which schedule will be reached early in the spring. This is in addition to capacity required for the new General Motors Six, which will be produced and distributed as a companion car to the Oakland.

DURANT DEALERS MEET

OAKLAND, Cal., Dec. 26.—Statement that 1925 had been the greatest merchandising year for the Durant products, and announcement that the most aggressive merchandising campaign ever carried on in the West would be started January 1, 1926, featured the annual convention of Durant and Star dealers in Oakland, late in December. Direct dealers from Idaho, Oregon, Nevada, Arizona, Washington, the Hawaiian Islands and all parts of California were in attendance to the number of 600. Norman DeVaux, vice-president and general manager, presided at the meetings, assisted by H. W. Curtis, director of sales, and Ernest Jones, assistant to Curtis.

THOMPSON BOOSTS VINTON

CLEVELAND, O., Dec. 26.—Thompson Products, Inc., valve and bolt manufacturers, Cleveland, announce the promotion of Al Vinton to district manager of the Pacific coast territory, with headquarters in San Francisco. Vinton was formerly a Thompson sales representative in the Kansas City territory.

Cincinnati Show Space Is Allotted to Car Dealers

Purple, With Splashes of Gold and Green to Be Decorative Motif at Display

CINCINNATI, Dec. 26.—Effects of gorgeous splendor accompanying a Maxfield Parrish motif in purple with splashes of gold and green will be the setting for the decorations of the 1926 Automobile Show of the Cincinnati Automobile Dealers' Association Jan. 16 to 23, as described to the members of the C. A. D. A. by Manager Harry T. Gardner.

The occasion of the description of the 1926 show was the annual allotment of space to the prospective exhibitors which took place at the Grand Hotel. This in itself was novel and interesting and was arranged with a dramatic presentation which impressed the observer with the care of the manager to make the drawing of booth space absolutely fair and impartial.

The following are the exhibitors, their space allotment and their choice number:

Herold Motor Car Co., Reo, 1,740 feet, Choice 17; Citizens Motor Car Co., Packard, 1,640 feet, Choice 21; Max R. Miller Co., Knight-Overland, 1,263 feet, Choice 23; Fulton-Kruse Motors Co., Wills St. Claire, 1,210 feet, Choice 13; Universal Car Co., Ford, 1,140, feet, Choice 5; Hodde Motor Co., Star-Durant, 1,280 feet, Choice 3; Southern Ohio Motors Co., Pierce-Arrow, 1,264 feet, Choice 15; Gilbert-Chevrolet Sales Co., Chevrolet, 1,362 feet, Choice 24.

Leyman-Buick Co., Buick, 1,980 feet, Choice 25; Nash Cincinnati Motors Co., 2,301 feet, Nash and Ajax, Choice 12; Fuller Automobile Co., Hupmobile, 1,800 feet, Choice 20; H. & T. Auto Co., Paige-Jewett, 1,700 feet, Choice 18; Hodge-Long Motor Co., Chandler Cleveland, 1,740 feet, Choice 16; Herschede Motor Car Co., Peerless, 960 feet, Choice 11; Charles Schiear Motor Co., Hudson-Essex, 1,760 feet, Choice 2; Cincinnati Automobile Co., Stutz, 640 feet, Choice 7; Cincinnati Oakland, Oakland-Pontiac, 1,760 feet, Choice 4; J. A. Gross Motor Car Co., Moon Diana, 960 feet, Choice 6. The Moon-Diana space was the same as the company had last year being the block at the entrance of the South wing of Music hall to the right of the entrance. Robert Sloan Co., Maxwell-Chrysler, 1,980 feet, Choice 22; Bishop Motor Car Co., Jordan, 960 feet, Choice 14; Bauer Auto Sales Co., Lincoln, 1,760 feet, Choice 9; Pfaff Motor Car Co., Marmon, 1,440 feet, Choice 1; E. S. Gahagan Company, Studebaker-Rolls Royce, 1,932 feet, Choice 19; Mason Towle Co., Dodge, 1,330 feet, Choice 8; Franklin Motor Car Cincinnati Co., 1,210 feet, Franklin-Locomobile, Choice 10.

After the member organization had been allotted, space allotments of 506 feet were made to Velie; 924 feet to Flint and 550 to Cincinnati Cadillac Co. A few small spaces were reserved for exhibitors of accessories. Two other applicants for space were not able to obtain allotments because their papers did not arrive in time to be considered.

NEW PAIGE DEALERS

DETROIT, Dec. 26.—The Paige-Detroit Motor Car Company has appointed the following new dealers:

Troost Paige-Jewett Co., Kansas City, Mo.; Jaige-Jewett Co., Newark, N. J.; Watkins Motor Co., Chaffee, Mo.; William V. Bird, Coeur D Alene, Ida.; F. H. Van Dorn, Red Bank, N. J.; Paige-Jewett Corp., Appalachia, Va.; Auto Service Garage, Dry Ridge, Ky., Gravois Paige-Jewett Co., St. Louis, Mo.; Linton Motor Co., Lowell, Ariz.; J. D. Rake, Richwood, W. Va.; Mulligan Paige-Jewett Co., Savanah, Ga.; Decatur Paige-Jewett Sales, Decatur, Ind.; W. A. Grate, Ashley, Ind. The Lostro Auto Sales, Columbus, O.

N. T. D. A. TO MEET AT SHOW

NEW YORK, Dec. 26.—George J. Burger, secretary-treasurer of the National Tire Dealers' Association, announces that the board of directors will hold its next meeting in Chicago Feb. 1 and 2, during the Chicago show. The Greater New York Tire Dealers' Association of which Burger is president will hold its annual dinner-dance Jan. 14 at Hotel Pennsylvania, during the New York show. The Chicago Tire Dealers' Association will probably hold its annual dinner-dance during the Chicago show but the date has not been selected.

D. B. EXPORT MEN LEAVE

DETROIT, Dec. 31.—In line with the program of expansion in the export field, nine men have been sent by the export division of Dodge Brothers, Inc., to various parts of the world to supplement men in the various territories. Three have been sent to Asia, three to Europe, two to South America and one to South Africa. These men will open up territory which has not been developed and will specialize in helping dealers in the territories to which they are assigned. Among the new branches which will be opened by the export division are the following: Johannesburg, Singapore, Tsien-Tsien, Hamburg, Buenos Aires. Another branch for Southern Europe will be opened in the near future.

Ford Engineers Show Plans Of New Airship to Coolidge

WASHINGTON, Dec. 26.—Agents of Henry Ford here have presented to President Coolidge at the White House secret plans for construction of a giant, all-metal dirigible, to be as large as the Los Angeles and to be safer from destruction than any bird machine ever devised.

The plans were described by W. B. Mayo, Ford aeronautic engineer, who was accompanied by Howard Coffin, head of the Government's airship production during the war, and since a member of the Morrow Aircraft Commission. Mr. Mayo informed the President that every primary section has been subjected to every known test following its construction and has withstood them all in a most remarkable manner.

The new machine is to be of aluminum, it is understood, but unusual secrecy has attended the development of the new air monster and Mayo brought no written plans. Special scientific tests are said to have developed machinery which defies all corrosive acids that in past machines have eaten away substantial parts and subjected the birdmen to grave danger. The metal dirigible will be able to use either hydrogen or helium.

Mexican Demand for U. S. Cars Shows Heavy Advance

Estimates Show Volume Has Doubled in 1925 over 1924—Prices Average High

LAREDO, Tex., Dec. 26.—That American made automobiles are finding favor in Mexico and the trade with the United States is increasing at a rapid rate is indicated by reports made by Brennan & Corrigan, custom brokers here.

According to their report a total of 772 car loads of automobiles passed through Laredo for Mexican points in 1924 while already more than 1,200 car loads have been exported through Laredo so far this year and another 1,000 loads are scheduled to move before the 15th of January. In 1924 a total of 5,000 American made automobiles passed through here for Mexican points. This year the total number will reach 10,000 it is said. The majority of the automobiles routed through here went to Monterey, San Louis Potisi, Victoria, Saltillo and Mexico City. In price they averaged more than $1,000 each.

Automobiles passing through here for Mexican points are paid for by purchasers before they are delivered on Mexican soil unless the purchaser happens to be a representative of some factory with a financial rating that is gilt-edged. A good number of the cars passing through here this year originated at San Antonio and Dallas and were results of sales efforts on the part of automobile concerns in those cities.

The value of automobile tires, accessories and parts passing through here for Mexican points during the year approximate $750,000,000 it is said. This is three times the amount passing through here last year. A considerable amount of these items originated at San Antonio and Dallas where Mexican dealers and Mexican car owners are inclined to shop for prompt shipment.

Reports brought to the border are that four of every five cars of recent vintage seen in Mexico are American made.

CHEVROLET DEALERS BANQUET

NEW ORLEANS, Dec. 26.—One hundred and sixty-five agents and dealers of the New Orleans district were guests of the Chevrolet Motor Company at a banquet in the convention hall of the St. Charles Hotel Saturday night, November 27 in celebration of their record as a leading sales organization. W. F. Doyle, sales manager of the district, which comprises all of Louisiana, half of Mississippi and part of Alabama, was toastmaster. The list of speakers included: E. W. Fuhr, regional sales manager of St. Louis; C. E. Dawson, assistant general sales manager, Detroit; R. K. White, service and promotion manager, Detroit; J. E. Grim, advertising manager, Detroit and L. F. Garlock, assistant service and promotion manager, Detroit.

Nash December Business Seen 50 Per Cent Ahead of 1924

Orders by Middle of Month Are More Than All of Same Period Last Year

KENOSHA, Wis., Dec. 31.—December Nash business is running at a rate better than 50 per cent over December 1924, which was the greatest December in Nash history, according to E. H. McCarty, general sales manager of the company. "Despite the general belief," says Mr. McCarty, "that this pre-holiday season is supposed to witness a slackening of sales throughout the country, we are enjoying a brisk demand that gives promise of surpassing last December sales by at least 50 to 60 per cent. At the middle of the month, we had bona fide orders on hand for 50 per cent more Nash cars than during the whole of December a year ago. And December, 1924 was the greatest December in Nash history.

"There are several ways to account for this unusual selling activity. In the first place, Nash sales were considerably stimulated by the Nash announcement of price reductions in November. On top of this our dealers have been concentrating their selling efforts during the last few months toward educating the public to the special winter features of the Nash cars.

"The increasing popularity of the automobile as a gift for Christmas has also played an important part in building up our volume of business this month. The stability of general business conditions and the sound prosperity of the country is largely responsible for this active Christmas buying.

"I understand that the Christmas savings funds in Chicago alone reached a total this year of $25,000,000 as compared with $20,000,000 for 1924. And according to some recent figures given out by the American Bankers Association, the savings deposits for the entire country total $2,000,000,000 more than a year ago. All this is finding reflection in increased motor car buying, and we are feeling the effects by a volume of orders that is far above all records for the corresponding period of previous years."

OHIO DEALERS HEAR N. A. D. A.

COLUMBUS, O., Dec. 26.—More than 260 dealers and salesmen in central Ohio gathered at the Deshler Hotel for afternoon and evening sessions when dealers and salesmen's problems were discussed and explained. The meeting, which is among the first of a series to be held under the auspices of the N. A. D. A., was addressed by Lynn M. Shaw, assistant general manager; H. D. Bullock, sales analyst and A. R. Kroh, sales promotion advisor of the N. A. D. A. A. C. Faeh, manager of the Ohio Council of the N A. D. A., arranged for the meeting and made a short talk in introducing the speakers.

Booth Joins Ajax Motors



Harold W. Booth, former sales manager of Willys-Overland St. Louis branch, now assistant Ajax sales chief.

TOWN NAMED FORDSON

DETROIT, Dec. 26.—Springwells, a small municipality west of Detroit, has voted to change its name to Fordson, in honor of the Ford family. The vote was 269 for to 237 against. By its new name, Fordson will honor every member of the Ford family, the mother and father of Henry Ford, Mr. Ford and Mrs. Ford and his brothers and son Edsel Ford, and Mrs. Edsel Ford. While members of the Ford family do not object to the city using the name they have so far refused to discuss the change.

RECOURSE IS OPPOSED

CHARLOTTE, N. C., Dec. 26.—Proposals to revise automobile financing contracts to include a recourse clause is becoming a widely discussed subject among automobile dealers and distributors in this territory. The subject was discussed by representatives of the Commercial Investment Company, of New York, and Carolina dealers and distributors of Willys-Knight and Overland lines, at a conference here. The dealers vigorously opposed the proposal.

TRUCK DEALERS MEET

ATLANTA, Dec 26.—International Truck dealers in the Atlanta territory attending the annual sales conference of the Atlanta branch of the company recently were told that the company's truck sales in this territory during 1925 have been approximately 300 per cent greater than they were in 1924, and that all indications promise that 1926 sales will exceed 1925 by at least 100 per cent.

South African Conditions Show Good 1926 Prospect

Authority Sees Need, However, of Better Contract System on Part of U. S. Car Makers

NEW YORK, Dec. 31.—William Campbell, manufacturers' representative of Johannesburg, British South Africa, who for 20 years has handled a wide line of American cars and parts for that country, is on his annual visit to the United States and will remain until after the national shows.

He reports general conditions in South Africa as unusually favorable, due to the phenomenal corn and fruit crops. The only cloud on the horizon is the seamen's strike, which interferes with exportation of citrous fruits. The corn crop this year was the largest in the country's history and had an added value due to the veritable chain of grain warehouses which the government has erected throughout the country and the increase in railroad rolling stock.

Nevertheless several of the largest importers of automobiles are in a more or less nervous condition, due to changes made by American manufacturers in their South African representation. Annual contracts, under which these importers have been working, were never so unpopular as now, because of cancellations by cable. This question is being discussed in South Africa more than ever.

Too high prices placed on cars by certain importers, and too little attention to service are also causing disturbance. There are examples of 300 per cent profits on replacement parts, which is not considered good for the trade.

European manufacturers have already sensed the situation and some who have been luke-warm in the South African field are planning for permanent representation and giving five-year contracts. Mr. Campbell believes that American manufacturers should get into direct contact with the foreign field, just as they are in the domestic field.

CHANGES TRADE NAME

MARION, Ind., Dec. 26.—The Indiana Manufacturing and Electric Company, manufacturers of automobile accessories and Indiana Hyperdyne radio receivers, has announced that the trade name of the company's entire line of products will be changed to "Case." This name will be used on all their products regardless of their nature or through what channels they are marketed The Indiana Manufacturing and Electric Company has been operating in combination with a subsidiary company, the Indiana Radio and Electric Company in the manufacture and marketing of this line of radio receivers. These two companies have been consolidated, the assets of the Indiana Radio and Electric Company have been completely absorbed by the manufacturing company and the business will be conducted and owned entirely by the latter company.

Along Automobile Row

LITTLE ROCK, Ark.—T. S. Farrell, formerly district agent for the Garford Motor Truck Company, has formed the Rickenbacker Farrell Company, which will have the agency for the Rickenbacker automobile agency in all except seven counties of the state. The location of the sales offices has not been determined, Mr. Farrell said.

MONTREAL.—Montreal Tire Sales, 1348 St. Lawrence boulevard, has gone into the radio field and is featuring the Rogers Batteryless A-C radio receiving sets.

DENVER.—Under the name of the Denver Velie Company, G. R. Pennington of the Pennington-Reed Insurance Company has taken over the Velie sales agency for this district, and is located at West Fourteenth and Bannock.

CHICAGO.—Carl M. Schonig, formerly a Hupmobile dealer, has joined the S. & M. Chevrolet Co., 8622 Commercial Avenue, as director of sales.

MONTREAL.—The Canadian Fairbanks Morse Co., Ltd., has added a complete stock of McQuay-Norris motor bearings.

HOUSTON, Tex.—The Firestone Tire & Rubber Company is to have a new home here. Announcement was made that a new building, providing more than 175,000 square feet of space will be erected to house the factory branch of the Firestone Company here.

WALNUT RIDGE, Ark.—James J. Sharum, president of the Sharum-Hopps Motor Company, has purchased all the stock of the company, retiring from the business. The company is agent for the Ford Motor Company.

MONTREAL.—Day-Martin, Ltd., has been appointed Canadian distributor of Pines Automatic Winterfronts, manufactured by the Pines Mfg. Co., Chicago.

EVANSVILLE, Ind.—The local Rickenbacker motor car agency, Edwin A. Aleon, manager, has been promoted to distributor rank for the tri-state territory covering southern Illinois and Indiana and western Kentucky, according to Mr. Aleon. The status of local agency has been changed from yearly contract to perpetual dealership. Mr. Aleon was recently in Harrisburg, Ill., to arrange for the opening of a retail dealer agency.

CONWAY, Ark.—C. C. Webb, formerly a salesman for the J. F. Jones Franklin Company at Little Rock and more recently connected with the Bulman Furniture Company here, has assumed his duties as manager of the James Motor Company here succeeding B. B. Drinkard.

CHICAGO.—The Chevrolet agency of Ross & Kushler, Inc., 1832 Irving Park Boulevard, has been dissolved. Mr. Ross has retained the Irving Park store while Mr. Kushler has purchased the business of the Kennedy Motor Sales, 6317 Broadway.

WINNIPEG, Man.—Lloyd Gorman, connected with the Wood, Vallance Co., Ltd., for over 15 years, has joined the accessory department of the Miller Morse Co., Ltd., also of Winnipeg.

DAYTON, O.—The Dayton Federal Truck Co. has signed a long lease on the building at 725 S. Main Street, formerly occupied by the Green Engineering Co. This move was necessary owing to increased business enjoyed by the Dayton Federal Truck Co., distributor for the Federal-Knight and heavy duty Federals.

FT. WORTH, Tex.—The Packard-Scruggs Company has added a Hudson-Essex agency to its Packard agency by appointment from the Hudson Motor Car Company of Detroit, and will handle the new line from its present location at 300 Throckmorton.

EVANSVILLE, Ind.—The Stickard Motor company at Princeton, Ky., has been signed as Willys-Knight and Overland retail dealer by the Bennighof-Nolan Company, distributor. The Stickard agency marks the 50th dealer point supplied in the Tri-State territory covering southern Indiana and Illinois and western Kentucky by the Bennighof-Nolan Company.

MONTREAL.—Paul-Smith, Reg'd, has been appointed selling agent for Quebec for Snap-On-wrench sets and tools, manufactured by the Snap-On-Wrench Co., Milwaukee.

MINNEAPOLIS.—Ford dealers from four states have closed a winter campaign sales meeting with officials of the Twin City branch. Agency managers were present from Minnesota, South Dakota, Wisconsin and Iowa. H. M. Bradford, assistant manager of the branch, presided.

CHICAGO.—The Northwest Buick Co., 3444 Lawrence Avenue, has broken ground for its new $160,000 home at Hamlin and Lawrence Avenues.

SAN FRANCISCO.—James Warden, Jr., has been appointed manager of the Ajax division of the Pacific Nash Motor Company, with headquarters in the sales-offices of the Ajax on Van Ness Avenue, San Francisco.

MONTREAL.—Mark-Kieran & Co., have been selected Canadian representatives for the products of the Zip Abrasive Co., Cleveland, O.

JACKSONVILLE, Fla.—The Bacon Motors Co., Hudson and Essex dealer in Jacksonville and the adjacent Florida territory, has announced plans for the construction of a substantial addition to the company's Jacksonville sales rooms and service station.

MILWAUKEE.—Jung & Reul Motor Co. has been organized at Jefferson, Wis., to handle Chevrolets exclusively. Earl Jung and Roy Reul, firm members, were formerly with the Jefferson Auto Co.

CHICAGO.—The Dashiell Motor Co., 2542 South Michigan Avenue, distributors of Dodge and Graham Brothers vehicles, has opened a new display room devoted entirely to the sale of used cars at 2522 South Michigan.

PORTLAND, Ore.—Appointment of J. C. Lawson Motor Company, East 10th street and Hawthorne Avenue, as East Side representatives for Oldsmobile Company of Oregon, is announced. Prior to coming to Portland, Mr. Lawson for five years was with the factory branch of the Willys-Overland Company at Winnipeg, Canada, and for the past two years has been associated with the East Side Overland Co.

STEUBENVILLE, O.—Papers have been filed with the secretary of state chartering the Reo Service & Sales Co., with a capital of $75,000 to operate a sales agency and service station.

CLEVELAND.—The Oakland dealer organization in the Cleveland district has been expanded by the addition of another showroom for the display of Oakland sixes. C. A. O'Hern has just opened a new Oakland display room at Chester Avenue and E. 30th Street, directly opposite the big plant of the Towell Cadillac Company.

JACKSONVILLE, Fla.—Lucian Powell, Jr., 426 W. Adams Street, Jacksonville, has been appointed as a dealer to handle Pierce-Arrow in this city, and also will act as distributor of the Pierce-Arrow in the adjacent North Florida territory. Mr. Powell also handles the Oldsmobile in the same territory, and will continue to handle this line in addition to the Pierce-Arrow.

CHICAGO.—The Dashiell Motor Co., distributors of Dodge Brothers passenger cars and Graham Brothers trucks, has opened a new branch at 3430 North Crawford Avenue, under the management of Walter Felton.

LOS ANGELES.—Val Haresnape, member of the contest board of the American Automobile Association, has accepted the general managership and vice presidency of the Al G. Faulkner, Inc., metropolitan Hudson & Essex dealer in Los Angeles.

WILMINGTON, Del.—Hammond Motors, Inc., has established a new Chevrolet agency in Wilmington, located at Thirty-fifth and Market streets. The company has a branch at Newark, Del., selling Buicks and Chevrolets.

CHICAGO.—The Ritt Motor Co., Chrysler dealer, has moved into its new building at 814 Diversey Parkway.

MILWAUKEE. — Hokanson - Thompson Inc., Oakland distributor in Wisconsin, has announced appointment of Sommer Motor Co., 1802 North Avenue, Milwaukee, as a Milwaukee Oakland dealer.

FORT WORTH, Tex.—The Smith-Swinney Motor Company has been organized here for the purpose of handling Hudson-Essex cars. The new concern is composed of O. B. Smith and J. G. Swinney and the sales rooms and service station are located at 115 Commerce street.

OGDEN, Utah.—Harbertson Bros. Motor Co. has been appointed "Music Master" radio dealers for Ogden and district.

CHICAGO.—Robert W. Grant, formerly connected with the Ford Motor Co., and more recently with the Dealers' Equipment Company, has been appointed manager of George E. Sherman & Co., Inc., authorized Ford and Lincoln dealer at 1725 West Division Street.

DALLAS, Tex.—Coincident with the introduction of the new six-cylinder Star cars J. F. Roark, district sales manager for Durant Motors, announced the formation of the Dallas Auto Sales Co., Inc., which will handle Star and Durant cars in Dallas and vicinity.

DENVER.—The Locomobile Sales Company has moved from 1520 Broadway to 1344 Lincoln Street. This building has been completely rearranged and re-decorated for the new tenants. Complete sales and service departments are being maintained at this address.

COLUMBUS, O.—The Lostro Sales Co., 207 North Fourth Street, Columbus, O., has been made agent for the Paige and Jewett lines by the Madden-Atkinson Auto Co., central Ohio distributors for those lines.

CHICAGO.—J. A. Dvoratchek, proprietor of Jack's Sales and Service, Rickenbacker and Rollin dealer, has opened a new salesroom and garage at 2231 Lincoln Avenue.

MILWAUKEE. — The Merkle-Chevrolet Co. has been organized in Milwaukee with capital of $50,000 by B. F. Anger, G. E. Merkle and R. G. Gunderson. Mr. Anger is president of the Anger-Chevrolet Co. which distributes these cars in Wisconsin.

DALLAS, Tex.—The Helm-Burks Motor Company, distributor of Hupmobiles in the Dallas territory, has occupied its new three-story fireproof home at Preston and Pacific streets. The retail sales rooms and the parts and service departments will be housed in the same building.

EVANSVILLE, Ind.—The C. F. Curtis Company, operating the Duco automobile finish service agency, has moved its shops from the Evansville Auto Exchange, First and Locust Streets, to the Evansville Nash Motor Company building, 1209-11 Main Street.

CHICAGO.—The Woodlawn Motor Car Sales and Service Co., 6136 Cottage Grove Avenue, dealer in Paige and Jewett, announces that it has added the Pierce-Arrow to its line.

OAKLAND, Cal.—The Kleiber Motor Company of San Francisco, has opened its permanent factory branch for sales and service of Kleiber cars and trucks at the corner of Eighteenth Avenue and East Twelfth Street, Oakland. This branch replaces the temporary location at 2919 Broadway. Jack Lynch, Frank J. Gasper and Clarence A. Hunt, the Kleiber Company's Alameda county representatives, are in charge of the new branch.

SPRINGFIELD, Mass.—Frederick J. Benn has accepted the position as manager of the Springfield Durant Company, handling the distribution of Star and Durant cars throughout central Massachusetts and the Connecticut valley region. Mr. Benn for three years was wholesale manager of the J. S. Harrington Company, Hudson and Essex distributor, and for four years before that time was with the Willys-Overland branch here.

With the Associations

Alabama Trades to Meet

BIRMINGHAM, Dec. 26.—Plans have been practically completed for the eleventh annual convention of the Alabama Automotive Trades Association which will be held in Montgomery, Ala., January 25 and 26 at the Exchange Hotel. The program and business arrangements have been made by Jim Farley, secretary, and when it comes to business nothing has been left out.

Mr. Farley has announced that there will be no social features during this meeting as they estimate it will take the full two days to get through with the business. Only the members of the association will be permitted to attend the meetings.

The meeting will be called to order at 10 o'clock on Monday morning by President E. W. Brownell. There will be an address of welcome by some Montgomery representative after which the president will make a talk on the necessity for getting down to business and a reasonable basis of co-operation in order to take care of the best interests of the automobile men.

Immediately after the president's address the convention will adjourn to meet in divisions to discuss matters of vital importance to special groups. Each group will be a separate meeting to be presided over by the director and to consider its own problems.

Meetings of the gas and oil division will be held under the guidance of Director Thad Holt of Birmingham, the meeting of the replacements parts division will be presided over by Director G. E. Woodward of Birmingham. Director Harper Johnson will have charge of the wholesale tires and accessories department, while Director J. H. Lord of Mobile will have charge of the retail tires and accessories division, Director R. M. Wikle of Talladega will be in charge of the Ford car division, the larger car division will be called to order by Director W. C. Stokes of Montgomery, the truck dealers' division will be directed by J. H. Shepherd of Tuscaloosa, the battery dealers' division will be directed by Frank Stephens of Montgomery and the repair men and cylinder grinders' division will be called to order by Director R. M. Hernandez of Birmingham.

On Tuesday morning at 10 o'clock the second meeting will be called to order. There will be the regular order of business, the presentation of resolutions and reports of the various committees. This will be followed by the election of officers and the selection of the meeting place for the next convention.

Los Angeles Engineers Meet

LOS ANGELES, Dec. 31.—Gasoline, detonation and changes in engine construction that might become necessary as a result of the researches conducted by the oil companies was the principal subject of discussion at the recent meeting of the Southern California Section, Society of Automotive Engineers, held at the City Club, Los Angeles. R. E. Haylett, of the Union Oil Company, led the discussion. Members of the Service Managers Association of Los Angeles were guests of the automotive engineers at the meeting.

Duesenberg Speaks at Chicago

Chicago, Dec. 26.—"Sho must had seben speeds," said one little colored fellow, helping to get some of the dirt off of Pete De Paolo's car. From under the car came a voice in contradiction, " 'Tain't neither, jes two—fust, an' gone."

And many other stories both amusing and instructive were told by Fred Duesenberg before the Mid West section of the Society of Automotive Engineers here last night, when he explained many of the problems that confronted the race car designer and explained the trials and achievements in adapting superchargers to his speed creations.

"And what effect will racing design have on commercial vehicles?" he was asked.

"Not so much as in past years," he answered. "And yet I believe the supercharger can be advantageously applied to passenger and commercial cars, making it possible to use smaller engines and still have greater power, acceleration and gas economy, one of the chief advantages of the supercharger in commercial work being its ability to give uniform mixture to all cylinders. This we have been unable to get when no supercharger is used, with the result that we have had to retard the spark enough to suit the cylinders with lean mixtures, thus reducing the possible power obtainable from the other cylinders."

Speaking of the new race cars which will have 91½ cu. in. displacement, Mr. Duesenberg said that he hardly knew what the limiting r.p.m. would be, that it was determined by piston speed, also the speed with which valves could be operated, and while in making a new design it was always estimated that a certain speed would be the maximum, yet when the engine was tried out, the speed went higher, due to some factor that had not been anticipated.

St. Louis Service Men Meet

ST. LOUIS, Dec. 26.—Arthur R. Mogge, president Lewis Automobile Co., and a veteran of the industry here, was the principal speaker at a recent meeting of the Service Managers' Bureau of the St. Louis A. D. A. at Hotel Claridge. Other speakers were Dr. C. W. Cuno, chemical department, Washington University, James M. Given, Davis Boring Tool Co., William J. Bell, Norman C. Hayner Co.

Mogge Meets Dealers

ST. LOUIS, Dec. 26.—J. D. Perry Lewis, merchandising director of the A. E. A., was the chief speaker at a meeting of the Automotive Accessory Association of St. Louis at the American Annex Hotel which was attended by 156 dealers in accessories and automotive supplies, wholesale and retail, in St. Louis, St. Charles, Mo., Alton, Ill., Belleville, Ill., Wood River, Ill., Granite City, Ill., and other points close to St. Louis.

Mogge spoke on the slogan, "Give Something for the Car for Christmas." He advised the automotive merchants to utilize their show windows for attractive displays and said that the whole country is spending huge sums of money for Christmas presents and that the automotive dealer has hundreds of items in stock which would make appropriate gifts.

Robert E. Lee, secretary-manager of the St. Louis A. D. A. extended an invitation to the accessory men to attend the N. A. D. A. sales Congress at Moolah Temple Dec. 14.

President Dan F. Hyland of the A. A. A. of St. Louis, who presided, appointed as a committee on program to arrange for three successive meetings of the association in January, February and March, Frank Quan of Fred Campbell Supply Co., George H. Niekamp of Beck & Corbitt Supply Co. and Stuart Campbell.

Finance Decision Discussed

RALEIGH, N. C., Dec. 26.—Representatives of automobile financing companies and a committee representing the North Carolina Automotive Trade Association held a conference here recently with the North Carolina department of revenue, when administration of the title law and repossession of cars was discussed in the light of recent court decisions. These decisions were regarded as favorable to the dealers and financing companies, but require certain recording of papers, including the mortgages and notes, as protective measures.

Indianapolis Plans Show

INDIANAPOLIS, Dec. 26.—The Indianapolis Automobile Trade Association has sent out announcements and applications for space for the Indianapolis Automobile Show which this year will be staged from February 15 to 20.

"Placing the show two weeks earlier than usual this year," says John B. Orman, manager, "the directors believe the early spring business will be greatly benefited. Up to this time the local show has been held during the early part of March, but directors and dealers have come to believe that such a date is altogether too late in these days when the show building is always adequately heated no matter what the weather."

Coming Motor Events

Automobile Shows

New York—Jan. 9-15
National Automobile Show in Grand Central Palace.

Newark, N. J.—Jan. 16-23
Nineteenth annual Automobile Show under auspices of New Jersey Automobile Exhibition Co., Chamber of Commerce Building.

Buffalo, N. Y.—Jan. 16-23
Buffalo automobile show by Buffalo Automobile Dealers' Association in 174th Regimental Armory, Carlton, C. Proctor, manager, headquarters, Hotel Statler.

Milwaukee—Jan. 16-23
18th Annual Automobile Show, Auditorium.

Cincinnati—Jan. 16-23
Cincinnati Music Hall, Cincinnati Automobile Dealers Association.

Philadelphia—Jan. 16-23
25th Annual Automobile Show at Commercial Museum Under Auspices Phila. Automobile Trade Assn.

Columbus, O.—Jan. 18-23
Show in Motor Hall by Columbus Automobile Dealers Co.

Elmira, N. Y.—Jan. 18-23
16th Annual Show, Elmira Automobile Merchants Assn., Inc., N. Y. State Armory.

Kalamazoo, Mich.—Jan. 19-23
Automobile Show in Armory by Kalamazoo Automobile Trade Association

Baltimore—Jan. 23-30
20th Annual Automobile Show and Second Annual Motor Boat Exhibit, 5th Regiment Armory, Baltimore Automobile Trade Assn., Inc.

Brooklyn—Jan. 23-30
Fifteenth Annual Automobile Show in 23rd Regiment Armory, under auspices of Brooklyn Motor Vehicle Dealers Association.

Detroit—Jan. 23-30
Detroit Auto Show in Convention Hall by Detroit Automobile Dealers Assn.

Cleveland, O.—Jan. 23-30
1926 Automobile Show under auspices of Cleveland Automobile Manufacturers' and Dealers' Association, Herbert Buckman manager, in Public Auditorium.

Jersey City—Jan. 25-30
Jersey City Automobile Show in National Guard Armory.

Rochester, N. Y.—Jan. 25-30
18th Annual Automobile Show, Edgerton Park, Rochester Automobile Dealers Assn.

Williamsport, Pa.—Jan. 25-30
Automobile Show by Williamsport Automobile Dealers Assn.

Scranton, Pa.—Jan. 25-30
Passenger Car Show in Armory, Scranton Motor Trades Assn.

Lowell, Mass.—Jan. 25-Feb. 1
Twelfth Automobile Show in Memorial Auditorium, Automobile Merchants Assn. of Lowell, Inc.

Harrisburg, Pa.—Jan. 30-Feb. 6
Harrisburg Automobile Show under auspices of Harrisburg Motor Dealers' Association.

Washington—Jan. 30-Feb. 6
Automobile show under auspices of Washington Automotive Trade Association in Washington Auditorium Building, Rudolph Jose, manager.

Washington—Jan. 30-Feb. 6
Washington Trade Association Show in Auditorium Building.

Chicago—Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.

San Francisco—Jan. 30-Feb. 6
Tenth annual Pacific Automobile Show under direction of Motor Car Dealers' Association of San Francisco, in Exposition Auditorium, G. A. Wahlgreen, 215-16 Humboldt Bank Bldg., manager.

Cumberland, Md.—Feb. 1-6
Automobile Show in New Armory, Automobile Dealers Assn. of Cumberland.

Denver—Feb. 2-6
Anual automobile show under auspices of Denver Automobile Dealers' Association, in Municipal Auditorium, Myron L. Smith, chairman of committee.

Atlantic City, N. J.—Feb. 2-9
Auto Show on Million Dollar Pier by Atlantic City Auto Dealers Assn.

Springfield, Ill.—Feb. 3-6
Seventh Annual Show in State Arsenal by Springfield Auto Dealers Assn.

Providence, R. I.—Feb. 6-13
Providence automobile show under auspices R. I. Automobile Dealers' Association, Chester I. Campbell, manager, 617 Industrial Trust Bldg.

Toledo, O.—Feb. 8-13
Annual show of Toledo Automotive Trades Association in Civic Center Garage, T. J. Cooper, manager, 925 Jefferson Avenue.

Schenectady, N. Y.—Feb. 8-13
Fifth Annual Automobile Show in State Armory by Schenectady Automotive Dealers Assn.

Syracuse, N. Y.—Feb. 8-13
18th Annual Auto Show, State Armory, Syracuse Automobile Dealers Association, Inc.

Kansas City, Mo.—Feb. 13-20
American Royal Bldg.—20th Annual Show, direction of K. C. Motor Car Dealers Association.

Des Moines—Feb. 14-20
17th Annual Automobile Show in Coliseum by Des Moines Automobile Dealers Association.

Indianapolis—Feb. 15-20
Auto Show Bldg.—15th Annual Motor Show, direction Indianapolis Auto Trade Association.

Louisville, Ky.—Feb. 15-20
Louisville Automobile Show, Armory, under the auspices of the Louisville Automobile Dealers Association, J. Garland Lea, manager.

Logan, W. Va.—Feb. 15-20
Logan Automobile Show under auspices of Logan Automobile Dealers' Association.

Great Falls, Mont.—Feb. 16-20
Eleventh Annual Show by Montana Auto Distributors Association.

Hartford, Conn.—Feb. 20-27
Automobile show by Hartford Automobile Dealers' Association in State Armory, Arthur Fifoot, manager, Hotel Bond.

St. Louis—Feb. 20-27
19th Annual Automobile Show, City Market Bldg., St. Louis Automobile Dealers Assn.

Grand Rapids, Mich.—Feb. 22-27
Seventeenth Annual Show by Passenger Car Dealers Association.

Peoria, Ill.—Feb. 22-27
Fifteenth Automobile & Accessories Show, Peoria Automobile Dealers' & Accessories Assn.

Omaha—Feb. 22-27
Twenty-first Annual Automobile Show under auspices Omaha Automobile Trade Association, Inc., in Municipal Auditorium, A. B. Waugh, manager.

Wilmington, Del.—Mar. 1-6
11th Annual Show, Hotel duPont, Wilmington Automobile Trade Assn.

Boston—Mar. 6-13
Boston Automobile Show under auspices of Boston Automobile Dealers' Association, Inc., and Boston Commercial Motor Vehicle Association, Inc., in Mechanics' Building, Chester I. Campbell, manager, 329 Park Square Bldg.

Ft. Worth, Tex.—Mar. 6-14
Show in Auto Building at Southwestern Fat Stock Show and Rodeo by Ft. Worth Automotive Trades Assn.

Conventions

New York—Jan. 11-13
Second World Motor Congress, under auspices of National Automobile Chamber of Commerce.

Chicago—Feb. 1-3
Ninth Annual Convention of National Automobile Dealers Association in La Salle Hotel.

Chicago—Feb. 2, 3
Convention of Automotive Electric Service Association in Congress Hotel.

Springfield, Ill.—Feb. 8, 9
Sixth Annual Meeting of Illinois Automotive Trade Association in the Abraham Lincoln Hotel.

Chicago—Feb. 9-16
American Drivurself Association Annual Convention.

Winston-Salem, N. C.—Mar. 17, 18
Annual Convention of North Carolina Automotive Trade Association.

Galveston, Tex.—May 12-13
Tenth annual convention of Texas Automotive Dealers' Association in Galvez Hotel.

Foreign Shows

Montreal—Jan. 23-30
1926 Motor Show under the auspices of Montreal Automobile Trade Association, Theo Dorian, manager.

London and Birmingham—Feb. 16-26
British Industries Fair of 1926.

Coming Feature Issues of Chilton Class Journal Publications

January 1—National Shows Number—Automobile Trade Journal.

January 7—Motor Age—National Shows Number.

January 14.—Motor World Wholesale—New York Show Report.

February 4—Motor Age—Chicago Show Number.

February 4—Motor World Wholesale—Chicago Show Report.

February 18—Automotive Industries—Statistical Issue.

South Dakota Tradesmen Hold Big Annual Session

Dan G. Urquhart Is Re-elected President of Association at Aberdeen Convention

HURON, S. D., Dec. 26.—With a registration of nearly 400, the Automobile Trades Association of South Dakota recently held in Aberdeen the largest and most enthusiastic convention since the organization was founded. A full two-day's program covered the items of interest to those in the automobile business, and indications point to a most successful year for 1926.

The convention was addressed by H. W. Shelby, district manager of the National Cash Register Company on the subject, "Face the Facts." Mr. Shelby's careful survey of the automobile and garage business in South Dakota in connection with his business enabled him to impart some valuable information to those present. Following his address the convention entered into a general discussion of the laws that had been passed at the last session of the legislature, and in connection with these laws, Buell F. Jones, attorney general, discussed those laws pertaining to the confiscating of personal property that has been used in the violation of the state prohibitions laws.

J. J. Murphy, chairman of the board of the railroad commission discussed the bonded warehouse law, and E. S. Goff and George Henry, director and registrar of the motor vehicle department of the office of the secretary of state, discussed the motor vehicle laws, and particularly the certificate of title law. Many points that had been misunderstood by dealers were fully explained by the officers present.

In the evening the annual banquet was held in the dining room of the Sherman Hotel, and the attendance was so large that 150 had to be accommodated in an adjoining room. The Automobile Association of Aberdeen provided an entertainment, following which those present listened to a short address by R. E. McCarthy of the Alexander Hamilton Institute on the subject of "Automobile Merchandising." After his address the principal address was given by W. V. Harrington, president of the Harrington Motor Company of Minneapolis, and a director of the National Automobile Dealers' Association. Mr. Harrington's subject was "Associations," and his address was well received by all present. After the banquet a dance was held in the new building of the Hatfield Motor Supply Company for all the visitors who cared to take part in this form of amusement.

The program the following morning was opened by an address given by R. D. Baldwin, of R. D. Baldwin & Company, Aberdeen, public accountants. Mr. Baldwin's subject was "Control" and he dealt with the necessity for good accounting systems in all places of business. Following this address the association was favored with a series of talks by three representatives of manufacturers of shop equipment. These three men, O. H. Leidy, representing the L. S. Sterrett Company, R. B. Belling, representing the Black & Decker Manufacturing Company, and B. F. Kragtorp, representing the McQuay-Norris Manufacturing Company, discussed the repair shop and the necessity for proper tools and shop equipment.

The afternoon session was addressed by Ex-Governor C. N. Herreid, president of the Citizens Trust and Savings Bank of Aberdeen, on the subject of the automobile finance problem. Following his address, F. H. Rash, a representative of the Surety National Detective Bureau of Sioux Falls, discussed before the convention the subject of "Protection." A short talk was also given by Teddy Roe representing the Standard Unit Parts Corporation on the subject of "Buy at Home." This completed the addresses and the convention then listened to the report of the committee.

Following a general discussion the convention elected a board of directors for the ensuing year as follows: Dan Urquhart, Huron, Elmer Judy, Aberdeen, George Dresser, Mitchell, G. H. Evans, Sioux Falls, A. B. McGowan, Redfield, E. J. Hanson, Watertown, O. M. Saylor of Rapid City, and E. P. Johnson of Brookings.

Immediately after the adjournment the board of directors elected the following officers for the coming year: Dan Urquhart, Huron, president; Fred J. Varie, Deadwood, vice-president; E. R. Judy, Aberdeen, treasurer; H. M. Whisman, Huron, secretary-manager. Watertown, South Dakota, was elected for the meeting place for 1926.

One of the outstanding features of the convention this year was the holding of an accessories and parts exposition in the same building in which the convention was held. About 25 firms manufacturing tires, equipment and supplies of one kind or another had fine exhibits on display.

Dealer Uses "Dog-Eat-Dog" System

BUFFALO, N. Y., Dec. 26.—The Meyer Motor Company, Studebaker distributor in Buffalo, uses what it calls the "dog-eat-dog" system in paying salesmen's commissions. Under this plan the commission for selling a car goes to the salesman, who actually puts the sale across, regardless of what may have been done by any other salesman in the way of luring the prospect to the dotted line.

Does it work?

It does.

The plan has been operative with this concern more than a year. From October 15, 1924, to October 15, 1925, using this system, the company sold 1,062 cars. The highest previous record of sale of Studebakers in Buffalo in a corresponding period, is said to have been 635. The company's executives do not credit the dog-eat-dog system with the sale of all of the cars disposed of in the period mentioned. It was partly due, they say, to improvements in the Studebaker car, and to its growing popularity.

Before adopting the present plan the Meyer people used many years a form of the protective file system, commonly employed in retail automobile merchandising, and under which it a salesman digs up a prospect and nurses him along—or pretends to—he gets the commission if that prospect is ever sold.

The company found that this plan made the salesmen indifferent to all prospects save their own. When the prospect of some other salesman came in the man on the floor, for example, would make no effort to close him up. Why should he bother? The commission would go to some one else. Chilled by this indifference the prospect would often walk out. Also it was found that under the old system salesmen were carrying a lot of dead-wood as prospects and pretending to keep in touch with them, hoping they might some time come to life and buy. This entailed use of a lot of time and energy on the part of executives whose duty is was to check up the lists of prospects. These were wasted.

The dog-eat-dog system was submitted to the sales force before it was adopted and was approved by a majority vote. It speedily eliminated the "weak sisters" on the force. Only the live ones were able to stand the gaff. It creates hard feelings now and then among the salesmen but the company's executives do not experience much trouble in smoothing these over. The system has stimulated search on the part of the salesmen for prospects and has kept the company supplied at all times with live ones to solicit.

EXTRA GENERAL DIVIDEND

AKRON, Dec. 26.—A Christmas bonus in the form of an extra 6 per cent dividend on common stock has accompanied letters mailed to stockholders of the General Tire & Rubber Co., announcing the company's annual meeting, which will be held today. As the regular common stock dividends have been on an 8 per cent basis for 1925, this brings the total common dividend disbursement for the year to 14 per cent.

EMPLOYMENT INCREASES

MOLINE, Dec. 26.—More than 600 men are now employed at the East Moline plant of the Yellow Sleeve-Valve Engine Works. This is a 100 per cent increase over a year ago. By spring it is stated the force will be increased by another hundred, according to Louis Ruthenberg, general manager.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
		"ST. 8"	
3520	5-p	Sp. Phaeton	$1,995
3750	4-p	Coupe	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"4-44"	
.....	5-p	Touring	$1,145
.....	5-p	Roadster	1,145
.....	5-p	Coupe	1,175
.....	5-p	Sedan	1,195
		"6-66"	
2850	4-p	Sport-Roadster	1,395
2860	6-p	Touring	1,395
.....	3-p	Coupe	1,445
3020	5-p	Brougham	1,495
3070	5-p	Sedan	1,695
3070	.....	Wanderer	1,745
		"8-88"	
3180	3-p	Sport-Roadster	1,695
3200	6-p	Touring	1,695
.....	3-p	Coupe	1,745
3380	5-p	Brougham	1,795
3450	5-p	Sedan	1,995
3450	.....	Wanderer	2,045
3750	7-p	Sedan	2,095
BUICK "Standard"			
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
3110	5-p	2 d. Sedan	1,195
		"Master" (120 in. W. B.)	
3350	2-p	Roadster	$1,250
3515	5-p	Touring	1,295
3670	5-p	Sedan	1,495
3765	5-p	2 d. Sedan	1,395
		(128 in. W. B.)	
3570	3-p	Sp. Roadster	$1,495
3635	5-p	Sp. Touring	1,525
3855	4-p	Country Club	1,765
3805	4-p	Coupe	1,795
4025	5-p	Brough. Sedan	1,925
3940	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line (132 in. W. B.)	
4040	2-p	Coupe	$3,045
4155	5-p	Sedan	3,195
4240	7-p	Sedan	3,295
4075	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
4115	4-p	Victoria	3,095
		Custom Built (132 in.)	
3920	.....	Roadster	$3,250
		(138 in. W. B.)	
4300	7-p	Touring	$3,250
3960	.....	Phaeton	3,250
4190	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE			
		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3570	4-p	Sub. Coupe	2,480
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"Y"	
3950	7-p	Touring	$2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,495
3223	7-p	Touring	1,595
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,795
3498	5-p	20th C'y Sedan	1,490
3594	7-p	Sedan	1,895
CHEVROLET			
		"Superior" (Series K)	
1780	2-p	Roadster	$525
1875	5-p	Touring	525
2030	2-p	Utility Coupe	675
2130	5-p	Coach	695
2215	5-p	Sedan	775
CHRYSLER "Four"			
		(109 in. W. B.)	
2300	5-p	Touring	$895
2405	2-p	Club Coupe	995
2510	5-p	Coach	1,045
2570	5-p	Std. Sedan	1,095

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHRYSLER (Continued)			
		"Six" (112¾ in. W. B.)	
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		(118¾ in. W. B.)	
3225	5-p	Town Car	$3,725
CLEVELAND "31"			
2415	5-p	Touring	$895
2565	5-p	Tour'g DeLuxe	1,025
2520	3-p	Coupe	975
2695	5-p	Sedan	995
		"43"	
2775	5-p	Touring	$1,095
2950	5-p	Sp. Touring	1,195
3000	5-p	Coach	1,295
2890	3-p	Coupe	1,175
3120	5-p	Sedan	1,295
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM			
		"V-6"	
4600	7-p	Touring	$6,650
4500	4-p	Sp. Touring	6,150
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR			
		"6-70"	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
3590	5-p	Petite Sedan	2,540
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	4-p	Roadster	$1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS			
		"90"	
2650	4-p	M. o' W. Road.	$1,495
2915	4-p	Legionaire T'r.	1,495
2750	5-p	Phaeton	1,395
.....	5-p	Sedan	1,595
3070	5-p	Imperial Sedan	1,795
3065	5-p	Berline Sedan	1,795
		"91"	
2835	4-p	Roadster	1,795
3020	5-p	Phaeton	1,695
.....	5-p	Sedan	1,895
3245	5-p	Imperial Sedan	2,095
3215	5-p	Berline Sedan	2,095
DIANA "St. 8"			
2970	5-p	Roadster	$1,895
3100	5-p	Phaeton	1,895
3245	5-p	Std. Sedan 2d.	1,995
3245	5-p	DeLuxe Sedan	2,195
3130	5-p	Cabriolet	2,095
3140	5-p	Sedan de Luxe	2,095
.....	7-p	Sedan (135 in. W. B.)	.....
DODGE BROTHERS			
2473	2-p	Roadster	$885
2593	2-p	Special Roadster	955
2567	5-p	Touring	875
2695	5-p	Spl. Touring	975
2708	2-p	Coupe "B"	960
2823	2-p	Spl. Coupe "B"	1,060
2995	5-p	"B" Sedan	1,045
3077	5-p	Spl. "B" Sed.	1,145
3020	5-p	Sedan "A"	1,195
3107	5-p	Spl. "A" Sedan	1,280
2723	5-p	Coach	1,035
2823	5-p	Spl. Coach	1,135
DUESENBERG			
		Straight "8"	
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	5-p	Phaeton	$6,650
3980	4-p	Sp. Phaeton	†
4115	5-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

DU PONT		**"D"**	
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT			
		A-22	
2300	5-p	Touring	$ 810
2380	5-p	Spec. Touring	930
2450	4-p	Coupe	1,090
2480	4-p	Spec. Coupe	1,160
2650	5-p	Sedan	1,150
2710	5-p	Spec. Sedan	1,230

SHIP. WT.	PASS.	BODY STYLE.	PRICE
ELCAR			
		"4-55"	
2560	5-p	Touring	$1,095
2900	5-p	Coach	1,195
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
2779	5-p	Coach	1,395
2900	5-p	Sedan	1,595
		"8-80"	
.....	4-p	Roadster	2,315
3700	5-p	Sp. Touring	2,165
.....	7-p	Touring	2,265
3000	3-p	Coupe Road.	2,315
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
4000	5-p	Brougham	2,865
ESSEX			
2135	5-p	Touring	$765
2395	5-p	Coach	795
FLINT			
		"55"	
3325	4-p	Sport Road.	$1,950
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	2,050
3245	4-p	Coupe	2,195
3595	5-p	Sedan	2,285
3565	5-p	Brougham 4d.	2,485
		"40"	
2715	5-p	Touring	1,185
2940	5-p	Sedan 4d.	1,495
2965	5-p	Brougham	1,575
FORD			
Without Starter and Dem. Rims			
1526	2-p	Runabout	$260
1557		*With Balloon Tires*	305
1607	5-p	Touring	290
1640		*With Balloon Tires*	335
With Starter and Dem. Rims			
1645	2-p	Runabout	345
1655		*With Balloon Tires*	370
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN			
		"11-A"	
2800	3-p	Sport Road.	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
3080	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
4135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER			
		"6-A"	
3290	5-p	Brougham	$1,595
3070	5-p	Touring	1,395
3030	4-p	Sport Roadster	1,595
3210	4-p	Cabriolet	1,845
3280	5-p	Sta. Sedan	1,595
3300	.....	DeLuxe Sedan	1,895
		"8-A"	
3620	5-p	Brougham	1,995
3350	5-p	Touring	1,995
3350	4-p	Sport Roadster	1,995
3480	4-p	Cabriolet	2,245
3620	5-p	Sta. Sedan	1,995
3600	5-p	DeLuxe Sedan	2,495
GRAY			
		"O"	
1830	5-p	Touring	
1920	3-p	Coupe	
2055	5-p	Sedan	
HERTZ			
		"D-1"	
3360	5-p	Sedan	$1,795
HUDSON			
		"Super Six"	
3400	7-p	Phaeton	1,250
3385	5-p	Coach	1,165
3425	4-p	Brougham 4d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE			
		"A"	
2620	5-p	Touring	$1,225
2800	5-p	Sedan	1,285
		"E"	
3050	2-p	Roadster	1,795
3270	4-p	Roadster	1,895
3135	5-p	Touring	1,795
3295	2-p	Coupe	2,095
3295	4-p	Coupe	2,095
3410	5-p	Sedan	2,195

SHIP. WT.	PASS.	BODY STYLE.	PRICE
JEWETT			
		"New Day"	
.....	5-p	Sedan	$ 995
.....	5-p	Sedan de Luxe	1,095
JORDAN			
		"J"	
.....	4-p	Playboy Road.	$1,695
.....	5-p	Sedan	1,845
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL			
		"55"	
3130	2-p	Speedster	$1,795
.....	2-p	Sp'dster DeL.	2,085
.....	4-p	Speedster	1,895
.....	4-p	Sp'dster DeL.	2,185
3530	2-p	Enc. Speedster	2,085
.....	4-p	Enc. Speedster	2,185
.....	4-p	Enc. Spd. DeL.	2,685
.....	2-p	Enc. Spd. DeL.	2,585
3190	4-p	Tourster	1,795
.....	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
.....	7-p	Touring	1,685
.....	7-p	Touring DeL.	1,885
3430	4-p	Coupe	2,085
.....	4-p	Coupe DeL.	2,485
3540	5-p	Broug. Sedan	1,995
.....	5-p	Brg. Sed. DeL.	2,485
.....	5-p	Brougham 3d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Ber. Sed. DeL.	3,185
3530	5-p	Victoria	2,185
.....	5-p	Victoria DeL.	2,485
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster DeL.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster DeL.	2,585
.....	2-p	Enc. Speedster	2,485
.....	2-p	Enc. Spd. DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Enc. Speedster	2,585
.....	4-p	Enc. Spd. DeL.	3,085
.....	4-p	Tourster DeL.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton DeL.	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring DeL.	2,285
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Luxe	2,885
.....	5-p	Broug. Sedan	2,395
.....	5-p	Brg. Sed. DeL.	2,985
.....	5-p	Brougham 2d.	2,095
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. DeL.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria DeL.	2,885
LEXINGTON			
		"6-50"	
2950	.....	Roadster	$1,745
2950	5-p	Touring	1,795
3425	5-p	Sedan	2,185
3425	5-p	Landau Sedan	2,245
3400	5-p	Landaulet	2,445
LINCOLN			
4460	2-p	Roadster	$4,000
4580	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	.....	Sport Touring	4,500
4750	4-p	Coupe	4,600
4885	4-p	Sedan	4,800
4760	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,300
LOCOMOBILE			
		"48"	
5280	4-p	Sportif Tour.	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Dr. Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,785
.....	4-p	Coupe	2,265
3400	5-p	Sedan	2,285
3350	5-p	Brougham	2,285
		"90"	
.....	4-p	Sportif Tour.	5,500
.....	4-p	Roadster	5,900
.....	3-p	Coupe	6,950
.....	5-p	Victoria Sedan	7,300
.....	5-p	Sed. (divided)	7,450
.....	7-p	Cabriolet	7,500
.....	7-p	Limousine	7,500
.....	6-p	Brougham	7,500
McFARLAN "6"			
		"SV"	
3700	2-p	Roadster	$2,650
.....	2-p	Spec. Roadster	2,900
3600	5-p	Touring	2,650

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
McFARLAND "6" (Continued)			
		"SV"	
3850	4-p	Coupe	3,180
3850	5-p	Sedan	3,180
.....	5-p	Spec. Sedan	3,180
3850	7-p	Sedan	3,280
.....	5-p	Sub. Sedan	3,380
.....	7-p	Sub. Sedan	3,480
.....	5-p	Brougham 4d.	3,180
		"TV"	
4000	2-p	Roadster	5,400
4600	4-p	Sp. Touring	5,600
4900	4-p	Coupe	6,720
5200	4-p	Tour. Sedan	6,720
5200	7-p	Tour. Sedan	6,810
.....	6-p	Sedan	6,720
.....	7-p	Sedan	6,810
.....	7-p	Spec. Sedan	6,810
.....	7-p	Enc. Sedan	7,110
.....	7-p	Sub. Sedan	7,110
5200	7-p	Town Car	9,000
		"Straight "8"	
.....	2-p	Roadster	2,650
.....	4-p	Roadster	2,900
.....	5-p	Touring	2,650
.....	7-p	Touring	2,750
.....	5-p	Sedan	3,180
.....	5-p	Sub. Sedan	3,280
.....	7-p	Sedan	3,280
.....	7-p	Sub. Sedan	3,480
.....	4-p	Coupe	3,180
.....	5-p	Coach Broug.	3,180
.....	5-p	Town Car	4,600
MARMON			
		"74"	
3695	2-p	Roadster	$3,295
3604	5-p	Phaeton	3,295
3704	7-p	Touring	3,295
3799	5-p	Broug. Coupe	3,295
3754	4-p	Victoria Coupe	3,295
3616	2-p	Std. Coupe	3,295
3869	5-p	Sedan	3,295
3859	5-p	Sedan De Luxe	3,775
3999	7-p	Sedan	3,370
3974	7-p	Sedan De Luxe	3,850
3969	5-p	Sedan Lim.	3,900
3999	7-p	Sedan Lim.	3,975
MOON			
		Series "A"	
2490	5-p	Roadster	$1,395
2675	5-p	Cab. Roadster	1,595
2510	5-p	Touring	1,195
2750	5-p	Coach	1,395
2750	5-p	DeL. Sedan 2d.	1,495
2850	5-p	Std. Sedan 4d.	1,545
2850	5-p	DeL. Sedan 4d.	1,695
		London	
3270	5-p	Sp. Touring	1,985
3290	7-p	Touring	1,985
3590	5-p	Petite Sedan	2,540
NASH			
		"Special"	
2870	2-p	Roadster	$1,115
2980	5-p	Touring	1,135
3030	2-p	Business Coupe	1,165
3120	5-p	Sedan 2 d.	1,215
3300	5-p	Sedan 4 d.	1,445
		"Advanced" (121 in. W. B.)	
3320	3-p	Roadster	1,375
3400	5-p	Touring	1,340
3550	5-p	Sedan 2 d.	1,425
		"Advanced" (127 in. W. B.)	
3480	7-p	Touring	1,490
3640	4-p	Victoria	1,790
3750	5-p	Coupe 4 d.	1,990
3830	7-p	Sedan	2,090
OAKLAND			
		"6"	
2425	2-p	Roadster	$975
2500	5-p	Touring	1,025
2640	5-p	Coach	1,095
2615	3-p	Landau Coupe	1,125
2765	5-p	Sedan	1,195
2885	5-p	Landau Sedan	1,295
OLDSMOBILE			
		"30"	
2235	5-p	Touring	$875
2445	5-p	Sp. Touring	980
2460	5-p	Coach	950
2660	5-p	De Luxe Coach	1,040
2535	5-p	Sedan	1,025
2735	5-p	De Luxe Sedan	1,115
OVERLAND			
		"91" 4 (100 in. W. B.)	
1919	5-p	Touring	$495
2060	2-p	Coupe	625
2205	5-p	Sedan De Luxe	695
2202	5-p	Std. Sedan 2 d.	595
OVERLAND (Continued)			
		"93" 6 (112¾ in. W. B.)	
2443	5-p	Sta. Sedan	$95
2584	5-p	Sedan De Luxe	1,095
PACKARD			
		"6" (126 in. W. B.)	
3643	4-p	Roadster	$2,785
3653	5-p	Touring	2,585
3595	4-p	Sp. Touring	2,750
3753	4-p	Coupe	2,585
3937	5-p	Sedan	2,585
		(133 in. W. B.)	
3793	7-p	Touring	2,785
4043	7-p	Sedan	2,785
.....	5-p	Club Sedan	2,725
4143	7-p	Sedan Lim.	2,885
		"8" (136 in. W. B.)	
4060	4-p	Runabout	3,950
4090	5-p	Touring	3,750
4023	4-p	Sp. Touring	3,900
4242	4-p	Coupe	4,650
4528	5-p	Sedan	4,750
.....	2-p	Coupe	5,775
		(143 in. W. B.)	
4199	7-p	Touring	3,950
.....	5-p	Club Sedan	4,890
4655	7-p	Sedan	5,000
4710	7-p	Sedan Lim.	5,100
PAIGE			
		"21-24"	
3875	4-p	Phaeton	$2,165
3935	7-p	Phaeton	2,165
4325	5-p	Sedan De Luxe	2,395
4325	7-p	Sedan De Luxe	2,340
PEERLESS			
		"6-72" (126 in. W. B.)	
3175	5-p	Touring	$1,895
3425	5-p	Coupe	2,295
3500	5-p	Sedan	2,395
		(133 in. W. B.)	
3275	2-p	Roadster	2,195
3300	7-p	Touring	1,995
3700	7-p	Sedan	2,595
3825	7-p	Limousine	2,695
		"6-80" (116 in. W. B.)	
.....	5-p	Sedan	$1,495
3310	5-p	Std. Sedan	1,595
		"8-67"	
3950	4-p	Phaeton	2,845
3995	7-p	Phaeton	2,895
4300	5-p	Tn. Brougham	3,495
4310	5-p	Town Sedan	3,495
4400	7-p	Sub. Sedan	3,595
4525	7-p	Berline Lim.	3,795
4100	4-p	Victoria Coupe	3,245
4150	5-p	Sub. Coupe	3,295
PIERCE-ARROW			
		"33"	
4350	2-p	Runabout	$5,250
4500	4-p	Touring	5,250
4590	7-p	Touring	5,250
4730	3-p	Coupe	6,800
4800	4-p	Sedan	6,900
4960	7-p	Sedan	7,000
4750	4-p	Coupe Sedan	6,900
4730	6-p	Brougham	6,800
4850	7-p	Limousine	7,000
5060	7-p	Enclosed Lim.	7,000
4780	7-p	French Lim.	7,000
4730	6-p	Landaulet	7,000
		"80"	
3205	2-p	Roadster	2,895
3260	4-p	Phaeton	3,095
3385	7-p	Phaeton	2,895
3430	5-p	Coach	3,150
3365	4-p	Coupe Landau	3,820
3335	4-p	Coupe	3,695
3440	5-p	Sedan	3,895
3560	7-p	Sedan	3,995
3615	7-p	Enc. Dr. Lim.	4,045
REO			
		"T-6"	
3350	2-p	Roadster	$1,665
3182	5-p	Sp. Touring	1,395
3250	2-p	Coupe	1,495
3400	5-p	Sedan 4 d.	1,565
3400	5-p	Spec. Sedan	1,745
REVERE			
		"25"	
3900	2-p	Sp. Roadster	$2,750
3975	4-p	Speedster	2,750
4050	5-p	Touring	2,750
4300	5-p	Sedan	3,800
		"M"	
3700	2-p	Roadster	3,200
3800	4-p	Sportster	3,200
3970	5-p	Touring	3,200
4400	5-p	Sedan	4,000
RICKENBACKER			
		"E" (117 in. W. B.)	
.....	5-p	Touring	$1,750
.....	7-p	Touring	1,795
.....	.....	Roadster	1,795
.....	5-p	Coupe	1,695
.....	5-p	Brougham	1,895
.....	4-p	Coupe Roadster	1,920
.....	4-p	Coupe De Luxe	1,995
.....	5-p	Sedan	2,095
.....	7-p	Sedan	2,195
		"B-8" (121½ in. W. B.)	
.....	.....	Roadster	$2,195
.....	5-p	Touring	2,150
.....	7-p	Touring	2,195
.....	5-p	Coupe Sedan	2,095
.....	5-p	Brougham	2,295
.....	4-p	Coupe Roadster	2,320
.....	4-p	Coupe De Luxe	2,395
.....	5-p	Sedan	2,495
.....	7-p	Sedan	2,595
ROAMER			
		"6-50-55" (115 in. W. B.)	
.....	2-p	Roadster	$1,385
.....	5-p	Spec. Tourer	1,245
.....	2-p	Bus. Coupe	1,495
.....	5-p	Coupe	1,495
.....	5-p	Sedan DeLuxe	1,695
		"6-54-E" (118-138 in. W. B.)	
.....	4-p	Roadster	2,385
.....	4-p	Tourer	1,985
.....	4-p	Sport	2,285
.....	7-p	Tourer	2,285
.....	3-p	Cabriolet	2,750
		"4-75-E" (128 in. W. B.) "Custom Built"	
.....	2-p	Speedster	3,485
.....	3-p	Sport	3,285
.....	4-p	Tourer	2,985
		"8-88" (138 in. W. B.)	
.....	4-p	Roadster	2,750
.....	5-p	Sport	2,750
.....	5-p	Tourer	2,495
.....	7-p	Tourer	2,585
.....	2-p	Speedster	2,985
.....	3-p	Cabriolet	2,950
.....	5-p	Spec. Sedan	3,785
.....	7-p	Sedan (136-in. W. B.)	3,285
.....	5-p	Brougham	2,895
ROLLS-ROYCE			
.....		Chassis	††

†† Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
STANLEY			
		"252"	
3400	5-p	Phaeton	$2,500
3800	5-p	Sedan	3,300
STAR			
.....	5-p	Touring	525
.....	2-p	Coupster	610
.....	5-p	Sedan 4 d.	805
		Standard "6"	
.....	.....	Coupster	$745
.....	.....	Coupe	820
.....	5-p	Coach	880
STEARNS-KNIGHT			
		"B" (4)	
.....	4-p	Coupe R'dster	$1,795
3775	5-p	Touring	1,595
4250	5-p	Sedan	2,095
3750	4-p	Coupe Br'ham	1,895
.....	5-p	Brougham	2,095
		"S" (6)	
.....	2-p	Roadster	2,495
3775	5-p	Touring	2,395
3850	7-p	Touring	2,495
4025	2-p	Coupe	3,395
4275	4-p	Sp. Coupe	3,150
3950	5-p	Sedan	2,945
4275	7-p	Sp. Brougham	3,395
.....	4-p	Sp. Sedan	3,395
		"C" (6)	
3525	4-p	Touring	1,875
3540	5-p	Touring	1,875
3550	2-p	Sport Coupe	2,185
3650	5-p	Coupe Br'ham	2,285
3700	5-p	Sedan	2,475
3700	5-p	Brougham	2,475
.....	5-p	Brough. Sedan	2,480
STEVENS-DURYEA			
5300	2-p	Roadster	$8,150
5500	7-p	Touring	7,500
5425	4-p	Sp. Touring	7,750
5600	4-p	Coupe	9,000
5730	4-p	Sedan	10,000
5850	6-p	Sedan	9,675
5750	6-p	Town Brough.	10,175
6100	6-p	Vestibule Lim.	9,675
6210	7-p	Vestibule Lim.	10,175
6150	7-p	¾ Limousine	10,175
6200	7-p	Cabriolet	10,175
STUDEBAKER			
		Standard Six	
2760	3-p	Du. Roadster	$1,125
2810	3-p	Sport Roadster	1295
2870	5-p	Du. Phaeton	1,145
2945	3-p	Country Club	1,295
2980	5-p	Coach	1,195
3260	5-p	Sedan	1395
3260	5-p	Sedan	1,495
		Special Six	
3380	3-p	Du. Roadster	1,395
3500	4-p	Sp. Roadster	1,595
3495	5-p	Du. Phaeton	1,445
3685	4-p	Victoria	1,750
3710	5-p	Brougham	1,695
3520	5-p	Coach	1,445
3875	5-p	Sedan	1,895
		Big Six 127 in. W. B.	
3785	7-p	Du. Phaeton	1,775
4030	5-p	Coupe	2,045
4030	5-p	Brougham 4 d.	2,195
4050	7-p	Sedan	2,245
3890	5-p	Berline	2,120
		120 in. W. B.	
3320	3-p	Du. Roadster	$1495
.....	41p	Sport Roadster	1645
3505	5-p	Sport Phaeton	1,575
3750	5-p	Club Coupe	1,750
3760	5-p	Sedan	1,995
STUTZ			
		"A-A"	
.....	2-p	Speedster	$2,995
.....	4-p	Speedster	2,995
.....	5-p	Brougham	2,995
.....	5-p	Sedan	2,995
.....	4-p	Vic. Coupe	2,995
.....	2-p	Coupe	2,995
VELIE			
		"60"	
3030	4-p	Sp. Roadster	$1,650
3025	5-p	Club Phaeton	1,450
.....	2-p	Coupe	1,425
3340	5-p	Royal Sedan	1,825
3005	5-p	Brougham	1,495
WILLS SAINTE CLAIRE			
		"B-68" (127 in. W. B.)	
3500	7-p	Phaeton	$2,885
3495	4-p	Coupe	3,785
3520	5-p	Sedan	3,885
3635	7-p	Sedan	3,900
3570	5-p	Brougham 4 d.	3,900
3710	7-p	Limousine	4,085
.....	7-p	Town Car	5,500
		"C-68" (Custom Built 127 in. W. B.)	
3350	4-p	Roadster	3,300
3500	4-p	Cab. Roadster	3,785
3450	5-p	Gray G. Trav.	3,300
3520	5-p	Sedan	4,085
3635	7-p	Sedan	4,100
3570	5-p	Brougham	4,100
3710	7-p	Limousine	4,285
		"W-6" (127 in. W. B.)	
3410	4-p	Roadster	2,800
3550	5-p	Gray G. Trav.	2,800
3580	4-p	Cab. Roadster	3,285
3500	7-p	Touring	2,385
3630	4-p	Coupe	2,985
3630	5-p	Brougham	3,185
3680	5-p	Sedan	3,185
3775	7-p	Sedan	3,285
3835	7-p	Limousine	3,385
		"W-6 Vogue" (127 in. W. B.)	
3770	5-p	Brougham	$3,400
3765	5-p	Sedan	3,400
3905	7-p	Sedan	3,500
3835	7-p	Limousine	3,385
WILLYS-KNIGHT			
		"65"	
2900	5-p	Touring	$1,195
2955	3-p	Coupe	1,395
3090	5-p	Sedan	1,450
3062	5-p	Coupe Sedan	1,395
3119	5-p	Brougham	1,595
		"66"	
3323	2-p	Roadster	1,750
3395	5-p	Touring	1,750
3566	7-p	Touring	1,950
3582	5-p	Coupe Sedan	2,095
3672	5-p	Brougham	2,095
3664	4-p	Coupe	2,195
3686	5-p	Sedan	2,295
3822	7-p	Sedan	2,495

Mechanical Specifications of Current Passenger Car Models

This list comprises cars distributed on a national basis

MAKE AND MODEL	Wheel Base (Inches)	Tire Size Decimals-Balloons	ENGINE: Make and Model	Number of Cyls., Bore and Stroke	Rated H.P. N.A.C.C.	Piston Displacement	Valve Arrangement	Camshaft Drive	Crankcase Integ. or Sep.	Piston Material	No. Main Bear.	Oiling System	Oil Cleaner?	Cooling System	Thermostat?	Carburetor Make	Air Cleaner?	ELECTRICAL SYSTEM: Ignition System Make	Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universals—Type and Make	REAR AXLE: Type and Make	Gear Ratio	BRAKES: Foot—Type and Location	Hand—Type and Location	4-Wheel Type = Optional	Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make
Ajax	108	30x4.75	Own	6-3x 4	21.6	170	L	He	Int	C I	7	P K	N	Pu	N	Car		A-L	A-L	P.B&B	Own	f-The	½ Own	4.77	B-F	E-T	M	Ross	S-50½	Pr-Al
Apperson	120	33x6.00	Own	6-3⅜x4¼	24.4	204	I	He	Int	C I	4	P F	N	Th	N	Sch	N	Remy	Remy	P.Roc	Mec	m-Stl	½ Col	5.10	I-R	B-F	M	Ross	J-48	Pr-Ze
Apperson St. Away 8	130	33x6.20	Lyc	2-H	31.3	276	L	Ch	Sep	C I	5	P C	N	Pu	N	Sch	N	Remy	Remy	P.Roc	Mec	m-Mec	½ Col	4.63	I-R	B-F	M	Ross	J-48	Pr-Ze
Auburn	120	30x5.25	Lyc	4S	25.3	207	L	Ch	Sep	C I	4	P C	N	Pu	N	Sch	N	Remy	Remy	P.Long	W-G	m-Uni	½ Col	5.10	B-F	E-T	M	Ross	S-57	Pr-Dot
Auburn	120	30x5.25	Lyc	4S	25.3	207	L	Ch	Sep	C I	4	P C	N	Pu	N	Sch	N	Remy	Remy	P.Long	W-G	m-Uni	½ Col	5.10	B-F	E-T	M	Ross	S-57	Pr-Dot
Auburn	129	30x5.77	Lyc	4H	33.8	276	L	Ch	Sep	C I	6	P C	N	Pu	N	Sch	N	Remy	Remy	P.Long	W-G	m-Uni	½ Col	5.10	B-F	E-T	M	Ross	S-57	Pr-Dot
Buick Standard	114⅜	31x5.25	Own	Std.	23.4	207	I	He	Sep	C I	4	P C	F	Pu	N	Mar	Y	Delco	Delco	D.Own	Own	m-Own	¾ Own	4.90	E-F	I-R	M	Jac	V-48	Pr-Ze
Buick Master	120–128	33x6.00	Own	Mast.	29.4	274	I	He	Sep	C I	4	P C	F	Pu	N	Mar	Y	Delco	Delco	D.Own	Own	m-Own	Fl Own	4.70	E-F	I-R	M	Jac	V-47⅝	Pr-Ze
Cadillac	314	33x6.75	Own	314	31.2	314	L	Ch	Sep	C I	3	P K	F	Pu	Y	Own	N	Delco	Delco	D.Own	Own	m-Spi	Fl Own	Var.	B-F	I-R	M	Own	S-60	Pr-Al
Case	132	34x7.30	Con	6J	33.8	331	L	He	Sep	C I	4	P C	N	Pu	Y	Sch	N	Delco	Delco	D.Own	Own	f-Sne	¾ Col	4.45	E-F	E-T	H	Ross	S-57	Pr-Sa
Case	132	32x6.20	Con	8R	27.3	242	L	He	Sep	C I	4	P C	N	Pu	Y	Sch	N	Delco	Delco	D.Own	Own	f-Sne	½ Col	4.90	E-F	E-T	H	Ross	S-54¾	Pr-Sa
Chandler	123	33x6.00	Own	35	29.4	289	L	Ch	Sep	C I	4	P C	N	Pu	N	Sch	N	Bosch	Bosch	P.B&B	Own	f-Own	¾ Own	4.45	E-R	E-T	M*	Own	S-59¼	M-Bo
Chevrolet	103	30x3½† 29x4.40	Own	Sup.	21.8	171	I	He	Int	C I	3	P S	N	Pu	N	Car	N	Remy	Remy	P.Own	Own	m-Own	½ Own	3.82	E-R	I-R	N	Own	S-54	Pr-Al
Chrysler "4"	109	30x5.25 30x5.77	Own	25F	4-3⅝x4½	21.0	186	L	He	Int	Al	3	P C	N	Th	N	Ste	N	Remy	Remy	P. Roc	Own	f-Own	½ Own	4.60	E-F	E-T	H	Gem	S-53	Pr-Ze
Chrysler 6	112¾–118¾	30x5.77	Own	G	6-3⅛x4¾	23.4	218	L	Ch	Int	Al	7	P C	F	Pu	Y	Bal	Y	Remy	Remy	P. Roc	Own	m-Uni	½ Own	4.30	E-F	E-T	H	Gem	S-51⅞	Pr-Ze
Cleveland 31	108½	30x4.75	Own	31	6-2⅞x4¼	19.8	166	L	Ch	Int	C I	3	P F	N	Pu	N	Til	N	Bosch	Bosch	P.B&B	Own	f-Pic	½ Own	4.90	E-R	E-T	M*	CAS	S-51	Cm-Bo
Cleveland 43	115	31x5.25	Own	43	6-3⅛x4¾	23.4	219	L	Ch	Sep	C I	3	P F	N	Pu	N	Sch	N	Bosch	Bosch	P.B&B	Own	f-Sne	½ Own	4.90	E-R	E-T	M*	CAS	S-54	Cm-Bo
Cunningham V-6	132–142	33x6.75	Own	V8	8-3⅜x5	45.0	442	L	He	Sep	C I	3	P F	N	Pu	Y	Str	N	Delco	Delco	D.Own	Own	f-Sne	Fl Tim	4.23	I-F	E-F	M	Gem	J-62	Pr-Al
Dagmar 6-60	120	32x6.20	Lyc	4S	6-3⅛x4½	25.3	207	L	He	Sep	C I	5	P C		Pu		Sch	N	Delco	Delco	P.B&B	W-M	m-Spi	½ Sal	5.10	E-R	E-T	H*	Ross	S-52	Pr-Al
Dagmar 6-70	138	33x5†	Con	6J	6-3⅜x5	33.8	331	L	He	Int	C I	4	P C		Pu		Sch	N	Delco	Delco	D.B-L	B-L	m-Spi	½ Tim	4.90	E-R	I-R	N	Gem	S-52	Pr-Al
Davis 90	115	30x5.77	Con	7U	6-3⅛x4¼	23.4	196	L	Ch	Int	C I	4	P C		Pu		Str	N	Delco	Delco	P.B&B	W-G	m-Pet	½ Col	5.10	E-F	E-T	H	Ross	S-52	Oc-Gi
Davis 91	118	30x5.77	Con	8R	6-3⅜x4½	27.3	242	L	He	Sep	C I	4	P C		Pu		Str	N	Delco	Delco	P.B&B	W-G	m-Pet	½ Col	5.10	E-F	E-T	H	Ross	S-52	Oc-Gi
Diana St. 8	125½	32x6.00	Cont	12Z	8-3 x4¼	28.8	240	L	Ch	Int	C I	5	P K	N	Pu	N	Str	N	Delco	Delco	P.B&B	War	m-Mec	½ Col	5.10	E-F	E-T	H	Ross	S-54	Pr-Al
Dodge Brothers	116	30x5.77	Own	4-37⅛x4½	24.0	212	L	He	Int	Al	3	P S	N	Pu	N	Ste	N	N-E	N-E	D.Own	Own	m-Own	½ Own	4.16	E-R	I-R	N	Own	S-55	Pr-Ze
Duesenberg St. 8	134–141	33x5	Own	A	8-2⅞x5	26.4	260	I	Sp	Int	Al	3	P K	N	Pu	Y	Sch	N	Delco	Delco	P.Own	Own	f-Cli	½ Own	4.90	I-F	E-T	H	Ross	S-59	Pr-Do
DuPont D	124	32x6.20	Wis	Y	6-3⅜x5	27.3	268	I	Ch	Int	C I	3	P C	N	Pu	N	Sch	N	Bosch	Bosch	D.Long	Cpl	m-Uni	½ Col	4.70 4.45	E-F	E-T	H	Ross	S-59	Pr-Al Pr-Ze
Durant A-22	109	30x5.25	Con	Spec.	4-37⅛x4¼	24.0	200	I	He	Int	Al	3	P S	N	Pu	N	Til	N	A-L	A-L	P.Own	Own	m-Spi	½ Own	4.33	E-R	I-R	N	Own	S-50½	Pr-Al
Elcar 4-55	116	30x5.25	Lyc	CF	4-3⅜x5	21.0	206	L	He	Sep	Al	5	P C	N	Th	N	Zen	N	A-L	A-L	P.B&B	W-G	m-Mec	½ Sal	4.70	E-R	E-T	M*	Ross	S-51	Pr-Al
Elcar 6-65	116	30x5.25	Lyc	2S	6-3⅛x4¼	23.4	196	L	Ch	Sep	C I	4	P C	N	Pu	N	Str	N	A-L	A-L	P.B&B	W-G	m-Mec	½ Sal	4.70	E-F	E-R	H	Ross	S-51	Pr-Al
Elcar 8-80	127	32x6.20	Lyc	2H	8-3⅛x4¼	31.3	261	L	Ch	Sep	C I	5	P C	N	Pu	N	Sch	N	Delco	Delco	P.B&B	W-G	m-Spi	¾ Sal	4.71	E-F	E-T	H	Ross	S-58	Pr-Al
Essex 6	110½	30x4.95	Own	6	6-2¹¹⁄₁₆x4¼	17.3	145	L	Ch	Int	Al	3	Sp	N	Th	N	Ste	N	Bosch	Bosch	D.Own	Own	m-Spi	½ Own	5.60	E-R	I-R	N	Own	S-54⅞	Ow
Flint 40	115	30x5.77	Con	6W	6-3⅛x4¼	23.4	196	L	Ch	Int	C I	4	P C	N	Pu	N	Car	N	A-L	A-L	P.Own	War	m-Spi	¾ Ada	4.77	I-F	E-T	H	War	S-50½	Pr-Ze
Flint 55	120	32x6.20	Con	6E	6-3⅜x5	27.3	268	L	Ch	Int	C I	7	P C	N	Pu	Y	Str	N	DeJo	DeJo	P.Own	War	m-Spi	¾ Ada	4.77	I-F	E-T	H	War	S-55	Pr-Ze
Ford T	100	30x3½†	Own	T	4-3¾x4	22.5	177	L	He	Int	C I	3	Sp	N	Th	N	Own	N	Own	Own	D.Own	Own	m-Own	½ Own	3.63	E-T	I-R	N	Own	O-43½	Oc
Franklin 11A	119	31x5.25	Own	11A	6-3¼x4	25.4	199	I	Ch	Sep	Al	7	P C	N	A	N	Str	Y	A-K	Dyn	P.B-L	Own	m-Spi	½ Own	4.73	E-T	E-R	N	Own	E-38	Pr-Ze
Gardner 6A	117	31x5.25	Lyc	2S	6-3⅛x4½	23.4	207	L	Ch	Sep	C I	4	P C		Pu	N	Sch	N	Remy	Remy	P.B&B	War	m-Cle	½ Col	4.90	I-F	E-T	M	Ross	S-57	Pr-Al
Gardner 8A	125	32x6.00	Lyc	2H	8-3⅛x4½	31.2	276	L	Ch	Sep	C I	5	P C		Pu	N	Sch	N	Remy	Remy	P.B&B	War	m-Cle	½ Col	5.10	I-F	E-T	M	Ross	S-57	Pr-Al
Gray O	104	29x4.40	Own	R	4-3⅝x4	21.0	165	L	He	Int	C I	3	Sp	N	Th	N	Sch	N	Scoe	N	A-L	A-L	P.Own	Det	f-Sne	½ Tim	3.90	E-R	E-T	N	Own	Q-30	Oc
Hertz D-1	114	30x5.77	Con	10U	6-3⅛x4¼	23.4	196	L	Ch	Int	C I	4	P S	N	Pu	N	Zen	N	Delco	Delco	D.Long	Det	m-Spi	½ Tim	4.89	E-R	E-T	O*	Ross	S-56	Pr-Al
Hudson Super 6	127⅜	33x6.00	Own	6	6-3½x5	29.4	289	L	Ch	Sep	Al	4	Sp	N	Pu	N	Ste	N	Bosch	Bosch	D.Own	Own	m-Spi	½ Own	4.45	E-R	I-R	N	Gem	S-57 11/16	Ow
Hupmobile "A"	114	30x5.25	Own	"A"	6-3⅛x4¼	23.4	196	L	Ch	Int	C I	4	P C		Pu		Ste	N	A-L	A-L	P-B&B	Own	m-Mec	½ Own	4.90	B-F	E-R	M	Ross	S-54	Pr
Hupmobile E	118¼	33x6.00	Own	E	8-2⅞x4⅜	26.4	247	L	Ch	Sep	C I	5	P K	N	Pu	Y	Str	N	A-K	Wes	P.Long	Det	m-Uni	½ Own	4.64	E-F	E-T	H	Ross	S-56½	Pr-Al
Jewett New Day	109	29x4.75	Con	Spec.	6-2¾x4¾	18.1	169	L	Ch	Int	C I	4	P C	N	Pu	N	Joh	N	Remy	Remy	P. Roc	War	m-Mec	½ Sal	4.90	E-F	E-T	H	Gem	S-54	Pr-Ze
Jordan Series A	125½	32x6.20	Con	Spec.	8-3 x4¾	28.8	268	L	Ch	Sep	C I	5	P F	N¾	Pu	Y	Str	Y	Bosch	Bosch	P.Det	Det	m-Thi	½ Tim	4.64	E-F	E-T	H	Gem	S-55¾	Pr-Al
Jordan J	116	30x6.00	Con	Spec	8-2⅞x4¾	26.4	247	L	Ch	Int	C I	5	P F		Pu	Y	Str	Y	Bosch	Bosch	P.Long	War	m.Uni	½ Tim	4.64	E-F	E-T	H	Gem	S-55¾	P-Al
Kissel 55	121	33x6.00	Own	55	6-3 3/16x5⅛	26.3	265	L	Ch	Int	Al	3	P F	Y	Pu	Y	Str	N	Remy	Remy	P.B&B	W-G	m-Spi	½ Tim	4.09	E-F	E-T	H	Ross	S-56	Pr-Da
Kissel 75	126–137	33x6.00	Own	75	8-3 3/16x4½	32.5	287	L	Ch	Int	Al	5	P F	Y	Pu	Y	Sch	Y	Remy	Remy	P.B&B	W-G	m-Pet	½ Tim	4.90	E-F	E-T	H	Ross	S-58	Pr-Da
Lexington 6-50	119	30x5.77	Ans	M	6-3 1/16x4½	26.3	233	I	Ch	Int	C I	3	P F	N	Pu	N	Sch	N	Delco	Bosch	D.Long	W-G	f-Pick	½ Sal	5.10	E-F	E-T	H	Ross	S-56	Pr-Do
Lincoln 8	136	33x5†	Own	8	8-3⅜x5	36.4	358	L	Ch	Sep	Al	5	P C	N	Pu	Y	Str	N	Delco	Delco	D.Own	Own	m-Spi	Fl Tim	4.58	E-R	I-R	N	Own	S-60	Pr-Al
Locomobile Jr. 8	124	30x5.77	Own	Jr. 8	8-2 11/16x4	25.3	206	I	Ch	Int	C I	5	P K	F	Pu	N	Str	Y	DeJo	DeJo	P. Spi	Own	m-Uni	½ Own	4.77 5.11	I-F	I-R	M	Ross	S-55 9/16	Pr-Ze
Locomobile 48	142	35x6.75	Own	48	6-4½x5½	48.6	525	T	He	Sep	C I	7	P F	F	Pu	Y	Bal	N	Delco	Wes	P.Own	Own	m-Spi	Fl Own	3.50	B-F	I-R	M	Own	J-50	Pr-Ze
Locomobile "90"	138	33x6.75	Own		6-3⅞x5¼	36.0	372	L	Ch	Sep	C I	7	P C	Y	Pu	Y	Str	Y	DeJo	DeJo	P.Own	Own	m-Uni	½ Eat	4.46	I-F	I-R	M	Ross	S-60	Pr-Ze

(*Continued on page 48*)

KEY TO SYMBOLS

*—At extra cost
†—Balloons at extra cost
½—Semi-floating
¾—Three-quarter floating
A—Air
Al—Aluminum
B—Semi-steel
B-F—Both internal and external, four wheels
Ch—Chain
CI—Cast iron
Cm—Central magazine
Cu—Oil and grease cups
D—Multiple disk
E—Full elliptic
E-F—External four wheels
E-R—External rear wheels
E-T—External transmission
f—Fabric
F—Filter
Fl—Full floating
G—Head and side
Gr—Grease cups
H—Horizontal (valves)
H—Hydraulic (brakes)
He—Helical gear
I—In head
Int—Integral
I-F—Internal four wheels
I-R—Internal rear wheels
J—Three-quarter elliptic
K—Cone
L—L head
m—Metal
M—Mechanical
N—None
N—Platform (rear springs)
O—Optional (brakes)
O—Special type (rear springs)
Oc—Oil cups
Ow—Oil cups with wick feed
P—Single plate
Pr—Pressure gun
PC—Pressure to all crankshaft and connecting rod bearings
PF—Full pressure to all bearings
PK—Pressure to crankshaft, connecting rods and camshaft bearings
PS—Splash with pressure
Pu—Pump
Q—Quarter elliptic
R—Rectifier
S—Semi-elliptic
Sep—Separate
Sp—Splash (lubrication)
Sp—Spur gear (camshaft drive)
Spe—Special make
Sta—Standard
T—T head
Th—Thermo-syphon
V—Cantilever
Var—Varies
X—Sleeve valve
Y—Yes

ABBREVIATIONS—NAMES OF MFRS OF STOCK PARTS

A-K—Atwater-Kent
A-L—Auto-Lite
Ada—Adams
Al—Alemite
Ans—Ansted
B&B—Borg & Beck
B-L—Brown-Lipe
Bal—Ball & Ball
Ba—Bassir cups
Bo—Bowen Products
Car—Carter
CAS—CAS Products
Cle—Cleveland
Cli—Climax
Con—Continental
Conn—Connecticut
Col—Columbia
Cpl—Campbell
Da—Dawson
DeJo—DeJon
Det—Detroit
Dit—Ditweiler
Do—Dot
Due—Duesenberg
Dur—Durston
Dyn—Dyneto
Eat—Eaton
Fli—Flint
Ful—Fuller
Gem—Gemmer
Gi—Gits
Hoo—Hoosier
Jac—Jacox
Joh—Johnson
Ju—Justrite
L-N—Leece-Neville
Lav—Lavine
Lyc—Lycoming
M&E—Merchant & Evans
Mar—Marvel
Mec—Mechanics Machine
Mon—Monson [Co.
Mun—Muncie
N-E—North East
Nor—Northway
Pet—Peters
Ray—Rayfield
Roc—Rockford
Sa—Saal
Sal—Salisbury
Sch—Schebler
Sne—Snead
Spe—Special Make
Spi—Spicer
Spl—Splitdorf
Ste—Stewart
Stl—Sterling
Str—Stromberg
The—Thermoid
Thi—Thiemer
Til—Tillotson
Tim—Timken
Uni—Universal
W-G—Warner Gear
Wag—Wagner
War—Warner
Wat—Watford
Wes—Westinghouse
W-M—Willys-Morrow
Wis—Wisconsin
Ze—Zerk
Zen—Zenith



Due now to the great and increasing popularity of the new 90-degree Cadillac, as well as the lower Cadillac prices, the legitimate market for Cadillac is very greatly enlarged.

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CADILLAC MOTOR CAR COMPANY, DETROIT
DIVISION OF GENERAL MOTORS CORPORATION

New 90 Degree

CADILLAC

Mechanical Specifications of Current Passenger Car Models—Continued

from page 46

(This list comprises cars distributed on a national basis)

MAKE AND MODEL	Wheel Base (Inches)	Tire Size Decimals-Balloons	ENGINE: Make and Model	Number of Cyls., Bore and Stroke	Rated H.P. N.A.C.C.	Piston Displacement	Valve Arrangement	Camshaft Drive	Crankcase Integ. or Sep.	Piston Material	No. Main Bear.	Oiling System	Oil Cleaner?	Cooling System	Thermostat?	Carburetor Make	Air Cleaner?	ELECTRICAL SYSTEM: Ignition System Make	Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universals—Type and Make	REAR AXLE: Type and Make	Gear Ratio	BRAKES: Foot—Type and Location	Hand—Type and Location	4 Wheel Type (*=Optional)	Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make
Marmon	74	136	32x6.20	Own....74	6-3¾x5⅛	33.8	340	I	He..	Sep.	{Al. CI	3	P F.	Y	Pu..	N	Sch...	N	Delco.	Delco.	D.Own..	Own....	m-Spi...	¾ Own..	Var.	E-R	I-R.	M*	Own..	O-45....	M-Bo
McFarlan	SV	127	33x6.20	Wis.....Y	6-3⅜x5	27.3	268	L	Ch..	Int.	C I.	3	P F.	F	Pu..	N	Ray...	N	Delco.	Delco.	D.Long..	W-G....	m-Uni...	½ Tim..	4.27	E-F.	E-T	H	Ross..	S-58½..	OW...
McFarlan	St. 8	131	33x6.20	Lyc....3H	8-3⅜x4½	32.6	287	L	Ch..	Sep.	C I.	5	P F.	N	Pu..	N	Sch...	N	Delco.	Delco.	P. B&B.	W-G....	m-Uni...	½ Tim..	5.11	E-F	E-T	H	Ross..	S-58½..	OW...
McFarlan	TV	140	33x6.75	Own...TV	6-4½x6	48.6	573	T	He..	Sep.	Al..	4	P F.	F	Pu..	N	Ray...	N	DeJo.	DeJo.	P.B&B..	B-L....	f-Sne....	Fl Tim..	3.53	E-F.	I-R.	H	Ross.	S-64....	OW...
Moon	London	128	32x6.20	Con....8R	6-3⅜x4½	27.3	242	L	He..	Sep.	C I.	4	P C.	N	Pu..	N	Str....	N	Delco.	Delco.	P.B&B..	B-L....	m-Spi...	½ Tim..	5.09	E-F.	I-R.	H	Ross.	S-54⅞..	Oc-Ba
Moon	Series A	113	30x5.25	Con....7Z	6-3⅛x4¼	23.4	196	L	Ch..	Int.	C I.	4	P C.	N	Pu..	N	Str....	N	Delco.	Delco.	P.B&B..	W-G....	m-Spi...	½ Sal..	4.82	E-F.	E-T	H	Ross.	S-54....	Pr-Al.
Nash	Advanced	121–127	33x6.00	Own....161	6-3¼x5	25.4	249	I	He..	Int.	C I.	3	P C.	N	Pu..	N	Mar...	Y	Delco.	Delco.	P.B&B..	Own....	m-Own..	½ Own..	4.50	B-F.	E-T	M	Gem..	S-56½..	Pr-Al.
Nash	Special	112½	31x5.25	Own....131	6-3⅛x4½	23.4	207	I	He..	Int.	C I.	3	P C.	N	Pu..	N	Mar...	Y	Delco.	Delco.	P.B&B..	Own....	m-Own..	½ Own..	4.90	B-F.	E-T	M	Gem..	S-53⅞..	Pr-Al.
Oakland	"6"	113	30x5.25	Own....OS	6-2⅞x3¾	19.8	185	L	Ch..	Sep.	B...	3	P K	F	Pu..	N	Str....	Y	Remy.	Remy	P. Hoo..	Mun....	m-Mec..	½ Own..	4.73	E-F.	E-T	M	Jac...	S-52½..	Pr-Dot
Oldsmobile	30	110½	30x4.95	Own....30	6-2¾x3¾	18.2	169	L	Ch..	Int.	C I.	3	P C.	N	Pu..	N	Car....	N	Delco.	Delco.	P.B&B..	Mun....	f-The...	½ Own..	5.10	E-R	E-T	N	Jac...	S-50¼..	Pr-Dot
Overland	91	100	30x3½†	Own....91	4-3½x4	19.6	154	L	Ch.	Int.	C I.	3	Sp..	N	Th..	N	Til....	N	A-L...	A-L...	P.B&B..	Own....	m-Own..	½ Own..	4.50	E-R	I-R.	N	Own..	O-25....	Cu....
Overland	93	112¾	29x4.95	Own....93	6-3 x4	21.6	170	L	He..	Int.	Al..	3	P C.	N	Pu..	N	Til....	N	A-L...	A-L...	D.Own..	Own....	m-Own..	½ Own..	5.11	E-R	E-T	N	Own..	S-52½..	Pr....
Packard	6	126–133	33x5.77	Own.....6	6-3½x5	29.4	289	L	Ch..	Sep.	C I.	7	P F.	R	Pu..	Y	Own..	N	Delco.	Dyn..	D.Own..	Own....	m-Mec..	½ Own.	{4.66 5.10	B-F.	I-R.	M	Own..	S-56....	Cm Bij
Packard	8	136–143	33x6.75	Own.....8	8-3⅜x5	36.4	358	L	Ch..	Sep.	C I.	9	P F.	R	Pu..	Y	Own..	N	Delco.	Dyn..	D.Own..	Own....	m-Mec..	½ Own..	4.66	B-F.	I-R.	M	Own..	S-56....	CmBij
Paige	21-25	131	33x6.75	Con...10A	6-3¾x5	33.8	331	L	Ch..	Sep.	C I.	4	P C.	N	Pu..	Y	Joh...	Y	A-K..	Remy.	D.Long..	W-G....	m-Mec..	½ Sal...	4.90	E-F.	E-T	H	Gem..	S-61½..	{Pr-Al. Pr-Ze.
Peerless	6-72	126–133	33x6.00	Own....72	6-3½x5	29.4	289	L	Ch..	Sep.	C I.	7	P C.	N	Pu..	N	Joh...	....	Delco.	Delco.	D.Own..	Own....	m-Spi...	¾ Tim..	4.90	E-F.	I-R.	H	Gem..	S-54....	Pr-Al.
Peerless	6-80	116	30x5.77	Own.....	6-3¼x4⅝	25.3	230	L	Ch..	Int.	C I.	7	P C.	Y	Pu..	N	Str....	....	A-L...	A-L...	P.B&B..	Det....	m-.....	½ Col..	4.46	E-F	E-T	H	Ross..	S-54¼..	Pr-Al..
Peerless	67	128	33x6.75	Own....67	8-3¼x5	33.8	332	L	He..	Sep.	C I.	3	P C.	N	Pu..	N	Str....	N	Delco.	Delco.	D.Own..	Own....	m-Spi...	¾ Tim..	4.90	E-F.	I-R.	H	Gem..	S-60....	Pr-Al.
Pierce Arrow	33	138	33x5	Own....33	6-4 x5½	38.4	415	T	He..	Sep.	C I.	7	P F.	N	Pu..	Y	Own..	N	Delco.	Delco.	D.Own..	Own....	m-Spi...	½ Own..	4.29	E-R	I-R.	M*	Own..	S-61¼..	Pr-Ze.
Pierce Arrow	80	130	32x5.77	Own....80	6-3½x5	29.4	289	L	Ch..	Sep.	C I.	7	P F.	N	Pu..	Y	Own..	N	Delco.	Delco.	P.B&B..	B-L....	m-Spi...	½ Tim..	4.45	I-F.	I-R.	M	Gem..	S-56½..	Pr-Ze
Reo	T6	120	32x6.20	Own....T6	6-3 1/16x5	24.3	239	G	He..	Int.	Al..	4	P S.	N	Pu..	N	Sch...	N	N-E..	N-E..	D.Own..	Own....	{m-Own. f-Own.	1/4 Own..	4.70	E-R	I-R.	N	Own..	{S-54½. S-55¼.	Pr-Ze.
Revere	M	131	32x4½†	Mon....M	4-4⅜x6	30.6	361	H	Ch..	Int.	Al..	2	P C.	Y	Pu..	N	Str....	....	Bosch.	Wes...	D.B-L...	B-L....	m-Spi...	½ Spe..	3.44	I-R.	E-R	M*	Gem..	S-56½..	Pr-Al.
Revere	25	131	32x6.20	Con.....6J	6-3¾x5	33.8	331	L	Ch..	Sep.	C I.	4	P C.	N	Pu..	N	Sch...	Y	Bosch.	Bosch.	D.Ful...	Ful....	m-Spi...	¾ Col...	3.75	I-F.	E-T	M	Gem..	S-56½..	Pr-Al.
Rickenbacker	E	117	31x5.25	Own....D	6-3½x4¾	25.3	236	L	Ch..	Int.	C I.	7	P C.	R	Pu..	N	Str....	Y	Bosch.	Bosch.	P.Long.	{Mec.. War..	m-Mec..	½ Col...	4.70	I-F.	E-T	M	Gem..	S-57....	Pr-Al.
Rickenbacker	B-8	121½	33x6.00	Own...B-8	8-3¼x4¾	33.8	315	L	Ch..	Int.	C I.	9	P C.	R	Pu..	N	Zen...	Y	Delco.	Bosch.	P.Long.	War....	m-Mec..	½ Col...	4.70	I-F.	E-T	M	Gem..	S-59....	Pr-Al.
Roamer	6-54-E	118–138	32x4½	Con.12XD	6-3½x5¼	29.4	303	L	He..	Sep.	Al..	3	P S.	N	Pu..	N	Str....	N	Spl...	Wes...	P.B&B..	Ful....	f-M&E..	¾ Tim..	4.45	E-R	I-R.	M*	Jac...	V-55¾..	Pr-Al..
Roamer	4-75-E	128	32x4½†	R-D ...G1	4-4½x6	28.9	340	H	Ch..	Sep.	Al..	3	P F.	N	Pu..	N	Str....	N	A-L...	Wes...	D.B-L...	B-L....	f-M&E..	¾ Tim..	4.63	E-R	I-R.	M*	Jac...	V-55¾..	Pr-Al..
Roamer	6-50-55	115	31x5.25	Con....7U	6-3½x4¼	23.4	196	L	Ch..	Sep.	C I.	5	P C.	N	Pu..	N	Sch...	N	A-L...	A-L...	P.B&B..	Dur....	f-Uni...	½ Sal...	4.64	E-F.	E-T	H	Ross..	S-52....	Pr-Al..
Roamer	8-88	138	32x6.20	Lyc....3H	8-3 1/16x4½	32.5	287	L	He..	Sep.	C I.	5	P F.	N	Pu..	N	Sch...	N	A-L...	A-L...	P.B&B..	Cpl....	f-Uni...	¾ Sal...	4.08	E-F.	E-T	H	Ross.	V-55¾..	Pr-Al..
Rolls Royce	Silver Ghost	143½	33x5†	Own.40–50	6-4½x4¾	48.6	453	L	He..	Sep.	Al..	7	P F.	F	Pu..	N	Own..	N	Bosch.	Wes...	K.Own..	Own....	m-Own..	Fl Own..	3.72	I-R.	I-R.	N	Own..	V-54½..	Pr-Al.
Stanley	252	122	32x5.77	Own...252	2-4 x5	20.0	126	....	....	....	C I.	2	Sp..	....	....	....	None	....	None..	Bosch.	None....	None....	f-The...	½ Own..	4.50	E-F.	I-R.	H	Ross.	S-58....	Pr....
Star	4	103	30x3½	Con..Spec.	4-3⅜x4¼	18.2	161	L	Ch..	....	Spe.	3	P K	N	Pu..	N	Til....	N	A-L...	A-L..	P.Own..	War....	m-Spi...	½ Ada..	4.87	E-R	I-R.	M*	War..	S-53¾..	Pr-Al
Star	"St'd. 6"	107	..x1.95	Cont.....	6-2¾x4¾	18.2	164	L	....	Int.	....	4	P K	N	Pu	N	.....	N	A-L...	A-L...	P.Own..	.....	.....	.....	.....	E-R	I.R.	.....	.....	.....	S-53¾	Pr-Al.
Stearns Knight	B	119	33x4½†	Own...Kni	4-3¾x5⅝	22.5	249	X	Ch..	Sep.	C I.	3	P C	....	Pu..	....	Joh...	N	A-K..	A-L...	D.Own..	Own....	f-Cli....	½ Own	4.50	E-R	I-R.	H*	Own..	V-50....	Pr-Al.
Stearns Knight	C	121	33x6.00	Own...Kni	6-3½x5	25.4	249	X	Ch..	Sep.	Al..	4	P C.	N	Pu.	N	Joh...	N	DeJo..	DeJo..	D.M&E.	Own....	f-Cli....	½ Eat..	5.30	E-R	I-R.	H*	Ross.	V-50....	Pr-Al
Stearns Knight	S	130	33x6.60	Own...Kni	6-3½x5	29.4	289	X	Ch..	....	Al..	4	P C.	N	Pu.	N	Joh...	N	DeJo..	DeJo..	D.M&E.	Own....	f-Cli....	½ Own.	4.90	E-R	I-R.	H*	Sta...	S-50....	Pr-Al.
Stevens Duryea	G	138	33x5†	Own.....G	6-4 1/16x5½	47.3	511	L	He..	Sep.	C I.	4	P S.	N	Pu.	Y	Str....	N	Bosch.	Bosch.	D.B-L...	B-L....	m-Spi...	Fl Tim..	3.76	E-R	I-R.	N	Ross.	J-59½..	Pr-Do.
Studebaker	Sta. 6	113	31x5.25	Own...ER	6-3⅜x4½	27.3	242	L	Ch..	Int.	C I.	4	P K	F	Pu..	N	Str....	Y	{Wag. Remy	{Wag. Remy	P.Own..	Own....	f-The...	½ Own..	4.18	E-R	E-T	H*	Own..	S-50⅛..	Pr-Al
Studebaker	Spec. 6	120	32x6.20	Own...EQ	6-3½x5	29.4	289	L	He..	Sep	C I.	4	P K	F	Pu..	N	Str...	Y	{Wag. Remy	{Wag. Remy	P.Own..	Own....	m-Spi...	½ Own..	4.36	E-R	E-T	H*	Own..	S-56....	Pr-Al.
Studebaker	Big 6	127 120	32x6.20 34x7.30	Own...EP	6-3⅞x5	36.0	353	L	He..	Sep.	C I.	4	P K	F	Pu..	N	Bal...	Y	{Wag. Remy	{Wag. Remy	P.Own..	Own....	m-Spi...	½ Own.	3.69 4.08	E-R	E-T	H*	Own..	S-56....	Pr-Al.
Stutz	AA	131	32x6.20	Own.....	8-3 1/16x4½	32.5	309	I	Ch..	Int.	B	9	P F.	F	Pu.	....	.....	Y	Delco	Delco.	P.B&B..	Det....	m-Mec..	½ Tim..	Var.	I-F.	E-T	H	Ross.	S-62....	CmMe
Velie	60	118	31x5 25	Own....50	6-3¼x4¼	24.4	203	I	He..	Int.	C I.	4	P F.	N	Th..	N	Str....	N	Remy.	Remy.	P.B&B..	Mun....	m-Uni...	½ Own.	5.10	E-F.	E-T	H	Ross.	S-55....	Pr-Do.
Wills Ste. Claire	W6	127	33x6.00	Own...W6	6-3¼x5½	25.4	274	I	He..	Int.	C I.	7	P F.	N	Pu..	Y	Sch...	N	Delco.	Delco.	P.Own..	Own....	m-Spi...	½ Tim..	4.45	E-F.	E-T	H	Own..	S-58....	Pr-Al.
Wills Ste. Claire	B&C68	127	32x6.20	Own.BC68	8-3¼x4	33.8	265	I	He..	Sep.	C I.	3	P F.	N	Th..	N	Sch...	N	Delco.	Delco.	P.Own..	Own....	m-Spi...	½ Tim..	4.45	E-F.	E-T	H	Own..	S-58....	Pr-Al.
Willys Knight	65	118	30x5.77	Own....65	4-3⅝x4½	21.0	186	X	Ch..	Sep.	Al..	3	P C.	N	....	N	Til....	N	A-L...	A-L...	D.Own..	Own....	f-Own...	¾ Own.	{4.44 5.12	B-F	I-R.	M	Own..	S-55....	Pr....
Willys Knight	66	126	32x6.20	Own....66	6-3¼x4¾	25.4	236	X	Ch..	Sep.	Al..	7	P C.	R	Pu..	Y	Til....	Y	A-L...	DeJo..	P.Own..	Own....	m-Mec..	¾ Own.	5.11	B-F.	E-R	M	Own..	S-57....	Pr....

KEY TO SYMBOLS

*—At extra cost
†—Balloons at extra cost
½—Semi-floating
¾—Three-quarter floating
A—Air
Al—Aluminum
B—Semi-steel
B-F—Both internal and external four wheels
Ch—Chain
CI—Cast iron
Cm—Central magazine
Cu—Oil and grease cups
D—Multiple disk
E—Full elliptic
E-F—External four wheels
E-R—External rear wheels
E-T—External transmission
f—Fabric
F—Filter
Fl—Full floating
G—Head and side
Gr—Grease cups
H—Horizontal (valves)
H—Hydraulic (brakes)
He—Helical gear
I—In head
Int—Integral
I-F—Internal four wheels
I-R—Internal rear wheels
J—Three-quarter elliptic
K—Cone
L—L head
m—Metal
M—Mechanical
N—None
N—Platform (rear springs)
O—Optional (brakes)
O—Special type (rear springs)
Ow—Oil cups with wick feed
P—Single plate
Pr—Pressure gun
PC—Pressure to all crankshaft and connecting rod bearings
PF—Full pressure to all bearings
PK—Pressure to crankshaft, connecting rods and camshaft bearings
PS—Splash with pressure
Pu—Pump
Q—Quarter elliptic
R—Rectifier
Sp—Splash (lubrication)
Sp—Spur gear (camshaft drive)
Spe—Special make
Sta—Standard
T—T head
Th—Thermo-syphon
V—Cantilever
Var—Varies
X—Sleeve valve

ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS

A-K—Atwater Kent
A-L—Auto-Lite
Ada—Adams
Al—Alemite
Ans—Ansted
B&B—Borg & Beck
B-L—Brown-Lipe
Bal—Ball & Ball
Ba—Bassic cups
Bij—Bijur
Bo—Bowen Products
Car—Carter
CAS—CAS Products
Cle—Cleveland
Cli—Climax
Con—Continental
Conn—Connecticut
Col—Columbia
Cpl—Campbell
DeJo—DeJon
Det—Detroit
Dit—Ditweiler
Do—Dot
Due—Duesenberg
Dur—Durston
Dyn—Dyneto
Eat—Eaton
En—Enots
Fli—Flint
Ful—Fuller
Gem—Gemmer
Gi—Gits
Hoo—Hoosier
Jac—Jacox
Joh—Johnson
L N—Leece-Neville
Lav—Lavine
Lyc—Lycoming
M&E—Merchant & Evan
Mar—Marvel
Me—Meyer
Mec—Mechanics Machin Co.
Mon—Monson
Mun—Muncie
N-E—North East
Nor—Northway
Pet—Peters
R-D—Rochester-Duesenberg
Ray—Rayfield
Roc—Rockford
Sa—Saal
Sal—Salisbury
Sch—Schebler
Sne—Snead
Spe—Special Make
Spi—Spicer
Spl—Splitdorf
Ste—Stewart
Stl—Sterling
Str—Stromberg
The—Thermoid
Thi—Thiemer
Til—Tillotson
Tim—Timken
Uni—Universal
W-G—Warner Gear
Wag—Wagner
War—Warner
Wat—Ward
Wes—Westinghouse
W-M—Willys-Morrow

MoA

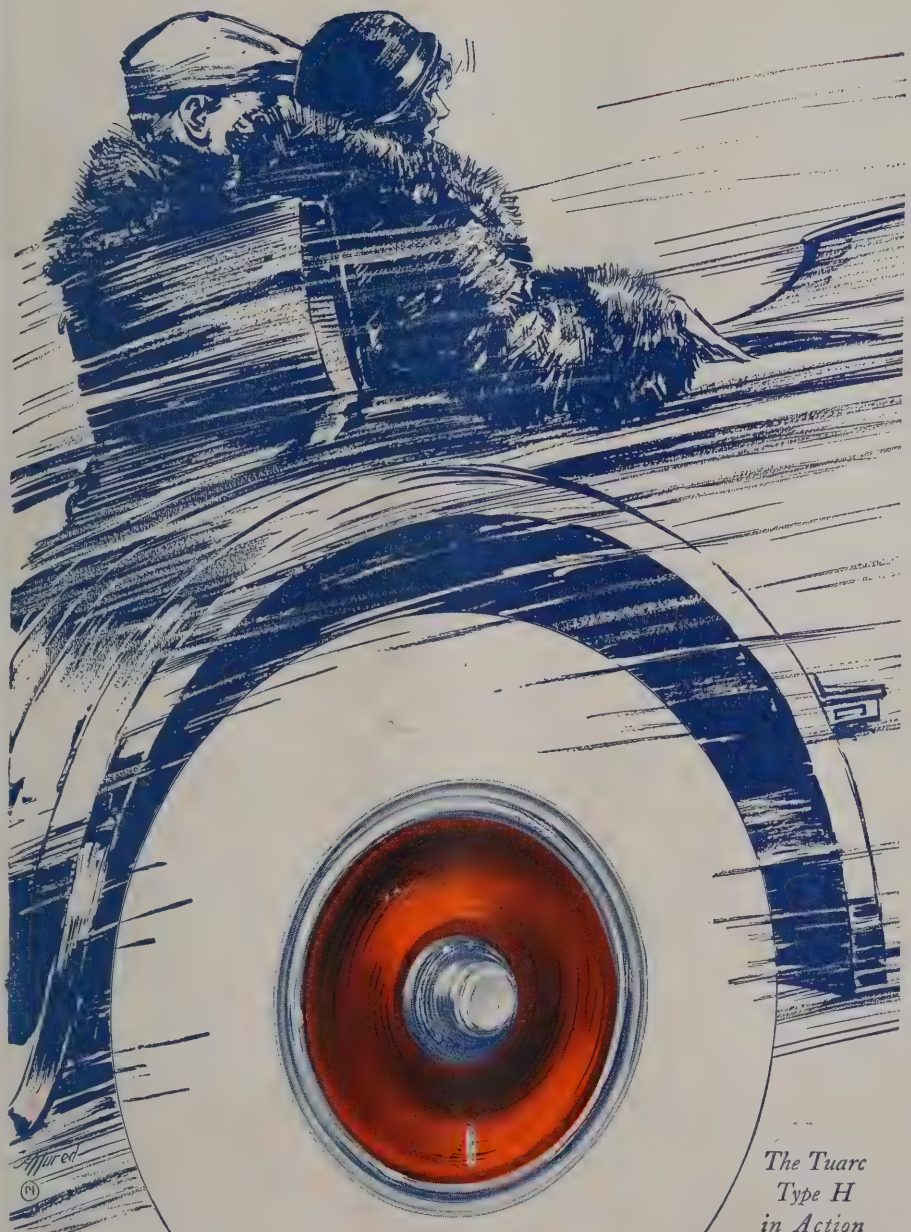
In This Issue—*Save Tires and Reduce Rubber Prices*

MOTOR AGE

Vol. XLVIII
Number 27

PUBLISHED WEEKLY AT 5 SOUTH WABASH AVENUE
CHICAGO, DECEMBER 31, 1925

Thirty-five Cents a Copy
Three Dollars a Year



The Tuarc Type H in Action

First to be Seen— Last to be Seen to

Mechanical perfection and complete utility are rarely combined in a form that is so beautiful as the Tuarc Type H steel wheel.

Steel strength, highest convenience in mounting or inflating tires, consistent lightness, and complete silence are embodied in simple curves which flow nicely into the contour of balloon tires.

The impression this wheel makes capitalizes the fact that it is the first moving part of a car to be seen. The construction of the Tuarc Type H makes it about the last moving part which ever needs to be seen to.

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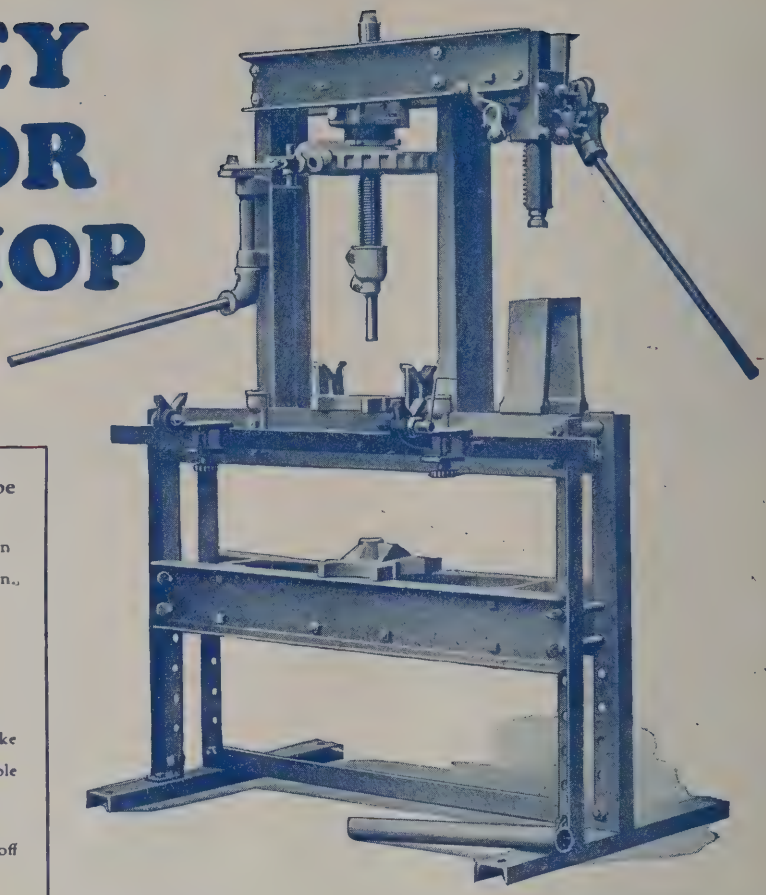
Motor Wheel PRODUCTS

Tuarc

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A MANLEY PRESS FOR EVERY SHOP

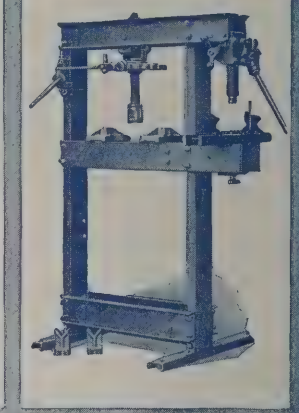


21 Operations on the Ford car that can be performed with a Manley Press

1. Pressing steering spindle body bushings out and in
2. Pressing steering arm bushings out and in.
3. Pressing lower steering column bushings out and in.
4. Straightening steering drag link.
5. Straightening front axle.
6. Pressing wheel hubs out and in wheel.
7. Pressing timing gear off and on camshaft.
8. Pressing timing gear off and on crankshaft.
9. Pressing gear off and on generator.
10. Straightening camshaft.
11. Straightening crankshaft.
12. Pressing piston pin bushings out and in piston.
13. Pressing bushings out and in transmission brake drums.
14. Pressing bushings out and in transmission triple gears.
15. Pressing differential axle gears off and on axles.
16. Straightening rear axle shafts.
17. Straightening rear axle shaft housing.
18. Pressing drive shaft pinion roller bearing sleeve off and on.
19. Straightening drive shaft.
20. Straightening drive shaft housing.
21. Pressing spring hanger bushings out and in.

12 REASONS WHY THE MANLEY PRESS IS PREFERRED:

1. Excess capacity: Manley ratings are very conservative and all Manley equipment has a much greater capacity than the Manley ratings indicate.
2. Exposed screw: The Manley Press is arranged so that the end of the screw is exposed and the Press is designed so that you may jar stubborn parts loose by a hammer blow on this exposed screw end, giving the effect of as much as a hundred ton straight pressure.
3. Open construction makes it possible to handle work of any length.
4. Extra wide clearance on lower table (42 inches).
5. Double table saves time adjusting table for work of different heights, long nose and short nose supplied with Press, this also saves time adjusting for height.
6. High speed Rack and Pinion Press Attachment. Two men can work on this Press at the same time.
7. Hand wheel mounted on ball bearings.
8. Hand levers in most convenient position, enabling operator to keep eyes on work.
9. Quick change of leverages and speeds.
10. Correctly lubricated.
11. Designed by R. E. Manley and guaranteed by The Manley Mfg. Co.
12. Price $100.00 without Rack and Pinion Press or Crankshaft Straightening Attachment. With Rack and Pinion Press and Crankshaft Straightening Attachment $145.00.



For the smaller shops the 20 Ton Manley Press is recommended; complete with Rack and Pinion Press and Crank-shaft Straightening Attachment $104.00.

Get a Manley

THE MANLEY MFG. CO., YORK, PA.

Buy from your own jobber.

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Division of General Motors Corporation

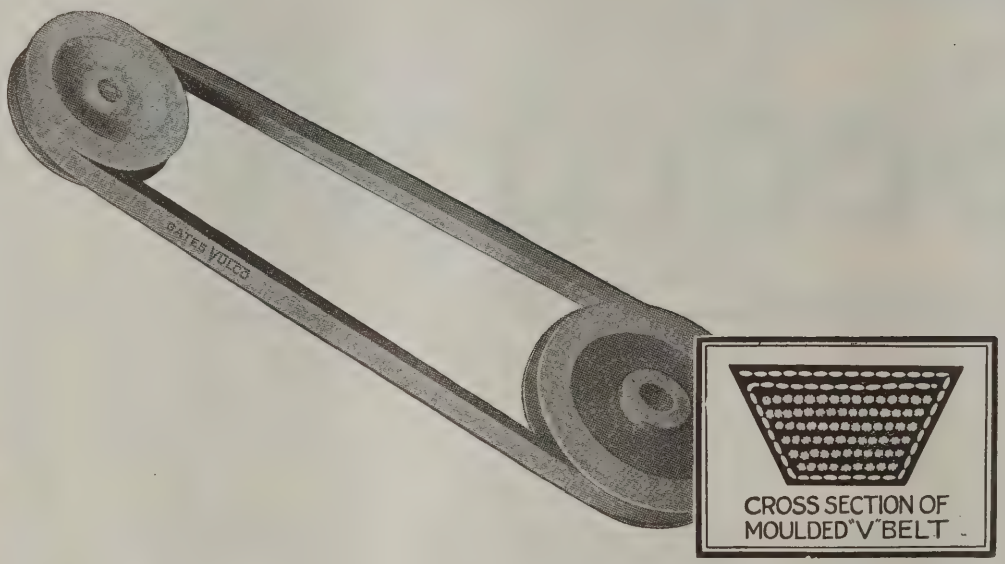
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90 to 100 cords encased in rubber—exactly the same cords and the same construction that go into a cord tire—that's why Gates Vulco V-Belts have solved the V-Belt problem.

Made by the World's Largest Manufacturers of Fan Belts.

How Studebaker Sells the Public *on the Dealer as well as on the Car*

THE SATURDAY EVENING POST January 3, 1926

Your Wife may buy a Used Car with Perfect Safety

—The Studebaker Used-Car Pledge certifies Value and Price

YOUR wife patronizes the store whose policy of square dealing is a matter of certainty. There she buys with absolute confidence. She may buy a Used Car with equal confidence under the policy outlined in the Studebaker Used-Car Pledge. For expert knowledge of Used-Car values is not necessary to secure honest treatment, where this Pledge is displayed.

Studebaker has brought to the business of selling Used Cars the same measure of integrity and square dealing expressed by Wanamaker in this statement:

From haggle and barter	— to fixed fair prices.
From tricks of the trade	— to open square dealing.
From the customer beware	— to the customer be satisfied.
From obscure price marks	— to accurate price marking.
From advertising bombast	— to accuracy in word and print.

Guided by this same policy, as expressed in the Studebaker Used-Car Pledge, the Studebaker dealer who sells you a used car has, as his first and biggest objective—your confidence. Therefore, he does not simply sell you a Used Car, arbitrarily priced for profit. He sells you "unused mileage," honestly priced to make you a friend of Studebaker.

Your Studebaker dealer is essentially a merchant in new cars. The solid business foundation upon which the Studebaker Corporation has progressed for 73 years, has actuated the policies under which he sells—whether fine One-Profit Studebakers, or used cars of any make.

Read this Pledge and you will understand why common sense guides the careful buyer, of either a new or used car, to the showroom of a Studebaker Dealer.

Pledge to the Public on Used Car Sales

1 All used cars offered to the public shall be honestly represented.

2 All Studebaker automobiles which are sold as CERTIFIED CARS have been properly reconditioned, and carry a 30-day guarantee for replacement of defective parts and free service on adjustments.

3 Every used car is conspicuously marked with its price in plain figures, and that price, just as the price of our new cars, is rigidly maintained.

4 Every purchaser of a used car may drive it for five days, and then, if not satisfied for any reason, turn it back and apply the money paid as a credit on the purchase of any other car in stock—new or used.

Not only to the public, but also to The Studebaker Corporation of America, whose cars we sell, we pledge adherence to the above policy in selling used cars.

By Your Studebaker Dealer

Out of every eight cars sold for more than one thousand dollars—one is a Studebaker



This is because buyers have considered these facts:

1. Studebaker is the only One-Profit car in the quality field—the only car which has all bodies, all engines, all axles, all clutches, gear sets, springs, differentials, steering gear, gray-iron castings and drop forgings designed, engineered and manufactured by one organization. Therefore prices are down to bed rock.

2. Studebaker facilities make possible Unit-Built construction. Since the entire car is designed and built as a unit, it functions smoothly and yields scores of thousands of miles of excess transportation

3. Studebaker's $100,000,000 facilities enable us to keep cars constantly up-to-date. Changes are constantly made, not saved up for annual announcements which make cars in the hands of owners artificially obsolete.

4. Purchasers may buy Studebaker cars out of income at the lowest time-payment rates known to the industry.

5. Studebaker cars are sold and serviced by a world-wide organization of responsible merchants

THIS IS A STUDEBAKER YEAR

The Country Has Gone Nash

Nash Is Turning December Into June

Daily during this month, when ordinarily motor car sales are depressed, Nash has been receiving wires to rush shipments for immediate delivery.

Business has piled up at the factory at so rapid a rate that December, 1925, will again set a new high record for December production and sales and will eclipse December last year—the previous banner Nash December—by 50 to 60%.

And this month, too, will see Ajax round out the 11,000th car built and shipped since the start of production barely more than six months ago.

Today the man with the Nash-Ajax franchise is in an uniquely fortunate position.

With a wider market, greater price range, superior value, and rising sales, his monthly and yearly net are climbing to figures never before approximated in the history of the Company.

THE NASH MOTORS COMPANY, *Kenosha, Wis.*

NASH (2696)



Prevent All Ailments from "LEAKAGE OF THE HEART" *in Motors You Repair*

OIL or gas that escapes past piston rings is like leakage of the heart. The piston rings (or valves in the heart of the motor) are not functioning properly. Result: Oil pumping, excessive oil consumption, piston slapping, lost compression, and other ailments.

Cure all such ailments with Ramco Inner Rings. And, in addition, make more money by preventing these troubles by putting Ramcos into every motor you tear down. Your customers will appreciate this ounce of prevention that will pay for itself over and over. Ramcos keep the piston centralized. They maintain the elasticity of the piston rings by cushioning the joint between rings and piston. And they equalize the tension of the rings. Let us send you a set of Ramcos for trial.

Order Ramcos from your jobber or write us.

RAMCO
Cushion
INNER RINGS
REG. U. S. PAT. OFF.

Ramsey Accessories Mfg. Corp. **St. Louis, Mo.**

WALTER P. CHRYSLER

Motor Car Manufacturer

Announces

AS FINE
AS MONEY CAN BUILD

UTMOST LUXURY
FOR 2 to 7 PASSENGERS

92
HORSE-POWER

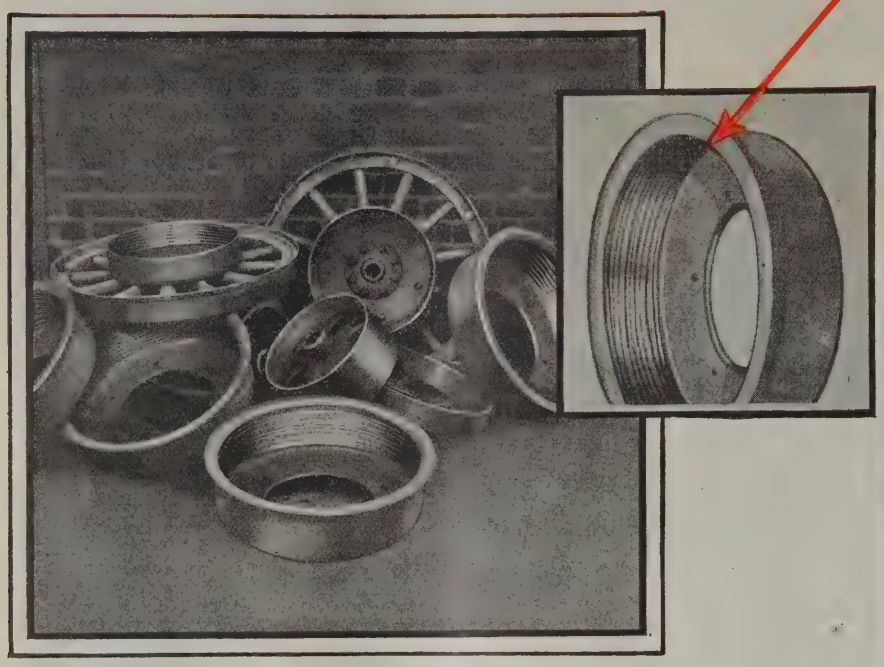
80
MILES PER HOUR



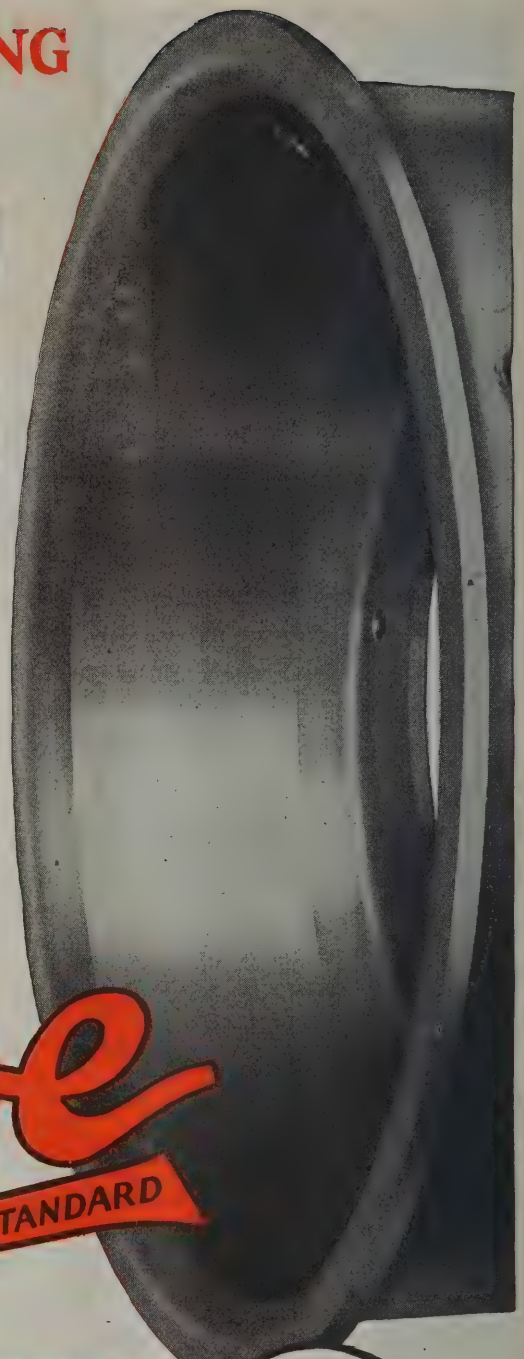
A NEW YEAR'S TIP

For a prosperous New Year and permanent success in the automobile business, sell **OLDSMOBILE SIX**

PREVENT BRAKE DRUM SCORING



Actual photograph of scored drums, junked by the cutting action of the ordinary brake lining. HYCOE does not score brake drums because of its non-abrasive nature.



Actual photograph of brake drum after 27 months of hard service with HYCOE. This drum is made of soft mild steel.

USE Hycoe

SETS A NEW BRAKING STANDARD

BRAKE LINING

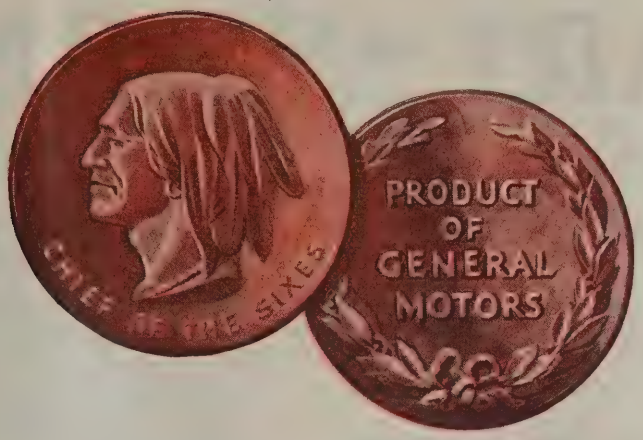
for Replacement Economy and Satisfaction

THE MANHATTAN RUBBER MFG. COMPANY

Executive Offices and Factories: Passaic, N. J.

Branches:

Chicago, Detroit, New York, Baltimore, Birmingham, Boston, Cleveland, Los Angeles, Minneapolis, New Orleans, Philadelphia, Pittsburgh, Salt Lake City, St. Louis



Chief of the Sixes

To the Automobile Dealers of America

OUR next announcement will reveal the name and other vital facts concerning the new General Motors Six—an entirely new automobile of tremendously broad appeal.

Subsequently the car itself will be displayed at the principal automobile shows.

This newest member of a famous family will be the fruit of the resources, engineering skill and manufacturing experience gained by General Motors in more than seventeen years of leadership.

It will combine elements of appearance, performance, and engineering design which will win for it immediate public acceptance. Its price will be such as to have a nation-wide appeal.

It will be built by Oakland and distributed as companion to the present Oakland Six under a double franchise that promises to become one of the most profitable in the industry.

Every automobile dealer in America—regardless of size, location or present affiliation—is invited to write at once for complete details. Address Oakland Motor Car Company, Pontiac, Mich.

STEWART-WARNER

1926 Campaign for Better Accessories—



THIS is going to be a great year for every dealer standardizing on the Stewart-Warner Accessory Family.

The time has come to give careful thought to the quality of the accessories offered to your customers.



You hold your customer's satisfaction and good-will of far more value than any special discounts on products of doubtful character.

The car you sell has been steadily improved. The car manufacturer has exerted every effort toward obtaining better material and better construction. In keeping with this we urge the use of BETTER ACCESSORIES.

To install "gim-cracks"—unknown brands—or brands in which the car owner takes no pride—is to be-little your car product—and gain nothing but adverse criticism.

So, we know that the dealer will join with us in a Campaign for Better Accessories, right at this time when accessories have attained the position of essentials.

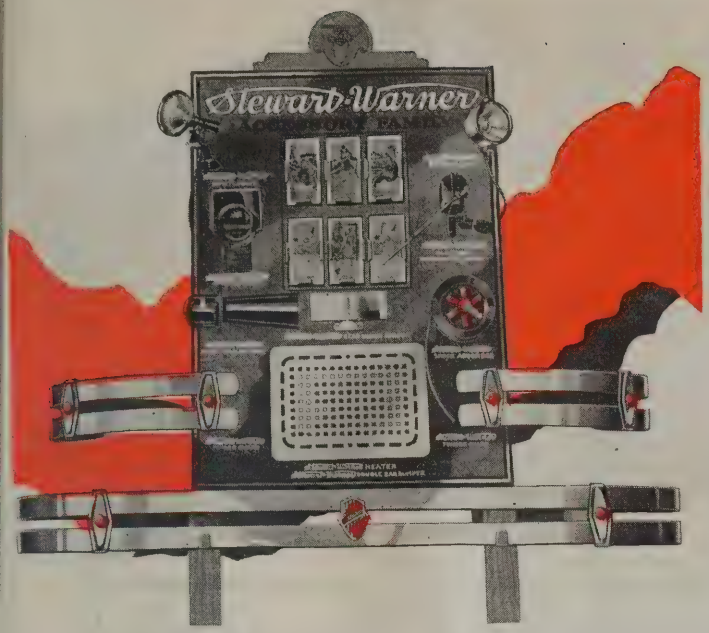
Twelve million people are today using Stewart-Warner Accessories, and this with our greatly increased appropriation for 1926 National Publicity will make selling easy for the dealer—and add laurels to the car he sells.

Our 1926 Message

We are going to tell the public that YOU have his best interests at heart. That YOU are the logical ONE to sell him his accessories. That he can buy his entire equipment of "better accessories" under one name—"Stewart-Warner." In this connection we do not claim to make the ONLY "better accessories," but we DO CLAIM TO MAKE THE ONLY COMPLETE LINE OF BETTER ACCESSORIES.

A car fully equipped with Stewart-Warner Accessories creates attention and can be sold on the assurance of 100% protection and satisfaction. Right now—at the beginning of the year—at inventory time—is an excellent time to take stock of your accessory business.

Aside from the superior selling advantages in the Stewart-Warner Line—you have the valuable advantage of Stewart-Warner Distribution Service, through 62 Service Stations in leading centers in



Could you ask for more?

You can join with us in the 1926 Campaign for Better Accessories and reap the harvest that is already assured because of the record heights to which Stewart-Warner sales mounted in 1925.

Compare your inventory right now with the Stewart-Warner Line and decide which you would rather have.

We'll work with you and for you. We are organized to do so and seek the opportunity.

Yours for Better Accessories,

STEWART-WARNER
SPEEDOMETER CORPORATION
CHICAGO U. S. A.

the United States and Canada and 34 in foreign lands. We have no jobbers or other distributors. We control our entire distribution. This enables the dealer to do business with a comparatively small stock—getting new stock as needed in a few hours time.

SEE WHAT THIS DOES:

It reduces your stock room space.

It reduces the cost of stock-keeping records.

It requires a smaller investment.

It gives you better control of finances.

It eliminates "dead ones."

It prevents loss on "orphans."

It saves "writing-off" for depreciation.

It insures a fresh stock at all times.

It perfects your organization.

It gives you multiplied turn-over—ever increasing percentage of profit on the initial investment.



Stewart-Warner Accessories

TWELVE MILLION PEOPLE ARE TODAY USING STEWART-WARNER PRODUCTS



What AC Means to the Dealer

New AC Spark Plugs



A new design, new alloy for sparking points, new electrically fused Kyanite insulator core and a new glaze.

AC Carbon-proof Plugs are also made in all sizes.

The demand for AC Spark Plugs is assured through their use as factory equipment on the following cars:

Ajax	Davis	Nash
Apperson	Dodge Brothers	Oakland
Buick	Durant	Oldsmobile
Cadillac	Essex	Paige
Case	Flint	Star
Chandler	Hudson	Velie
Chevrolet	Hupmobile	Westcott
Chrysler	Kissel	Wills Sainte Claire
Cleveland	Marmon	

New AC 1075 for Fords



The special features of the AC 1075 make it the most desirable plug for Fords. Dealers are building a big and profitable business by emphasizing these features in making sales:

1 Spring Terminal Clip
2 Heavy Body Porcelain
3 Hexagon of extra length permits easy and positive application of spark plug wrench
4 High Temperature Fins — Patented carbon-proof Porcelain
5 Drip electrode forms natural Oil Drain

Made in both one and two-piece design.

DEALERS who carry AC products can build a profitable business.

◆ ◆ ◆

The demand is assured because of their use as car equipment.

◆ ◆ ◆

They are backed by strong advertising.

◆ ◆ ◆

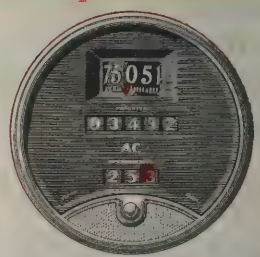
AC Spark Plug Company, FLINT, *Michigan*

Makers of AC Spark Plugs—AC Speedometers —AC Air Cleaners

AC-SPHINX
Birmingham
ENGLAND

AC-OLEO
Levallois-Perret
FRANCE

AC Speedometers



The Model for Fords

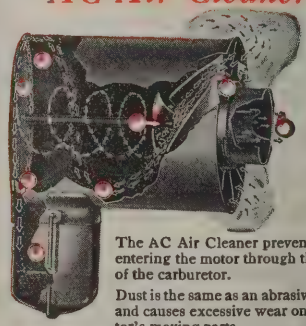
There is proof of the quality of AC Speedometers in the fact that they are used as original factory equipment on Buick, Cadillac, Chandler, Chevrolet, Chrysler, Gray, Oakland, Oldsmobile, Peerless and G.M.C. trucks.

The AC Speedometer for Fords is of the same quality as furnished the above manufacturers for their original factory equipment.

The AC Direct Drive does away with the troublesome swivel joint and insures continuously satisfactory service.

Packed complete with all attachments.

AC Air Cleaners



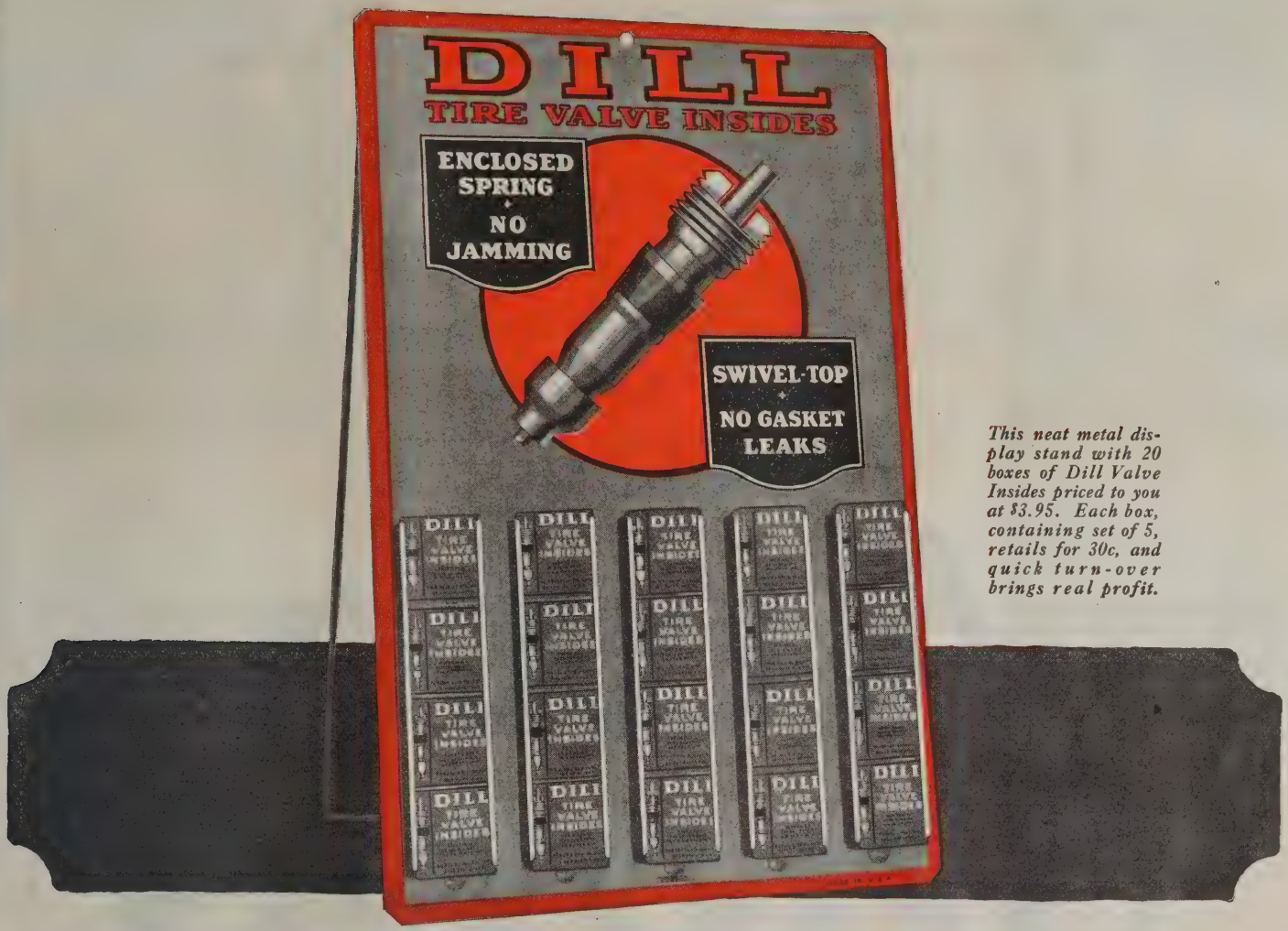
The AC Air Cleaner prevents dust from entering the motor through the air intake of the carburetor.

Dust is the same as an abrasive compound and causes excessive wear on all the motor's moving parts.

AC Air Cleaners are original factory equipment on the 1926 models of Nash, Buick and Oakland.

Installation is easy as it connects directly to the carburetor. Once installed it requires no attention as there are no moving parts to get out of order. Packed complete with all attachments.

Models are now ready for Chevrolet, Chrysler Four, Dodge Bros., Ford, Maxwell, Oldsmobile, Star, Studebaker, as well as the 1925 and earlier models of Buick, Nash and Oakland.



This neat metal display stand with 20 boxes of Dill Valve Insides priced to you at $3.95. Each box, containing set of 5, retails for 30c, and quick turn-over brings real profit.

Valve insides sell themselves from this attractive display

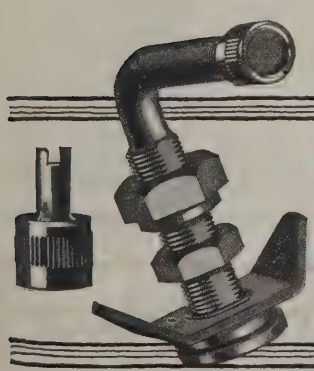
SET this display stand on your counter and watch how the little boxes of Dill Valve Insides are snapped up! Balloon tire users, especially, are quick to buy them. Every pound of pressure in their tires is important, and they know that there is no danger of leakage through Dill Valve Insides.

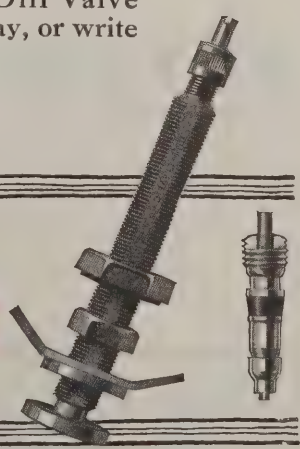
A sturdy metal barrel protects the frail valve stem and spring. No chance of bending or twisting out of place. Every part is made and assembled with the finest accuracy to do the job 100%—and they never fail!

Your jobber will supply you with this display stand filled with Dill Valve Insides. Order from him today, or write direct to us.

THE DILL MANUFACTURING COMPANY · *Cleveland, Ohio*

Manufactured in Canada by The Dill Manufacturing Company, of Canada, Ltd., Toronto





DILL

Standard Tire Valves and Valve Parts

TO THE TRADE

WRITE TODAY for tickets for the TRADE SESSIONS of the National Automobile Shows. They will be available for admission from 10 A. M. to 1 P. M. on Monday and Tuesday at each show. The head of every concern in the industry, and his principal representatives, are entitled to admission. If you write now your show tickets will cost you two cents—for postage. If you don't, it may cost you dollars worth of time standing in line.

26th Annual

NATIONAL

Auto Shows

Auspices *of* National Automobile Chamber *of* Commerce, Inc.

At New York

GRAND CENTRAL PALACE

JANUARY 9th to 16th - - -

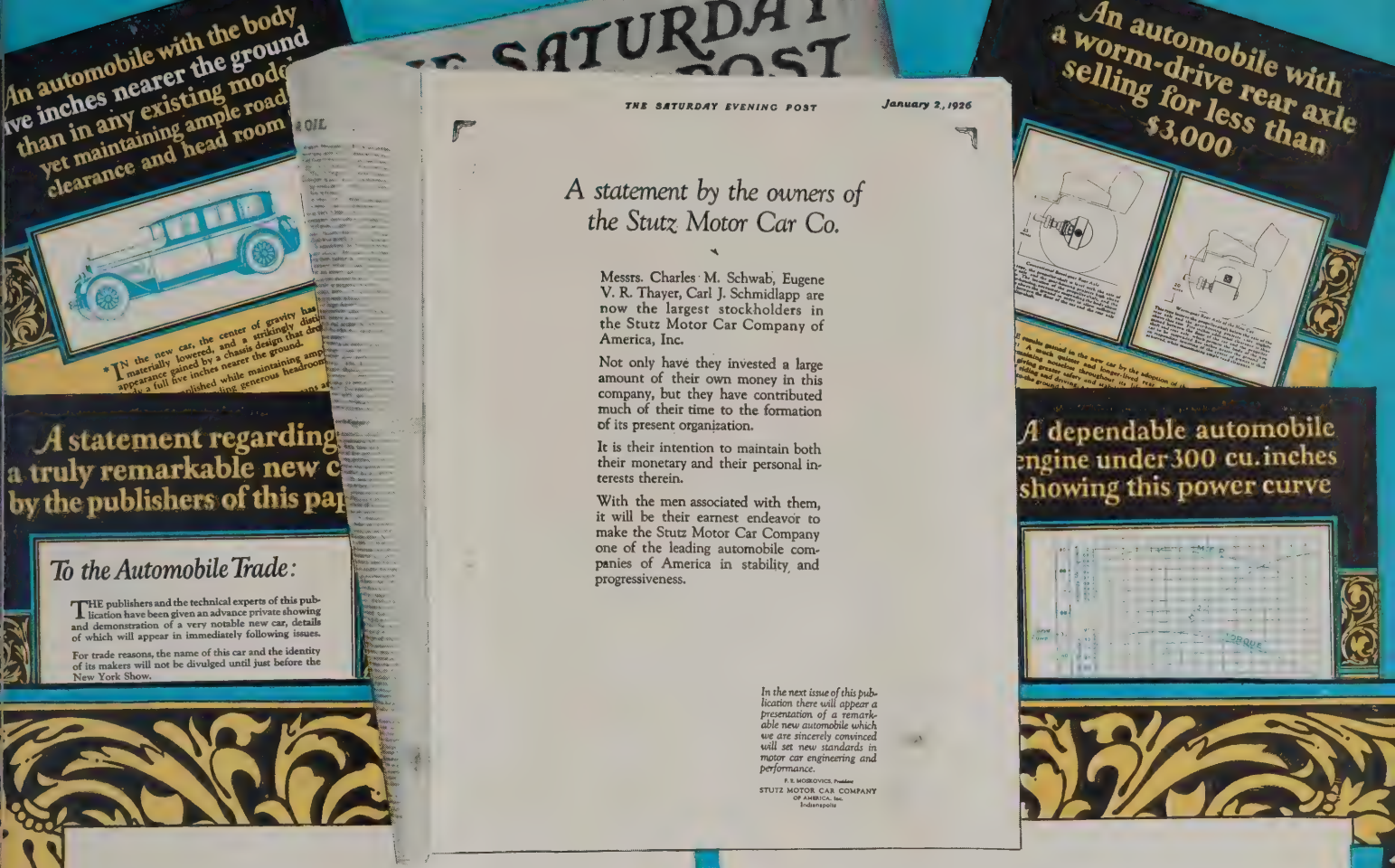
At Chicago

COLISEUM - - - -

JANUARY 30th to FEBRUARY 6th - -

S. A. MILES, Manager
366 Madison Ave., New York

The Big Show Back in Grand Central Palace



The NEW STUTZ

"When an organization of vision and ambition engages year after year in the production of motor cars, it develops certain ideals, definite standards of perfection; it conceives its 'dream car.'

"But the ideal of practical automobile technicians is never a merely theoretical conception, for it is born of the hard school of experience and close observation of the requirements of the public. The ideal car embodies all the virtues that experience has shown desirable, and eliminates all the disadvantages that observation has taught to be detrimental.

"Some ideal cars remain but dreams, never reaching material being because of production problems or financial limitations. A few pass from the dream stage into reality and become pioneers of new eras.

"The New Stutz is an ideal car—the realization of notably ambitious aims. In its design has been enlisted the skill of leading engineers of America and Europe, who have adopted tried and proven ways to accomplish the desired ends. It is being built with little restriction on eventual production costs, ample capital being available, with no interference from hampering traditions.

"We, who have built the car for you, offer the result of our labors firm in the conviction that we are rendering a distinct contribution to motor car engineering."

P. E. Moskovics

President, The Stutz Motor Car Company

MOTOR

"The motor of the New Stutz will, I confidently expect, be recognized by the automotive engineering profession as a decided advance toward the common goal of greater simplicity, maximum efficiency and elimination of vibration.

"In evolving this motor, I have had associated with me C. E. Greuter, a pioneer designer of overhead-valve engines; Paul Bastien, a former chief engineer of the Societe Anonyme Auto-Metallurgique, Brussels; and William Guy Wall, one of America's leading engineers.

"While in some ways, this automobile appears to be a radical departure from earlier practice, it utilizes only tried and sound principles. It is the new application and combination of these principles which result in such a remarkable automobile."

Chas. S. Crawford

Chief Engineer, Stutz Motor Car Company

REAR AXLE *and* BRAKES

"The worm-drive rear axle incorporated in the New Stutz is intrinsically as standard and as proven a type as the more familiar bevel-gear drive.

"This company has equipped thousands of modern, high-speed and long-distance motor buses with worm-drive rear axles of essentially the same type. Even under this strenuous service, worm-drive axles that have already gone three hundred thousand miles and more are good for several hundred thousand additional miles—and with no lessening of their quietness or efficiency. On passenger cars, the worm-drive should be good for at least a half-million miles, or longer than any car is likely to remain in service.

"The hydrostatic brakes with which the New Stutz is fitted have been thoroughly demonstrated in service. Their principle is recognized as sound hydro-mechanical engineering.

"The design of this brake gives practically 100% contact of the brake-shoes on the drums—with equal pressure applied to all four wheels. The hydrostatic system is a closed one, and being hermetically sealed, is insured against leakage and evaporation."

A. W. Alden

Chairman of the Board, Timkin-Detroit Axle Co.

BODIES

"In an international experience extending from the inception of the automobile, I never before have had presented such an opportunity for legitimately 'hanging a car on the ground.'

"The chassis construction of the New Stutz has permitted us to approach very closely to the ideal in motor car proportions. The result is a car of very distinctive appearance, yet free from any suggestion of freakishness, whose lines and contour are exceedingly smart and, by their directness, suggestive of smooth, straightforward speed.

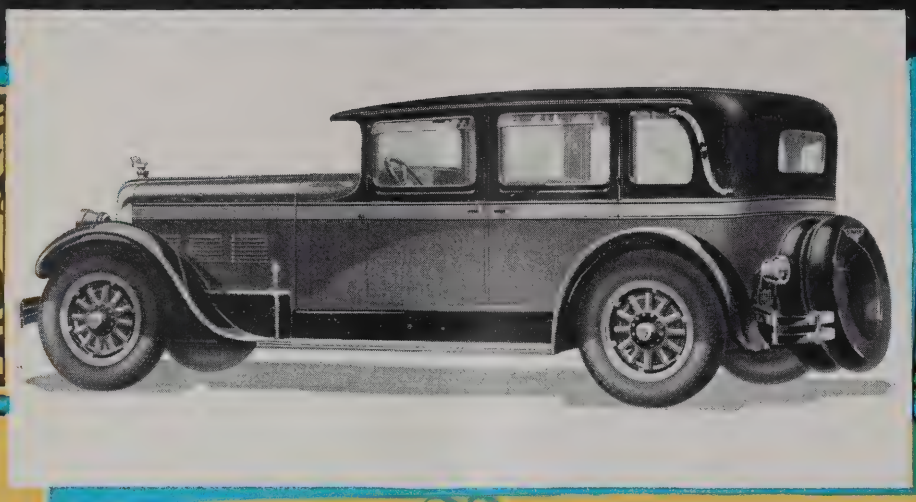
"No sacrifice of either legroom or headroom is made; on the other hand, the low center of gravity must greatly add to the comfort and safety of the passengers."

Brewster

Brewster & Company, New York

see next page

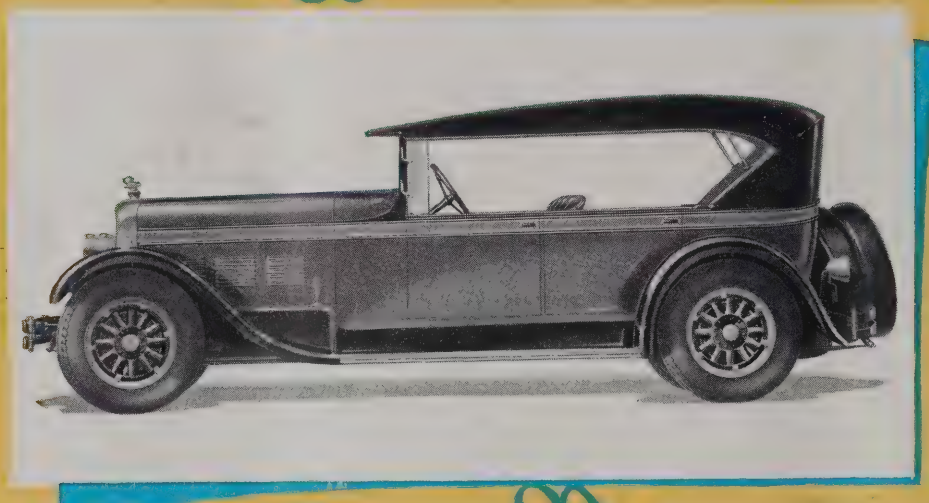
The NEW STUTZ vertical eight



STUTZ
SAFETY 8 CHASSIS

The Brougham

A five-passenger closed car of the same general design as the sedan, except that the rear quarter windows are D-shaped instead of rectangular, and rear quarter is leather-trimmed and embellished with Victoria irons. Hubbard Ventilating Eaves on doors.

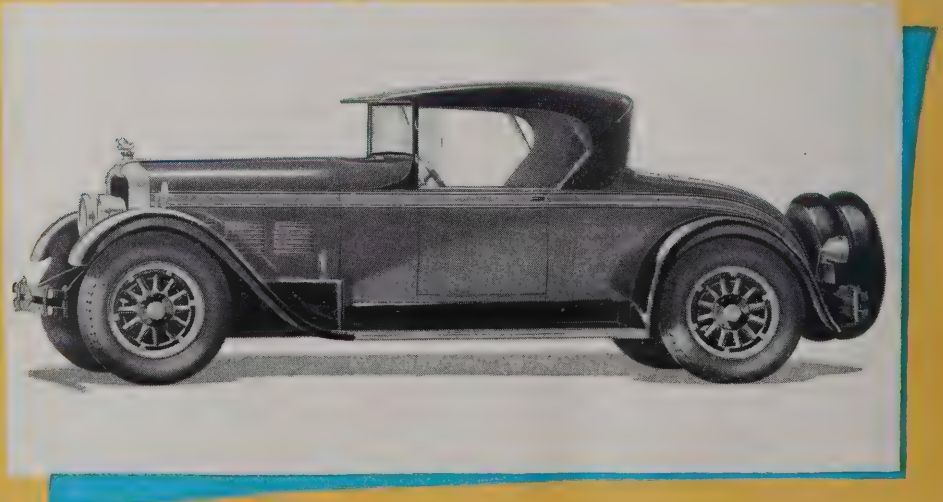


The four-passenger Speedster

A roomy, four-passenger Speedster with one-man folding top. A tonneau storm-apron, reaching from the back of the front seat to the back of the rear seat is provided.

The two-passenger Speedster

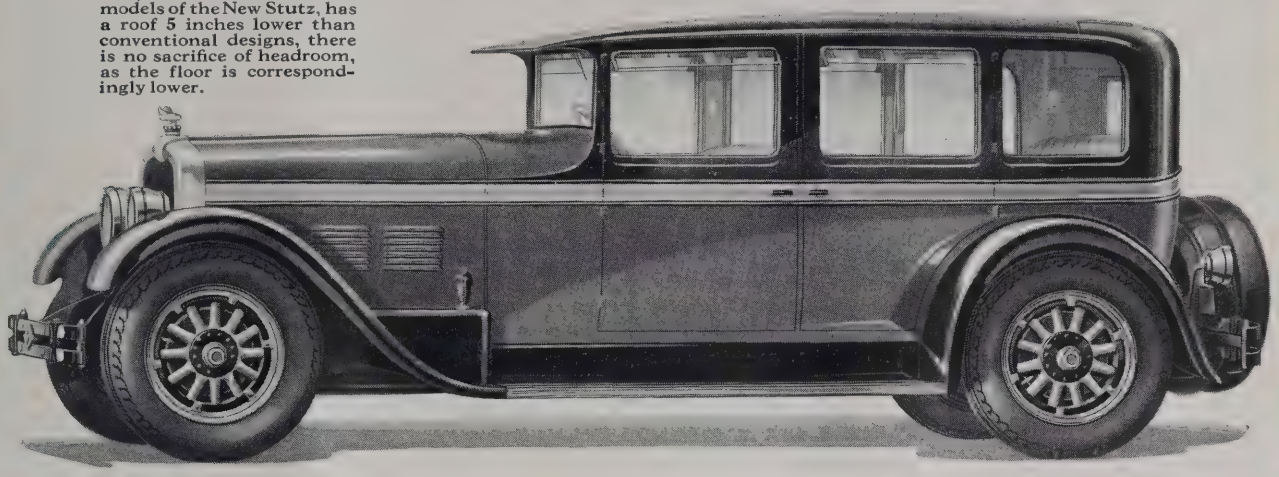
An open car with rumble seat in rear deck; a door in curb side of the rear deck permits using rear compartment for golf clubs, etc., without opening up the rumble seat. It has a detachable folding top.



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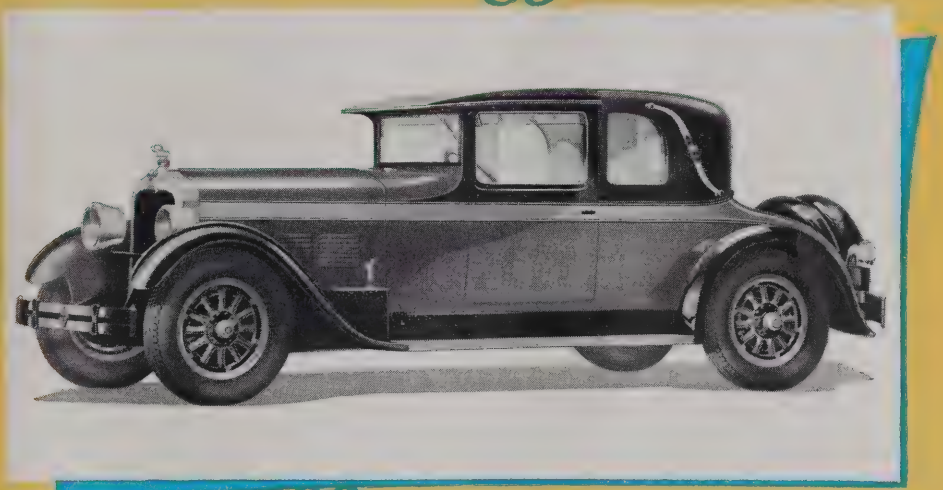
The five-passenger Sedan

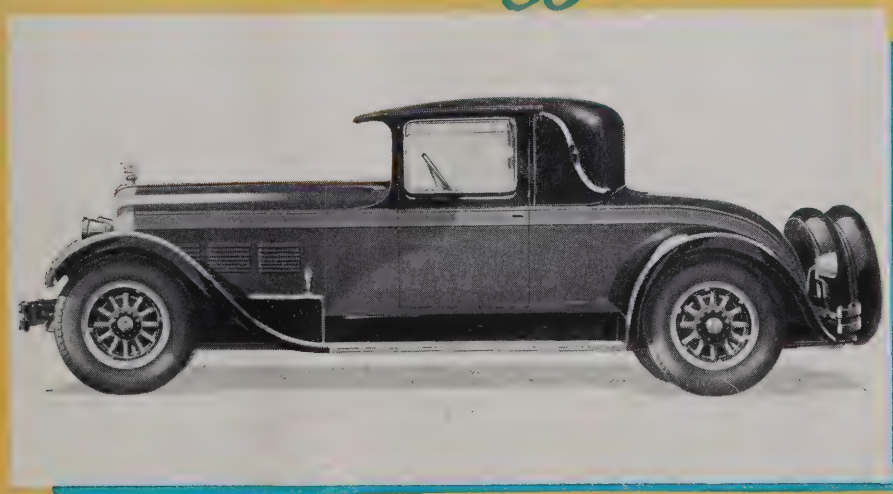
A genuine sedan (not a coach) with full windows all around. Hubbard Ventilating Eaves on doors. Although this, like all other closed models of the New Stutz, has a roof 5 inches lower than conventional designs, there is no sacrifice of headroom, as the floor is correspondingly lower.



The Victoria Coupe

A four-passenger staggered-seat closed car of customary coupe arrangement, but with leather-trimmed, Victoria-ironed rear quarter. It has a rear deck with door, a golf-club compartment and a glove-box. Hubbard Ventilating Eaves on doors.





The two-passenger Coupe

A single-seat-inside closed car with rumble seat in rear deck. Door in curb side of rear deck to admit golf clubs, etc. Leather-trimmed, Victoria-ironed rear quarter. Drop glass in rear of body. Parcel compartment back of front seat.

see next pag

The first showing of a new and advanced type of automobile at the NEW YORK SHOW

THE NEW STUTZ is "the new car" that you have been reading about in the preceding issues of this publication. It is more than a new model, more than the usual yearly refinement or dressing-up with minor improvements.

It is a car of a new type, basically and fundamentally different from all other cars of today. Yet no single feature of The NEW STUTZ is experimental or untried. The car simply combines proven features never before brought together in one automobile.

Read the condensed summary of features below:

VERTICAL EIGHT MOTOR—This motor shows a performance unparalleled by any other stock motor under 290 cu. in. piston displacement. The motor develops over 90 H.P. A speed of over 75 miles per hour is available when desired; likewise, acceleration from 10 to 50 miles per hour in less than 15 seconds. The camshaft, actuated by an exclusive form of automatic silent-drive, operates directly on the tappets of overhead valves. These function without either rocker-arms, push-rods, rollers, or other noise-producers. The crankshaft is very large, heavy, rigid; it is inherently balanced. It has nine bearings with a total bearing-surface of 120.5 sq. in., exceeding that of any other motor of its capacity. Vibration is non-existent. Fan mechanically actuated; no belt required.

WORM-DRIVE REAR AXLE—The adoption of this costly type of rear axle, in combination with a lowered center of gravity, represents its first appearance in any American passenger car, regardless of price. Yet, it is standard in the more expensive foreign chasses, and has been thoroughly proved by long use on thousands of motor vehicles.

This type of axle is incomparably quiet at all speeds, and remains noiseless after hundreds of thousands of miles. In fact, the worm-drive improves rather than deteriorates with use. The worm and gear are guaranteed by us for two years.

NON-LEAKING, HYDROSTATIC BRAKES—These are four-wheel brakes of an entirely new design. There is nothing on them to adjust; they are inherently equalized. There are no working parts to get out of order. Each brake is divided into six shoes, which are uniformly actuated by an expanding circular tube, giving equalized braking pressure at every point on every wheel. Leakage is impossible, as there are no cylinders or pistons. The entire hydrostatic system is of continuous tubular construction, hermetically sealed. The lining will last several times as long as in brakes of conventional design, and the shoes can be readily replaced.

CHASSIS LUBRICATION SYSTEM—All working parts of the chassis are lubricated by an entirely new self-lubricating system, non-clogging, self-cleansing, troubleless and positive. Oil is fed to each moving part by means of local magazines, which contain enough oil for three months' supply, mechanically refilled directly from the motor when needed.

OIL RECTIFIER—A triple-duty rectifier keeps the crankcase oil at its original purity and consistency, eliminating all foreign matter, gasoline and water.

IGNITION—The Delco dual ignition operates two spark plugs in each cylinder from opposite points. The firing of the gasoline charge from two points lessens the actual burning time, increases the mixture turbulence and thereby delivers a greater explosive force against the piston-head. Knocking is eliminated, acceleration is improved, greater speeds are attainable, and longer and harder "pulls" may be negotiated.

FRAME—Most rigid frame on any car, with integral steel running boards (actually, side bumpers). Seven cross-members; double drop, torsion-resisting construction.

LIGHTS—Twin-beam reflector headlights; steering column control. Combination tail, stop and backing light.

FINISH—Lacquer, three tones. Polished to a high lustre. Available in a number of attractive color combinations.

UPHOLSTERY—Rich and luxurious, employing fine, high-grade fabrics and genuine leathers of distinctive beauty.

LOCATION OF CONTROLS—Emergency brake and gear shift lever within a hand-span of the steering wheel. No obstruction to passage between controls and front seat.

INSTRUMENT BOARD—Speedometer, eight-day clock, ammeter, oil gauge, gasoline gauge and water-temperature indicator are all under one glass plate, indirectly illuminated. Board also carries ignition control, carburetor control and a combination cigar-and-pipe lighter, inspection and spot light.

BODIES—Six models. Designed and constructed under the supervision of Brewster of New York.

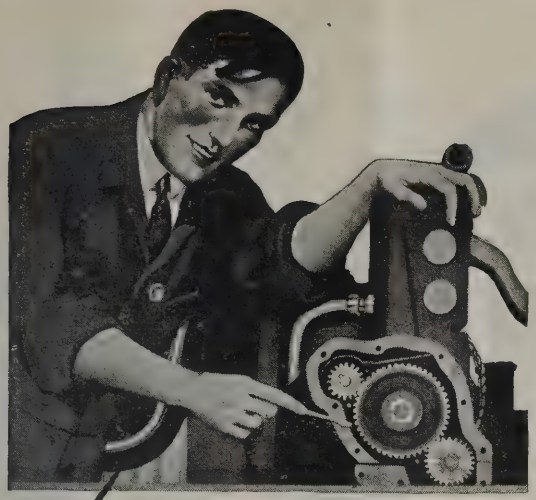
All models are equipped with bumpers, front and rear, Watson Stabilators and full-balloon cord tires. Hubbard Ventilating Eaves on all closed-body doors.

To the Automobile Trade:

Dealers who are interested are invited to write to The Stutz Motor Car Company for fuller details and to inspect The NEW STUTZ at the Automobile Shows.

STUTZ MOTOR CAR CO.
of America, Inc.
INDIANAPOLIS

ee preceding page



Be a noise killer

IT is a sure way to please all of your trade. If you make the engine run more quietly, even the least-knowing motorist appreciates that you have improved his car.

You know that the clash of metal-on-metal in the timing assembly is responsible for much of the irritating motor noise. You can put an end to this noise by installing a

Textolite

Silent Cam Shaft Timing Gear

Textolite Cam Shaft Timing Gears have a flexible web. They are die-formed. They will absorb the shocks of 100,000 miles of severest service. They are oil-proof, heat-proof and tougher than cast iron.

Get the complete story and name of your nearest distributor from

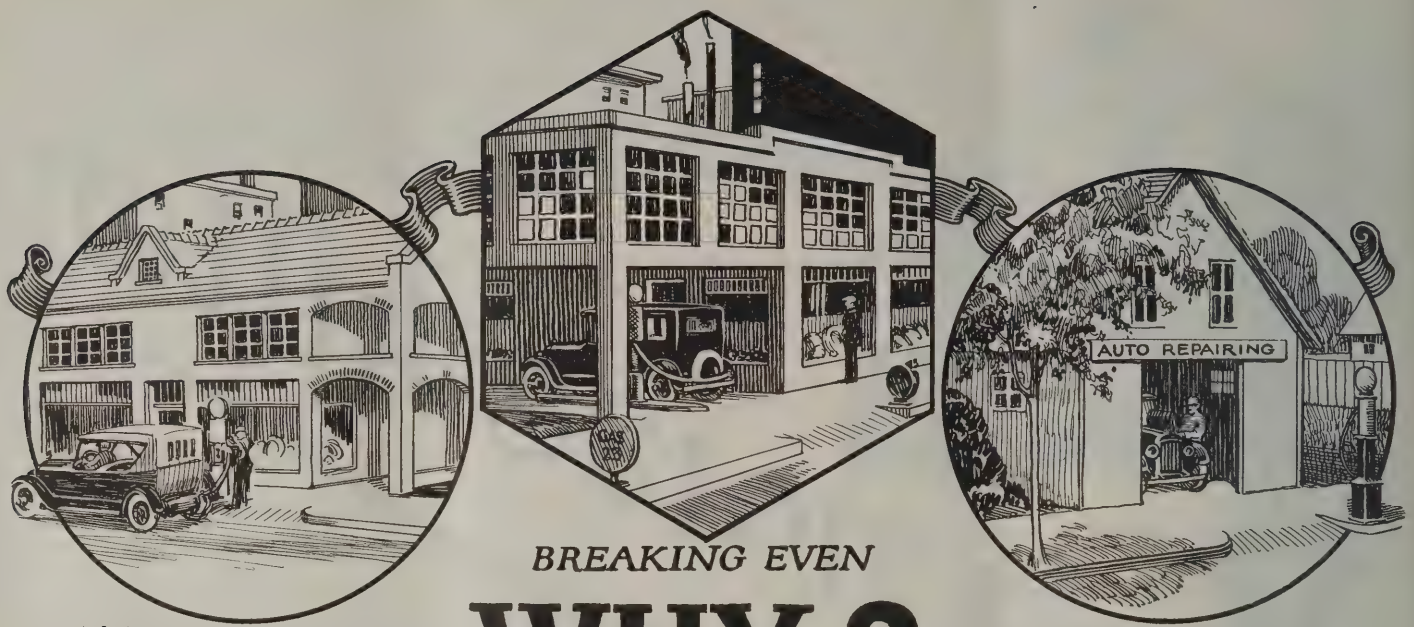
JOHN C. HOOF & COMPANY
157 West Illinois Street, Chicago, Ill.

Like many other General Electric products, Textolite Gears were developed in the Research Laboratories. Here scientists are working continually that men may have better materials with which to work.

50-18

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN ALL LARGE CITIES



MAKING PROFITS

BREAKING EVEN

WHY ?

LOSING MONEY

The Difference Comes in Knowing How

There are three kinds of automotive dealers—those who are making money, those who are not making money, and those who are actually running their business at a loss.

Only one kind survives—and that is the first of the three.

Profit makers know how. They take advantage of every opportunity to learn. Reading right, is perhaps their most productive teacher. It shows them dozens of ways to success.

Every week MOTOR AGE brings to its subscribers ways and means of making good. Every week there is something of money value in it for you.

MOTOR AGE

5 So. Wabash Ave. Chicago, Ill.

Rickenbacker

A • CAR • WORTHY • OF • ITS • NAME

Built Up To a Standard—Not Down To a Price

You Will Be Interested

Rickenbacker policies—Rickenbacker types—Rickenbacker values for the coming year represent a distinct departure from the prevailing trend which may be expressed in the phrase "Cut quality—then cut price."

With characteristic daring and initiative this dynamic concern which has taken the leadership in so many innovations, now again shows the way.

You will be intensely interested in the Rickenbacker line for the coming year.

They comprise all standard and at least two strikingly original types.

All will be exhibited at the National Shows—and in the spacious show rooms of our metropolitan distributors.

See the new Rickenbackers.

Ask about our sales plan for the future—you will be surprised and pleased with both.

Rickenbacker Motor Company
Detroit, Michigan

Famous "Six" Prices

7 Pass. Phaeton	*$1795*
5 Pass. Phaeton	*1750*
4 Pass. Roadster	*1795*
5 Pass. Coupe Sedan	*1695*
4 Pass. Coupe Roadster	*1920*
5 Pass. Brougham	*1895*
5 Pass. Sedan	*2095*
7 Pass. Sedan	*2195*
4 Pass. De Luxe Coupe	*1995*



f.o.b. Detroit—plus war tax

Vertical "Eight" Prices

7 Pass. Phaeton	*$2195*
5 Pass. Phaeton	*2150*
4 Pass. Roadster	*2195*
5 Pass. Coupe Sedan	*2095*
4 Pass. Coupe Roadster	*2320*
5 Pass. Brougham	*2295*
5 Pass. Sedan	*2495*
7 Pass. Sedan	*2595*
4 Pass. De Luxe Coupe	*2395*

THE HEADLIGHT ADJUSTING STATION

Vol. I. No. 4. PUBLISHED BY THE AMERICAN FLATLITE CO.



Just Read What One of Oregon's Leading Official Headlight Adjusters Says About Flatlite—

Yes. It's the young lady in the picture.

We wrote her on November 23rd, and enclosed a copy of our booklet "Motor Vehicle Headlighting."

Her answer follows:

The American Flatlite Co.,
Reading Road at Dandridge St.,
Cincinnati, Ohio.

Gentlemen:

We are in receipt of your letter and the forms mailed to us November 23rd. The forms are very helpful, especially the pamphlet "Motor Vehicle Headlighting."

Our headlight adjusting station proved to be more satisfactory than we hoped when we installed it, both from the financial standpoint and as a drawing card for new customers. We were surprised at the number of people, not only from our own district, but from all parts of town, who came to have their lights adjusted, who had never been in before, and we know that a good many of them will come back when they need other service.

We have kept a list of all the cars we adjusted and the name and address of the owners, thereby building up a very good mailing list which we can use to advantage in advertising our shop and other lines.

It is always a pleasure to me to work with Flatlite Reflectors, because I am always sure of the satisfaction of the best light it is possible to get.

Thanking you for your interest, I am
Very truly yours,
Mrs. EILEEN GANTENBEIN.

LONG & SILVA GARAGE
East Eighth and Hawthorn Streets
Portland, Oregon.

Every light adjusting station in the country should have a copy of our free 28-page book on Motor Vehicle Headlighting.

Every garage and service station should consider this new and profitable business.

And the best and quickest way to learn all about how to conduct a light adjusting station anywhere, is to mail the coupon below. Ask us anything you want to know. We have the answer based on the experience of thousands of successful stations located in every state.

Cut out and mail the coupon now.

The American Flatlite Co.
Reading Road at Dandridge Street
Cincinnati, Ohio

flatlite

THE AMERICAN FLATLITE CO.
Reading Road at Dandridge Street
Cincinnati, Ohio
Dept. A

Gentlemen:

Please send me without charge or obligation booklets and literature on headlight adjusting station equipment.

NAME_____

_____

ADDRESS_____

_____

☐ Check here if you want copy of "Motor Vehicle Headlighting." A 28-page text book on headlighting. No charge.

Chevrolet's Greatest Year

-a half million cars in 1925

Never before has any manufacturer of gear-shift automobiles even approached Chevrolet's total production this year of over a half million cars.

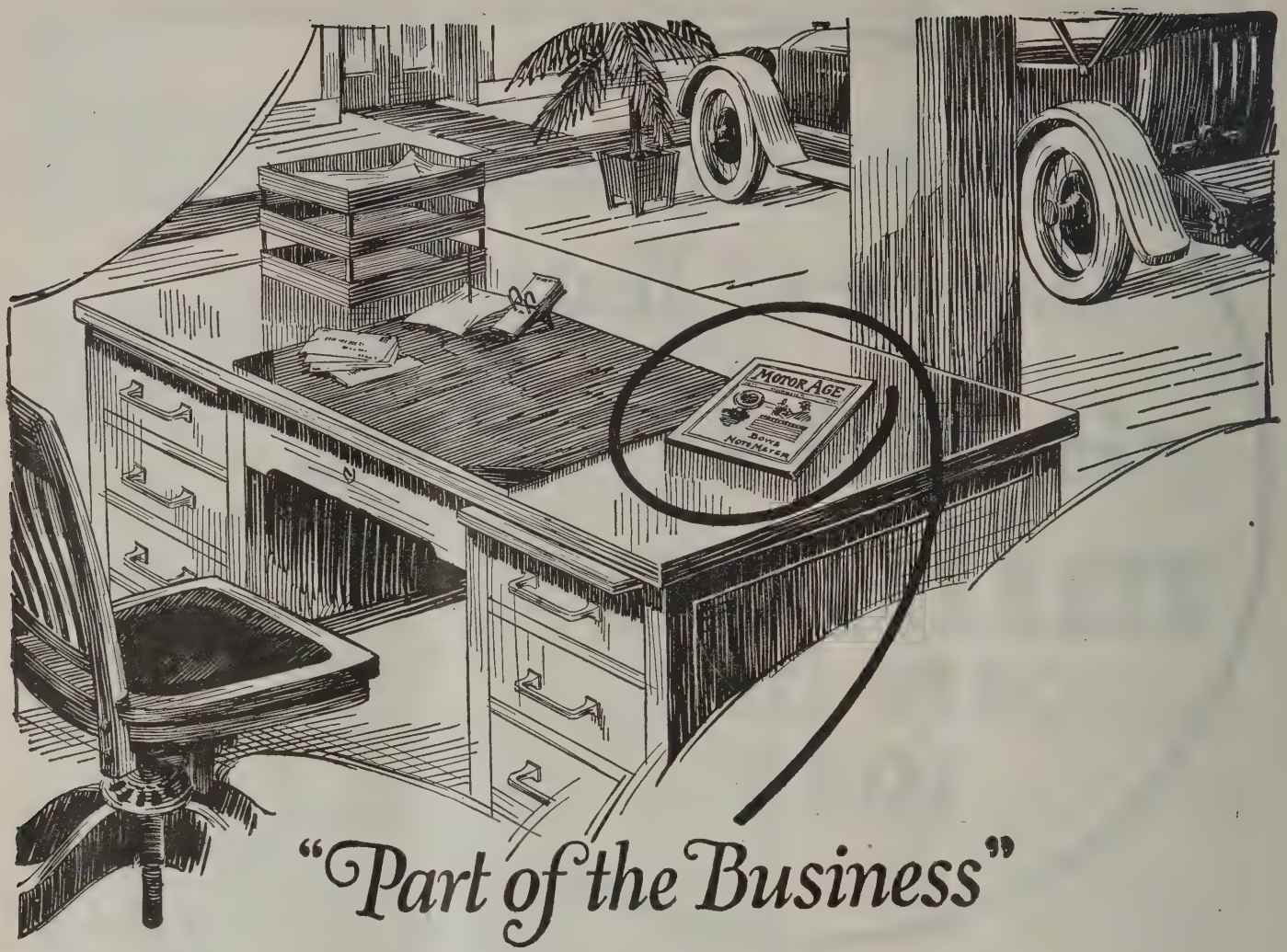
Chevrolet is the world's largest builder of cars with modern three-speed transmissions—a position won and being held by providing high quality at low cost.

CHEVROLET MOTOR COMPANY
DETROIT, MICHIGAN
Division of General Motors Corporation

for Economical Transportation

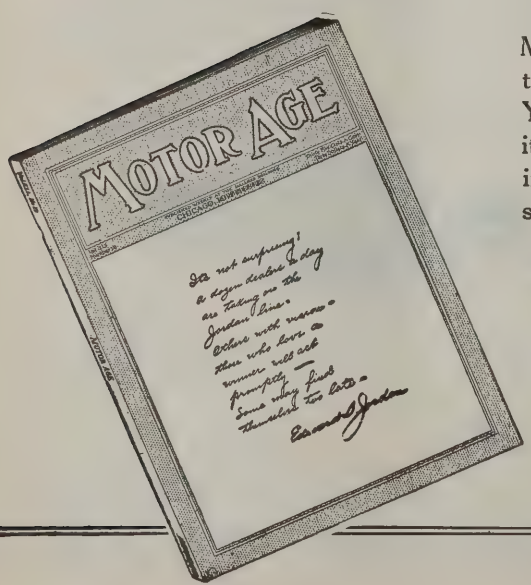
CHEVROLET

QUALITY AT LOW COST



"Part of the Business"

IF an automotive merchant could travel through the country asking hundreds of other automotive merchants about their methods of doing business—if he could find out why some businesses have failed and others prospered—if he could hear the personal stories of success from the acknowledged leaders of the automotive trade—if he could do this he would return home a far broader man and a more progressive dealer than when he started. His mind would be filled with new ideas. His enthusiasm would be kindled. And his business would reflect the valuable lessons learned.



MOTOR AGE is making such a trip possible to thousands of automotive merchants the world over. Yet these men need never leave their desks, for in its columns MOTOR AGE presents information of inestimable value gathered from every conceivable source.

MOTOR AGE

5 S. Wabash Ave. Chicago, Ill.

Are you using the right kind of HACK SAW BLADES?

THERE are Goodell-Pratt blades made for general all-around work, blades for jobs where there is severe twisting and side strains, blades for iron and steel, blades for brass or pipe, blades for soft metals, blades for thin steel sheets or tubing. Are you using the right kind of blades? Read this advertisement and find out.



No. 888 ALL-HARD Hack Saw Blades

Made from a high grade of hot rolled sheet steel .025 inch thick. Cut so that the length of blade runs with the grain. Teeth are cut, sharpened and set by a special process for speed in cutting. Hardened and tempered by another process which assures uniformity and long life.

These all-hard blades are for general work and are offered in lengths from 8 to 12 inches.

No. 777 FLEXIBLE Hack Saw Blades

These blades are for cutting under difficult conditions. Made to withstand severe twists and side strains without snapping.

Made from best hot rolled sheet steel with hardened teeth and back, *but with soft centers* for flexibility. The result is a fast-cutting, long-life blade that will stand up under severe strains.

Offered in lengths from 8 to 12 inches.

Pick the right Goodell-Pratt blade for the metal to be cut

For cutting iron and steel rods or bars, use blades with 14 teeth to the inch.
For cutting brass, tubing or pipe, use blades with 20 teeth to the inch.
For soft metals or light tubing, use blades with 24 teeth to the inch.
For thin steel sheets or tubing, use blades with 32 teeth to the inch.

Interesting catalog FREE

The Goodell-Pratt Catalog shows all the Goodell-Pratt hack saw blades, as well as frames and all the other 1500 Good Tools—many made especially for motor repair work. Write for a copy. It's free to you.

GOODELL-PRATT CO. *Toolsmiths* GREENFIELD, MASS.

Makers of Mr. Punch

GOODELL-PRATT

1500 GOOD TOOLS

Announcing a New Price List on TANPAC Fibre Sheet Packing



.015 or 1/64	$0.80
.020	1.20
.032 or 1/32	1.60
.0625 or 1/16	3.00

Our Discounts Remain the Same

Our volume on this popular product, has made the above reductions possible, in the face of advanced prices on most manufactured products.

Advance Packing & Supply Co.

808 Washington Blvd. **Chicago, Ill.**

Pacific Coast Distributors: Allied Industries, Inc., Los Angeles, San Francisco, Portland and Seattle

There are Profit Making Ideas in Every Issue of

MOTOR AGE

Many subscribers of MOTOR AGE, who realize the value of its contents each week, route every issue regularly through their places of business to all departments.

As a means of business-building this is a profitable habit to encourage, both for the benefit of the organization and its individual members. It is always best to read MOTOR AGE every week.

MOTOR AGE

5 SO. WABASH AVE. CHICAGO, ILL.



HERE'S part of the No. 19 Ford LAPS system at the Hubbell Auto Sales Co., Bay City, Michigan. Notice the neat appearance of the steel bins, the systematic storage of parts, and the convenient arrangement for quick service. Also note visual check on parts in stock. If you see 'em, they're there. If not, you re-order.

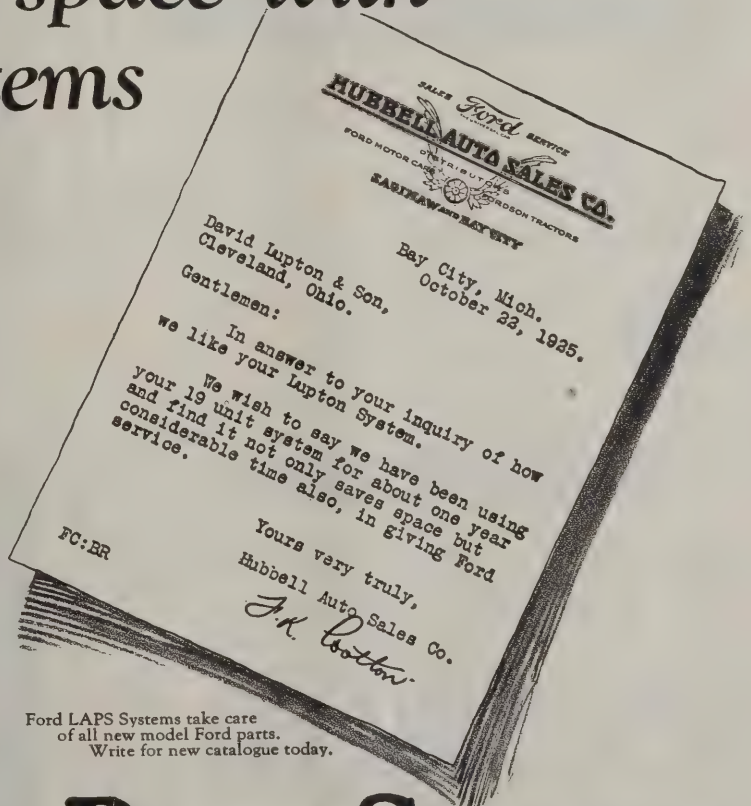
Save time and space with these parts systems

TO make money in parts these days, you have to save time and space in the parts department. And you have to give rapid, sure service to build up a profitable business. Your modern customer won't wait while you hunt through a confusion of bulky bins for the item he wants.

That's why successful dealers, accessory men, and shops have installed LAPS systems. These steel systems keep all the parts at your fingertips—in logical order, and with the minimum use of floor area. They permit snappy service to mechanic or driver and, at the same time, release valuable space for your display room, office, or other departments.

Many a dealer has increased his parts business 50% by installing a LAPS system. Could you use this extra profit? If you could, write today for "Better Parts and Accessories Merchandising."

DAVID LUPTON'S SONS CO.
Philadelphia
Sales Office—2631 Woodward Ave., Detroit, Mich.
Sole Manufacturers of Lupton Auto Parts Storage Systems



Ford LAPS Systems take care of all new model Ford parts. Write for new catalogue today.

LUPTON AUTO PARTS STORAGE

MORRISON

Automatic Double Range

Worm Drive JACKS



Special model for Balloons

Can't Slip or Tilt

Flexible steel "Sure Hold" cap prevents dangerous slipping. Long folding handle (36 to 72 in.) operates from standing position. Gets under overhanging bodies. Easy to work. Few turns and it's up. Built in 11 sizes for all service requirements up to 8 tons. Furnished as standard equipment on fine passenger cars, trucks, buses and Fire Apparatus for past 4 years. The Jack for YOUR shop. Write for sample for test.

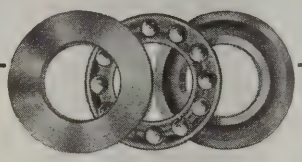
THE WOODS ENGINEERING CO., Alliance, Ohio



FULLBACKS look good on every sort of car — $14 to $25

The dealer receives New Era bumpers carefully wrapped, securely cartoned and—ready. Saves him a lot of time!

NEW ERA SPRING & SPECIALTY CO., GRAND RAPIDS, MICH.



THE BEARINGS COMPANY OF AMERICA

Lancaster, Penna.

Manufacturers of Angular Contact Thrust Bearings, Angular Contact Radial Bearings, and Thrust Ball Bearings of all types.

Supplied to your blueprints and exact requirements.

Western Sales Office
1012 Ford Bldg.
Detroit, Mich.

THE B & R 5

There Are Good Profits in Battery-Charging

THIS BURTON & ROGERS 5 BATTERY CHARGER is designed especially for THE CAR DEALER

FLEET-OWNER BUS-TERMINAL
SERVICE GARAGE ACCESSORY STORE
RADIO DEALER COUNTRY GARAGE

to use in starting the charging-business. B & R 5 Battery Chargers have paid for themselves in 2 to 3 months. NO POWER LINE REQUIRED. Plug in on any 110-volt socket and set it to work. We make larger chargers too.

Send for our Charger Booklet.

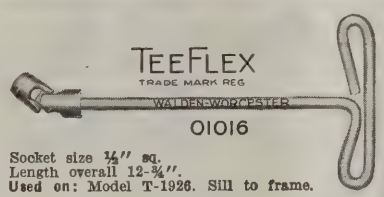
BURTON & ROGERS MFG. CO.

755 Boylston St. Boston, Mass.



Definite Purpose Socket Wrenches

FOR FORD CARS 1926 MODELS



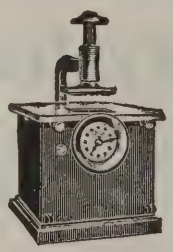
Socket size 1/2" sq.
Length overall 12-3/4".
Used on: Model T-1926. Sill to frame.

ASK YOUR JOBBER

WALDEN-WORCESTER
INCORPORATED
475 SHREWSBURY ST.
WORCESTER, MASS.

FOLLETT'S NEW MODEL TIME STAMP

accounts for every labor minute



Learn the interesting details from our descriptive data.

Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

NOV 19 1920 4 31 PM

Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

Absolutely automatic — except for winding. Every machine guaranteed.

Follett Time Recording Co., 217 High Street, Newark, N. J.

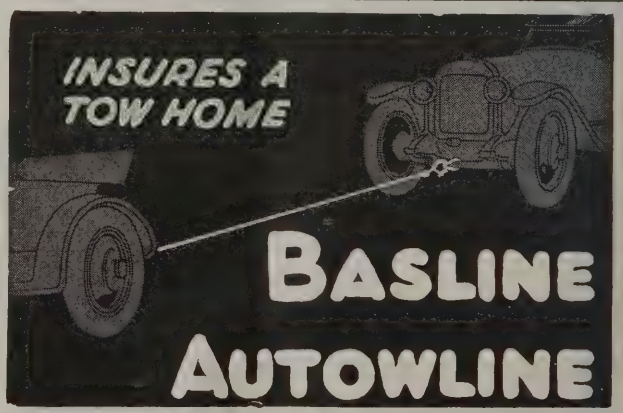
"Established Since 1904"

BOLTS THE BLUE PRINT BUSHINGS

"Made to Blue Print"

"BP" guarantees to the Replacement Trade the same high standard of Quality and Accuracy demanded by the car manufacturer. "BP"

The Fostoria Screw Co., Fostoria, Ohio



E-196

PROTECTOMOTOR

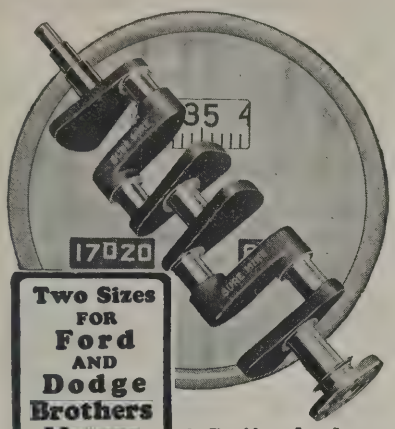
REG. U.S. PAT. OFF.

Perfect Positive Protection

Filters all dust, sand and grit out of air supply to carburetor and motor. Write us for facts.

STAYNEW FILTER CORPORATION
Rochester, N. Y.

99 9/10 EFFICIENT



"Six" cylinder results at all speeds!

Stops Vibration!

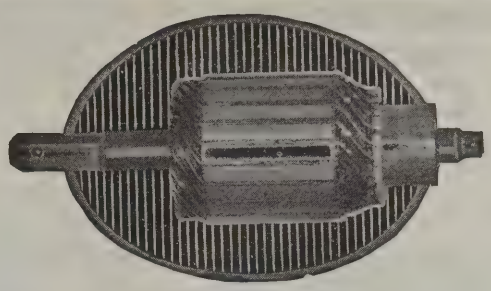
The SURE-MIKE COUNTER-BALANCED CRANK SHAFT replaces any Ford or Dodge shaft without change in motor or bearings. Guaranteed interchangeable. Makes an amazing difference in way motor performs. No vibration period. Insures smooth, quiet, vibrationless performance at all speeds.

A QUALITY SHAFT in every respect. Patented design. Drop forged in one piece. Beautifully machined and finished in world's largest crank shaft plant. Two types for both Ford and Dodge: "Regular" for splash oiling; "Drilled" for force feed oiling system. Approximate weights: Ford 22½ lbs., Dodge 50 lbs. Every owner wants one. A necessity for Ford racers. Write for literature and prices.

Dealers make money installing Sure-Mike Counter-balanced Crank Shafts. Attractive discounts. Write for name of nearest Jobber.

J. WADSWORTH STAFF
213 North Hamilton St. SAGINAW, W.S., MICHIGAN

SURE STAFF MIKE
REG. U.S. PAT. OFF.
COUNTER-BALANCED CRANK SHAFT



Up and At This Armature Profit!

Send for the Fredericks price list. Plan to get in on armature rewinding profits now. Frederick's new low rates have made this business still more desirable. Write us for the booklet.

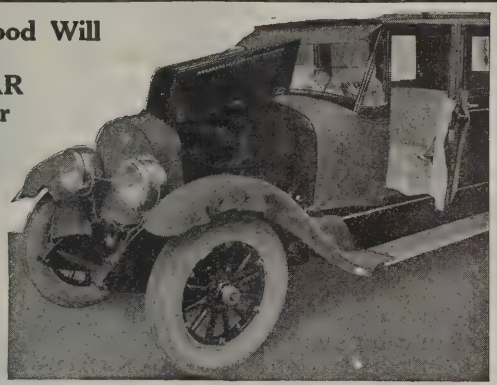
FORD GENERATOR Armatures Rewound	$1.50
FORD Starter Armatures Rewound	1.50
ALL OTHER TYPES TWO-UNIT Generator Armatures Rewound	3.25
ALL OTHER TYPES TWO-UNIT Starter Armatures Rewound	3.25
ALL TYPES MOTOR GENERATOR Armatures Rewound	8.00

GUARANTEED to give the same satisfaction as new armatures.

The H. M. FREDERICKS CO., Lock Haven, Pa.

FREDERICKS Rewinding Service

There's Good Will In Every KLEENKAR Shop Cover



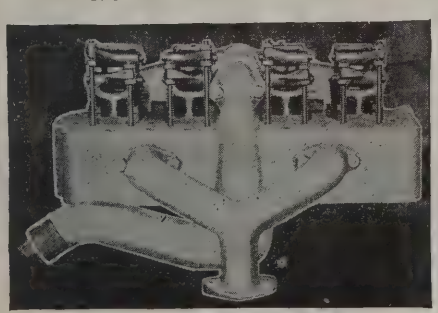
The biggest factor for greater profits in your business is customer satisfaction.

And every time you use a KLEENKAR Shop Cover you make a better friend. Good will pays.

Write for samples and free courtesy tags.

AUTOMOTIVE FABRIC EQUIPMENT COMPANY
Originators 235 East Water St., Milwaukee, Wis.

ROOF 16 OVERHEAD VALVE EQUIPMENT
For Ford and Dodge Motors
ROOF 8 VALVE HEAD FOR FORD MOTOR



Stupendous Power—Lightning Speed

Ford racing cars with Roof Equipment are rivals on mile and one half mile tracks of the highest priced racing cars. Doubles the pulling power of the Ford or Dodge pleasure car or truck. Hill climbing and general road work beyond wildest dreams of the owner. Complete — ready for installation — no machine work necessary.

We are headquarters for all speed equipment. No matter what you want, write us. Racing quality —lowest prices. A postal card brings you complete list of our specialties.

Jobbers—Dealers—Consumers—Write Us.
THE LAUREL MOTORS CORPORATION, ANDERSON, INDIANA

A Continued Story of the Industry

READING MOTOR AGE every week is very much like following the growth of the automotive industry in story form.

It is as interesting as a fiction serial, and instructive to the point of making better and more prosperous dealers.

Reading MOTOR AGE every week when it comes, assures subscribers that they will stay up to date and profit accordingly.

MOTOR AGE

5 So. Wabash Ave. Chicago, Ill.

GOODRICH-LENHART PRODUCTS

Cable

Starting - Lighting - Ignition

Goodrich Cable is sold in lengths found to be the most popular with the average buyer—coils of 100 ft. packed in individual cartons. Both shop men and car owners like the clean 100 ft. package idea—and this leads to quick and profitable sales. Send for samples, prices and discounts.

THE GOODRICH-LENHART MFG. CO., Hamburg, Pa.

"As Silent as a Shadow"

Quincy Compressors

Quincy, Illinois

J-538



DIERINGER

BUSHING REMOVER

Any spindle bushing out in two minutes! Merely insert tool, drive out with hammer. Full set of 3 sizes covers all cars. $4.50. Write for trade discount. Distributors wanted.

E. T. Dieringer, Box 282, Bolivar, O.

HALL'S CYLINDER HONE

They Won't Come Back

Those jobs won't come back showing oil passing, compression loss and crank-case dilution if you use a Hall Hone. The Hall makes cylinders both round and parallel. Ask your jobber.

THE HALL MFG. COMPANY
512 Hall Bldg., 1600-06 Woodland Ave.
Toledo, Ohio

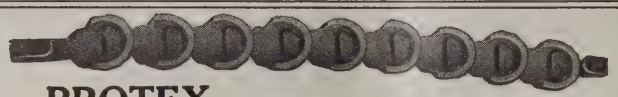
FISK TIRES

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

Lycoming MOTORS

Fine Fours, Sixes and Eights-In-Line

LYCOMING MFG. CO. WILLIAMSPORT, PA.



PROTEX TIRE CHAINS

Protex Chain Co., Inc.
Waynesboro, Pa.

Absolutely Stop Skid

Many small horseshoes grip the road and prevent slip. The first scientific anti-skid device.

UNITED STATES Portable Electric DRILLS

Built by the oldest maker of Portable Electric Drills in the World.

Ask for Catalog 108 THE UNITED STATES ELECTRICAL TOOL CO.
Cincinnati, Ohio, U. S. A.

Kawneer

SOLID COPPER

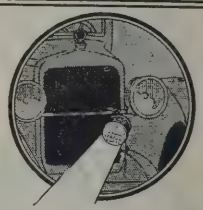
STORE FRONTS

Write for Special Book Garage Front

THE KAWNEER CO., 3124 Front St., Niles, Mich.

THE WALDEN FORE-LITE

Mounted ahead of the radiator and operated like a spotlight from the instrument board, the WALDEN Fore-Lite satisfies a need hitherto filled by make-shifts. Universal fittings. Selling fast wherever introduced. Ask your jobber, or write us direct, giving his name.



THE WALDEN CO.

1114 S. Michigan Ave. Chicago

ZENITH CARBURETOR

More Power Less Fuel

Zenith - Detroit Corporation, Detroit, Mich.

CURTIS

AIR COMPRESSORS-HOISTS-TROLLEYS-CRANES

ST. LOUIS

Curtis Pneumatic Machinery Co.

1527 Kienlen Ave.
St. Louis, Mo.

Transmissions and Clutches FOR BROWN-LIPE GEAR CO. Trucks, Busses Passenger Cars

QUICK SERVICE ON COMPLETE UNITS OR PARTS

BROWN-LIPE GEAR CO.

SYRACUSE, N. Y.

Cushers

The Modern Spring Rebound Controls—Fast—Noiseless

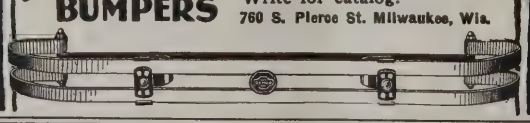
Manufacturers: CHICAGO ROLLER SKATE CO., CHICAGO

Cushers Sales Dept., Fulton-Dean Co., 332 S. Michigan, Chicago

Gemco BUMPERS

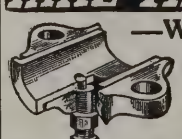
Tempered and nickel plated by our own exclusive process. Maximum strength, lasting beauty of finish. Write for catalog.

760 S. Pierce St. Milwaukee, Wis.



TAKE THE END-PLAY OUT!

—WITHOUT PULLING THE MOTOR



The C. A. ADJUSTABLE CENTER BEARING CAP corrects Ford crankshaft end play and sets magneto for highest efficiency without removing the motor. Easily and quickly installed. Guaranteed for one year. List price $3.75. Ask your jobber or dealer or write us direct.

Pat'd 7-22-'22

ADJUSTABLE BEARING CO., Inc.
Dept. M. Brazil, Indiana

R.I.V. Means Quality
in Every Language

R·I·V·Co.

250 West 57th St. New York City

SIOUX

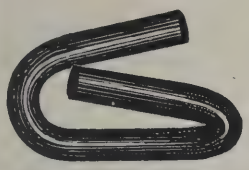
Valve Face Grinding Machine

Before you buy *any* valve grinding machine it will pay you to investigate the "Sioux." Nothing like it!

Ask Your Jobber About It.

Albertson & Co. Sioux City, Iowa

NO TOOLS—It's Self-Closing



Repair Link for Broken Cross Chains

A Self-Closing Monkey Link attached with fingers to loose ends of broken chain closes and locks on first turn of wheel. Stops clanking—saves fender—low-priced. Box of 10 Links retails for 25 cents.

Write for samples and discounts.
Distributors wanted.

FLOWER CITY SPECIALTY CO.
Rochester, N. Y.



QUALITY—PROFIT—TURNOVER

American Hammered Piston Rings

American Hammered Piston Ring Company
Baltimore, Maryland

To beat the water meter—
GAYLORD
WATER SAVING DEVICES

Sales Office
A. K. TROUT CO., Inc.
342 Madison Ave., New York, N. Y.

Factory
GAYLORD MFG. CO.
Paterson, N. J.

HIGH LUSTRE FINISH

For Everything Varnished or Enameled
Automobiles, Pianos, Furniture
Recommended for DUCO

H. L. FEASEL'S LABORATORY
9-11-13 Desbrosses St., New York, N. Y.



Rubber Tubing for the Trade

EKLA radiator hose—All-Rubber or Cloth-Inserted, tire pump hose and windshield wiper tubing, all in standard lengths, will show you better profits and your customers better service.

Insist on EKLA Brands when buying these items.

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Cuyahoga Falls, Ohio



A KLEAN-RITE Auto Laundry Franchise Is a Big Money-Maker

Write for a copy of our booklet on "The Business Possibilities of An Auto Laundry." It contains valuable information. Sent free upon request.

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CUSTOM BUILT
Kissel Motor Car Co., Hartford, Wis.

A Word to the Dealer Who Has Never Handled Radio Equipment

WE offer you *exclusive* territory and a *permanent* business. We start you with a complete set at a price that beats competition, and the opportunity exclusively to handle the products of the foremost radio designer of the day. Get in touch with your Jobber at once—or wire Sales Department, giving his name and address.

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Gas Gauge for FORD, CHEVROLET and OVERLAND



Sells Quick at $1.25 Retail

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Akron, Ohio

CLASSIFIED ADVERTISING

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The largest stock of new and used car and truck parts in the world. We have everything. Always mention model and serial number in order. Write us. All inquiries answered promptly.

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New and Used Gears—Springs and Axles—Cylinders—Motors—Rear Systems, etc. Wire or Write

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FOR SALE—Automobile business and modern garage with dwelling adjoining. Popular agency. Wonderful opportunity in thriving town. Center of hard roads. Address Box 6256, Motor Age, 5 S. Wabash Ave., Chicago, Ill.

snappy salesman *for you—*



ask your jobber's salesman about this counter display

KEY Graphite Paste will sell itself to the car owner when he sees this instructive counter display. Lithographed in attractive colors and holding 8 quarter-pound cans. It takes up very little space and can be placed anywhere. Convenient sized card 13¼" by 10½".

Up-to-date repair men know all about Key Graphite Paste. For several years they have been using it when sealing all gaskets and screw-thread connections, or any place where it is essential to get an oil-tight or heat-proof connection.

The great multitude of car owners who do their own repair work will buy Key Graphite Paste, gladly.

If your distributor cannot supply you, send us his name with 10c to pay cost of mailing and we will send you a liberal size can for trial purposes.

KEY BOILER EQUIPMENT CO.
27th and McCasland Ave.
East St. Louis, Ill.

---Send for Trial Can---

Key Boiler Equipment Co.
27th and McCasland Ave., East St. Louis, Ill.

Enclosed find 10 cents for which please send me a trial can of Key Graphite Paste.

NAME .....

FIRM .....

ADDRESS .....

JOBBER'S NAME .....

M.A. 12-31-25

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Never Before a Jack Like This



—with a high-power lifting range from 4¾ to 15½ inches

The Master So-Lo Jack Fully Solves the Balloon Tire Problem

Heavy ALL-STEEL Construction

(Side Bars Channeled for super-strength)

Compound leverage takes the car up with startling ease.

Folding-telescope handle extends to full 36 inches. Combined rigid-universal joint at handle-end makes this the easiest of all jacks to place under the car and to operate.

Its unusual shape and handsome green enamel "overcoat" make it a wonderful display feature.

Retails at $6.00

(West of Mississippi $6.50)

THE MASTER SO-LO JACK IS A SURE SELLER

Inquire at once of your wholesaler

SO-LO JACK CO., Inc.

ATTLEBORO, MASSACHUSETTS

SALES OFFICE

537 Commonwealth Ave. Boston, Mass.

Do You Read Our Editorials?

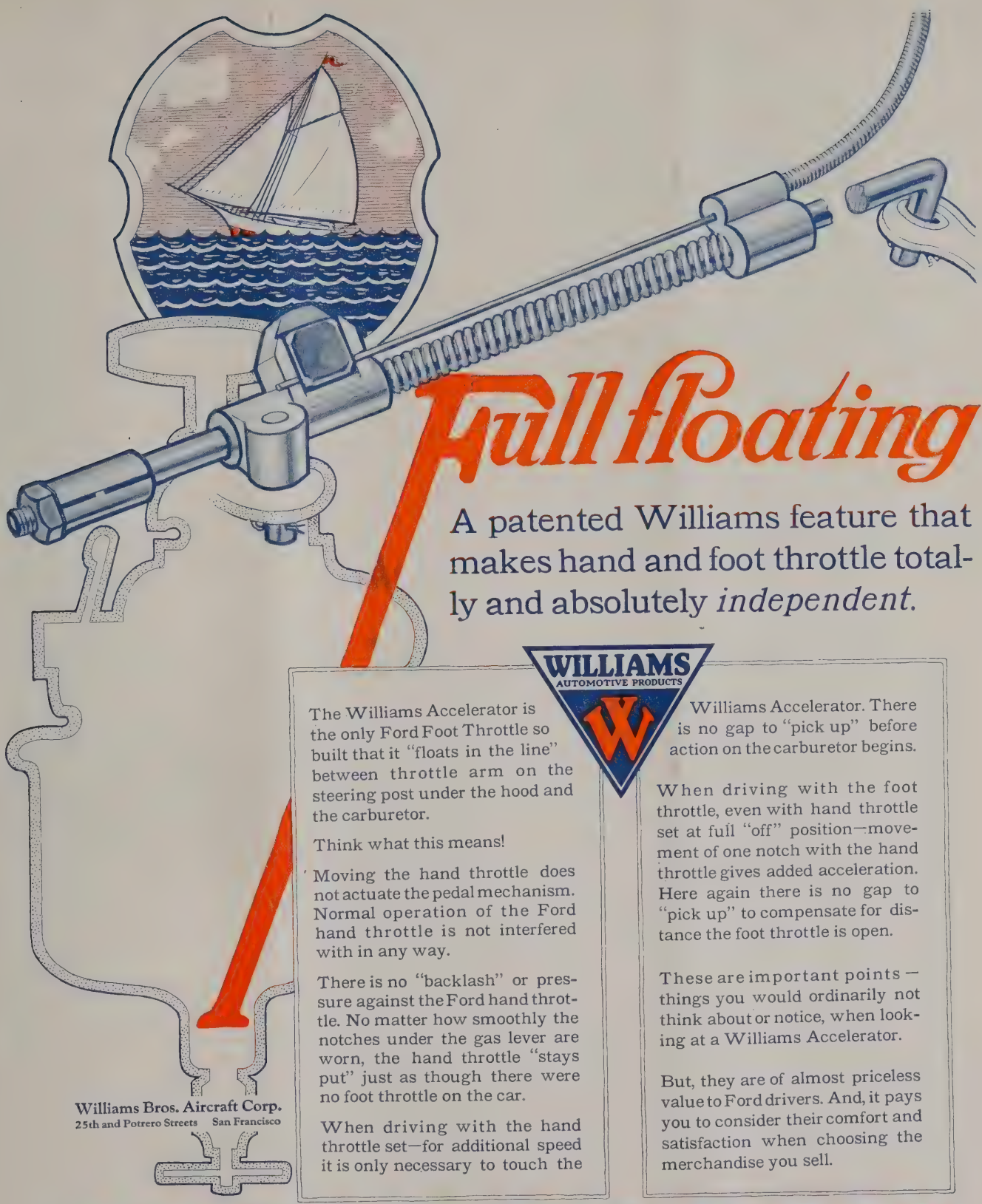
EVERY once in a while we discover a reader who goes through each issue of MOTOR AGE with great care, and yet manages never to read an editorial.

This raises the question, "Why is an editorial?" You may be quite certain editorials are not written just to fill space, for space in MOTOR AGE is too valuable a commodity to be used in that way. They are meant to be read, and read by just such people as the reader described. Because we believe that it is important that our editorials be read, we see that they are printed in rather large type, well displayed, and inviting to the eye.

Our editors are well informed men. They study their field—your field—continually. In the process they gain many impressions and form many opinions about the same things that occupy *your* mind when you consider the problems of your own business. They cannot afford to be dogmatic about these things, nor make their conclusions the basis of authoritative articles, for they may be mistaken. But they can tell you what they think and why—they can pass on to you their personal opinions for you to match against your own. And it is in their editorials that they can do this.

If you could drop into our office once a week for an informal talk with our editors, you would probably gain much by getting their slant on the various controversial questions that you, as a member of the trade, are deciding or helping to decide. By the same token you can gain much by reading our weekly editorials, for it is just here that our editors do talk to you informally, and tell you what they are thinking of on a host of subjects intimately related to your business.

Turn to our editorial page, and see if you don't agree.



Full floating

A patented Williams feature that makes hand and foot throttle totally and absolutely *independent.*

WILLIAMS
AUTOMOTIVE PRODUCTS

The Williams Accelerator is the only Ford Foot Throttle so built that it "floats in the line" between throttle arm on the steering post under the hood and the carburetor.

Think what this means!

Moving the hand throttle does not actuate the pedal mechanism. Normal operation of the Ford hand throttle is not interfered with in any way.

There is no "backlash" or pressure against the Ford hand throttle. No matter how smoothly the notches under the gas lever are worn, the hand throttle "stays put" just as though there were no foot throttle on the car.

When driving with the hand throttle set—for additional speed it is only necessary to touch the Williams Accelerator. There is no gap to "pick up" before action on the carburetor begins.

When driving with the foot throttle, even with hand throttle set at full "off" position—movement of one notch with the hand throttle gives added acceleration. Here again there is no gap to "pick up" to compensate for distance the foot throttle is open.

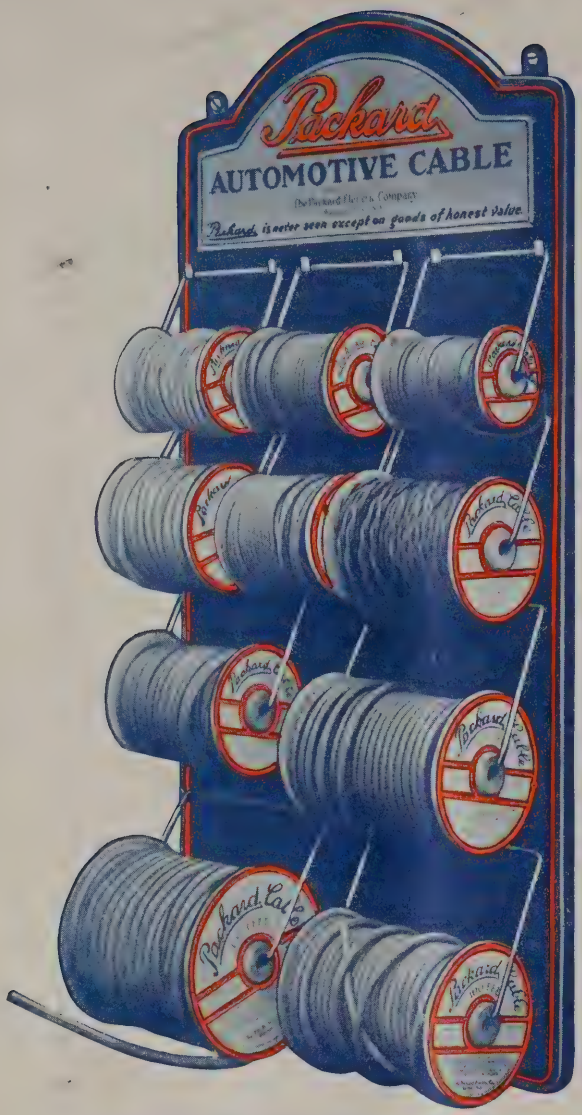
These are important points—things you would ordinarily not think about or notice, when looking at a Williams Accelerator.

But, they are of almost priceless value to Ford drivers. And, it pays you to consider their comfort and satisfaction when choosing the merchandise you sell.

Williams Bros. Aircraft Corp.
25th and Potrero Streets San Francisco

WILLIAMS

ACCELERATORS FOR FORDS



The Packard Cable Merchandiser as it appears ready for use.

The Packard Merchandiser

The biggest step ever taken to make a profitable merchandising line of automotive cable.

The Packard Cable Merchandiser together with ten 100-foot spools of Packard Cable, of different types is shipped complete in a neat container which also includes an instruction card—list price schedule—a handsome display card—and a Packard Wiring Chart. This Wiring Chart shows by trade number the proper cable for every requirement on all American made Automobiles and trucks.

Assortment A or assortment B will take care of any car on the road. Special assortments can be made up where necessary—AND all for the price of the cable.

Ask any representative of the more than 400 Packard Jobbers for the complete story, or should you prefer, write us direct.

THE PACKARD ELECTRIC CO., Warren, Ohio

Packard is never seen, except on goods of honest value

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